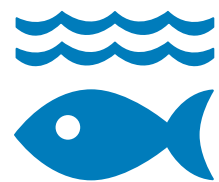




Contributions of Regional Seas Conventions and Action Plans to a Healthy Ocean



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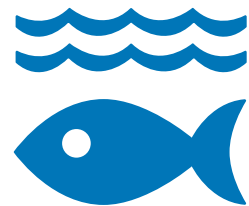
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Contributions of Regional Seas Conventions and Action Plans to a Healthy Ocean



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Table of Contents

Abbreviations	9
Key messages	10
1. Introduction	14
1.1: Purpose of the report	15
1.2: A global problem.....	17
1.3: Regional contributions to solving global problems	19
2. Contributions of regional seas to Sustainable Development Goal 14	24
Target 14.1: Reducing marine pollution	26
Target 14.2: Strengthening sustainable marine management for a healthy ocean.....	33
Target 14.3: Mitigating ocean acidification	38
Target 14.4: Reducing illegal, unreported and unregulated fishing	41
Target 14.5: Enhancing marine and coastal area protection.....	45
Target 14.6: Reforming fishing subsidies	49
Target 14.B: Supporting small-scale fishers	49
Target 14.7: Increasing economic benefits to small island developing States and least developed countries	52
Target 14.A: Improving scientific knowledge.....	55
Target 14.C: Implementing international sea law	59
3. Regional Seas beyond 2021	64
3.1: A pivotal time	65
3.2 Role of regional seas	66
3.3 Recommended actions to enhance the impact of regional seas.....	67
4.4 Conclusion	69
5. References	70
Annexes	
Annex 1 Regional seas information	75
Annex II Annex II Sustainable Development Goal 14 targets	77

Supplement: Contributions of Regional Seas Conventions and Action Plans to a Healthy Ocean	80
Overview	81
Target 14.1	82
Framework Convention for the Protection of the Marine Environment of the Caspian Sea: combating pollution in the Caspian Sea	82
Secretariat of the Pacific Regional Environment Programme (SPREP): collaborating with the private sector to remove waste	83
Northwest Pacific Action Plan (NOWPAP): regional oil and hazardous and noxious substances contingency plan	84
Helsinki Commission (HELCOM): developing the Nutrient Reduction Scheme.....	86
Coordinating Body on the Seas of East Asia (COBSEA): addressing plastic pollution through the SEA circular initiative	87
Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region: increasing public awareness of marine litter	89
Barcelona Convention: developing a regional plan to tackle marine pollution in the Mediterranean	90
BSC and the Barcelona Convention: cooperating on marine pollution	94
South Asia Co-operative Environment Programme (SACEP): developing a regional oil and chemical pollution contingency plan for South Asia	95
SACEP: addressing nutrient loading and eutrophication in the Bay of Bengal	97
Protection of the Marine Environment (PAME): addressing marine litter in the Arctic	99
Programme for the Environment of the Red Sea and Gulf of Aden (PERSGA): combating oil pollution	100
Target 14.2.....	101
Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR): environmental monitoring to support a precautionary approach in the Southern Ocean	101
Regional Organization for the Protection of the Marine Environment (ROPME): developing an ecosystem-based management strategy	102
NOWPAP: managing integrated coastal zones	103
COBSEA: encouraging environmental stewardship in the tourism industry.....	105
COBSEA: undertaking coastal spatial planning	107
Cartagena Convention: improving marine protected area (MPA) management	108
PAME: developing guidelines for applying the ecosystem-based management approach in the Arctic	110
PERSGA: enabling local communities to incorporate the ecosystem approach	112



Target 14.3	114
SPREP: monitoring ocean acidification	114
Nairobi Convention: developing an ocean acidification action plan	115
HELCOM: developing ocean acidification indicators	116
Cartagena Convention: partnering to monitor ocean acidification	118
Target 14.4	119
Permanent Commission for the South Pacific (CPPS): supporting multilateral agreements to combat illegal, unreported and unregulated fishing	119
CCAMLR: tackling illegal, unreported and unregulated fishing	121
BSC: cooperating on fishery issues	122
Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region Convention: partnering for aquatic wildlife	123
Target 14.5	124
Nairobi Convention: delivering a regional outlook on MPAs	124
CCAMLR: designating MPAs	125
ROPME: developing an MPA network	126
Abidjan Convention: establishing MPA partnerships	127
Barcelona Convention: building a road map for a comprehensive MPA network	129
OSPAR: networking MPAs in the Northeast Atlantic	131
PAME: establishing an MPA network in the pan-Arctic region	132
PERSGA: supporting a regional MPA network	134
Target 14.7	135
SPREP: assessing sustainable tourism	135
Abidjan Convention: restoring mangrove ecosystems	137
OSPAR: cooperating with CEP	138
Target 14.A	140
Nairobi Convention: establishing a science-policy platform	140
CPPS: monitoring oceanographic phenomena	142
NOWPAP: using satellite imagery to monitor eutrophication	143

Targets 14.6 and 14.B.....144

Nairobi Convention: enhancing ecosystem-based management in small-scale fisheries 144

Target 14.C.....145

Tehran Convention: increasing regional cooperation and stability 145

Nairobi Convention: developing a regional strategy for ocean governance 146

SACEP: implementing the CBD Strategic Plan for Biodiversity policy framework 147

OSPAR: partnering with the North-East Atlantic Fisheries Commission (NEAFC) 148



Figures

Figure 1: Key areas of work for Regional Seas 10

Figure 2: Key actors with whom the secretariats of regional seas establish partnerships, including other secretariats of regional seas. (Note: size of bubble is for design purposes only and does indicate the importance or number of partnerships formed). 11

Figure 3: Purpose of the report: audiences and intended impact. . 16

Figure 4: Services provided by marine ecosystems. 17

Figure 5: Five main direct drivers of change and key indirect drivers of change as identified by IPBES (2019) in marine and coastal ecosystems. Various activities affecting marine and coastal ecosystems and a non-exhaustive list of sample impacts are also shown. 18

Figure 6: Map showing geographic areas of Regional Seas. This map does not highlight explicit geographical boundaries. The boundaries and names shown, and the designations used on this map do not imply official endorsement or acceptance by the United Nations. 20

Figure 7: Examples of other types of ongoing global processes to which the core work of Regional Seas is closely aligned. 22

Figure 8: Pollutants from human activities on land and at sea. Sources mainly include heavy metals (e.g., mercury), nutrients (e.g., nitrogen and phosphorus), solid wastes (e.g., plastic) and hydrocarbons (e.g., oil and oil derivatives). 27

Figure 9: Key actions by secretariats of regional seas to control, reduce and mitigate pollution of the marine environment 28

Figure 10: Examples of key actions that Regional Seas take to support sustainable marine management. 34

Figure 11: Example key actions that Regional Seas take to support the reduction and mitigation of ocean acidification. 39

Figure 12: Examples of key actions that Regional Seas take to support reductions in IUU fisheries. .. 42

Figure 13: Examples of key actions that Regional Seas take to support MPA designation and management. 46

Figure 14: Examples of key actions that Regional Seas can take to support small-scale fishers and reformation of fisheries subsidies. 50

Figure 15: Examples of key actions that Regional Seas take to support resource mobilization and research to support SIDS and LDCs. 53

Figure 16: Examples of key actions that Regional Seas take support advances in s scientific knowledge. 56

Figure 17: Key actions that Regional Seas take to support the implementation of international law. 60

Figure 18: Timeline of key dates and events of strategic importance to marine conservation and sustainable development and the work of Regional Seas. 65

Abbreviations

ABNJ	areas beyond national jurisdiction
BSC	Black Sea Commission
CBD	Convention on Biological Diversity
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CEP	Caribbean Environment Programme
COBSEA	Coordinating Body on the Seas of East Asia
CPPS	Permanent Commission for the South Pacific
FAO	Food and Agriculture Organization of the United Nations
GEF	Global Environment Facility
GFCM	Food and Agriculture Organization of the United Nations General Fisheries Commission for the Mediterranean
GPML	Global Partnership on Marine Litter
HELCOM	Helsinki Commission (Baltic Marine Environment Protection Commission)
IMAP	Integrated Monitoring and Assessment Programme
MAP	Mediterranean Action Plan
MoU	memorandum of understanding
MPA	marine protected area
NEAFC	North-East Atlantic Fisheries Commission
NOWPAP	Northwest Pacific Action Plan
OSPAR	Commission of the Convention for the Protection of the Marine Environment of the North-East Atlantic
PAME	Protection of the Arctic Marine Environment
PERSGA	Programme for the Environment of the Red Sea and Gulf of Aden
RFMO	regional fisheries management organization
ROPME	Regional Organization for Protection of the Marine Environment
SACEP	South Asia Co-operative Environment Programme
SASP	South Asian Seas Programme
SPREP	Secretariat of the Pacific Regional Environment Programme
UNDP/GEF CLME+	United Nations Development Programme/Global Environment Facility Caribbean and North Brazil Shelf Large Marine Ecosystem Project
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme



Key messages

In 2015, the 2030 Agenda for Sustainable Development, adopted by all United Nations Member States, set out 17 interconnected Sustainable Development Goals. The present report focuses on Goal 14: Life below water, which seeks to “conserve and sustainably use the oceans, seas and marine resources for sustainable development” (United Nations, 2015, p. 14). Goal 14 is one of only two Goals that are entirely ecosystem-focused (the other being Goal 15: Life on land). The achievement of Goal 14 requires an integrated, ecosystem-based management approach that includes and promotes equality across all marine actors to successfully balance social, cultural and economic needs with environmental needs.

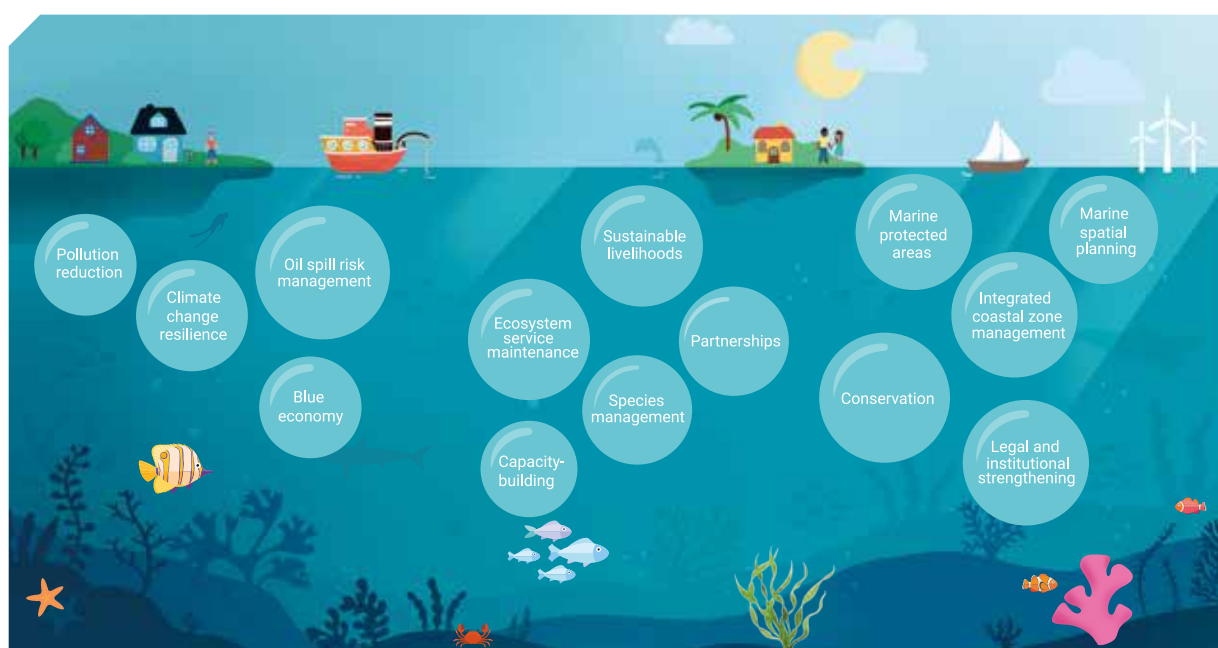
The present report highlights the significant role of regional seas conventions and action plans (hereafter “regional seas”) in supporting contracting parties to deliver directly on Goal 14 (and indirectly on Goals 1, 2, 5, 12, 13 and 17). Case studies are presented in further detail in a supplement to show how, through cooperation

and collaboration, regional seas have helped advance progress towards a healthy marine and coastal environment for people and the planet.

Key areas of work supported by regional seas

Under their respective mandates, regional seas support member countries and contracting parties in addressing complex marine and coastal issues through a variety of measures and approaches. They also facilitate dialogue between contracting parties and stakeholders, including civil society, industry, and research and academic institutions, on a regional scale. In some regions, efforts are under way to bring together and empower all relevant actors and integrate their voices into marine policies and management activities (UNEP/GWA, 2019). This is particularly important for women, youth and indigenous peoples, whose contributions to the conservation and sustainable use of marine and coastal ecosystems has historically been overlooked or underestimated (UNEP/GWA, 2019). Across many regions, the secretariats of regional seas face similar issues and challenges and share opportunities for achievements. **Figure 1** highlights the key areas of work supported by regional seas.

Figure 1: Key areas of work for Regional Seas



Source: UNEP-WCMC

The key findings and messages of the report are summarized below.

1. Regional seas drive measurable reductions in marine and coastal pollution through collaborative approaches

The reduction of marine pollution is a key mandate of nearly all regional seas, with many demonstrating great success through a range of approaches. In the Mediterranean, the Regional Plan on Marine Litter, which was adopted as a binding agreement by the parties to the Mediterranean Action Plan (MAP), has resulted in the establishment of 19 national action plans and a reduction in beach marine litter by 39 per cent from 2016 to 2019. In the Baltic, where eutrophication is one of the main threats to biodiversity, the Nutrient Reduction Scheme of the Helsinki Commission (Baltic Marine Environment Protection Commission) has led to a substantial reduction in nitrogen and phosphorus across the whole Baltic Sea. In the Caspian Sea, the Framework Convention for the Protection of the Marine Environment of the Caspian Sea has established a system for the collaborative management of oil pollution where no previous cooperation systems existed. Elsewhere, oil spill action plans developed under the Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region and the South Asia Co-operative Environment Programme have enabled timely responses to oil spill incidents in recent years, greatly reducing their impact. In the Pacific, the Moana Taka Partnership of the Secretariat of the Pacific Regional Environment Programme has increased the transportation of recyclable waste in the Pacific (also relevant to Sustainable Development Goals 3 and 12). In the future, the secretariats of regional seas will be able to enhance that critical role by facilitating the establishment, implementation and expansion of action plans for marine litter, nutrient reduction and oil spills, as well as by seeking further collaboration with other marine actors to achieve healthier and more resilient oceans.

Figure 2. Key actors with whom the secretariats of regional seas establish partnerships, including other secretariats of regional seas. (Note: size of bubble is for design purposes only and does indicate the importance or number of partnerships formed).



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2. Regional seas are leading efforts to monitor the impact of climate change on the ocean, establishing a baseline upon which future nature-based solutions can be built

Regional seas support countries in monitoring and responding to meteorological and oceanographic events, including those driven by climate change (relevant to Goal 13). In the South-East Pacific, the regional monitoring programme of the Permanent Commission for the South Pacific enhances government preparedness for El Niño events through annual risk forecasts. Through regional seas, significant work has also been undertaken to expand regional systems for understanding and monitoring ocean acidification. For instance, the secretariats of the Convention for the Protection and Development



of the Marine Environment of the Wider Caribbean Region and the Amended Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean are developing regional strategies and action plans; the Secretariat of the Pacific Regional Environment Programme is building regional capacity through its jointly coordinated New Zealand Pacific Partnership on Ocean Acidification; and the Helsinki Commission has developed a marine acidification indicator to support monitoring in the Baltic. Looking ahead, in addition to enhanced monitoring, there are many opportunities to expand the work carried out through regional seas in relation to the promotion of nature-based solutions for resilience and restoration. Current examples include the work by the Nairobi Convention to develop guidelines for the restoration of mangroves and sea grasses, and the work of the Secretariat of the Pacific Regional Environment Programme in supporting projects to plant mangroves to buffer pH, restore corals and establish Locally Managed Marine Areas.

3. Regional seas play a critical role in balancing sustainable use and conservation to secure healthy and resilient oceans and the move towards a sustainable blue economy

Regional seas are supporting the development of regional networks of marine protected areas (MPAs). From the Persian Gulf to the North Atlantic, East Atlantic, Western Indian Ocean and the Mediterranean, regional seas have supported contracting parties and diverse stakeholders in developing regional road maps for enhancing the protection of biodiversity and habitats most at risk and have resulted in the review and development of guidelines for management effectiveness. In the wider Caribbean region, for example, over 50,000 square kilometres of MPAs have been designated since 2010. Regional seas also support coastal planning, as is the case, for example, in the Northwest Pacific, one of the most densely populated areas in the world, where increasing development has resulted in degradation, fragmentation and loss of marine habitats. Regional seas have also demonstrated

the positive impact that can be achieved by fostering sustainable tourism (relevant to Goals 8 and 12). As an example, the Green Fins initiative is reducing the impact of diving in the East Asian Seas region, where its code of conduct has been adopted by 600 marine tourism companies in 11 countries. Regional seas also play a key role in raising awareness and recognition of the value of a healthy natural environment for economic development and human well-being. That includes monitoring by their secretariats of human impact on the ecosystem, as successfully demonstrated by the ecosystem monitoring programmes established by the secretariat of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) in the Southern Ocean and MAP in the Mediterranean. Awareness-raising campaigns, economic assessments and state of the environment studies are all additional options to support increased awareness. Through increased awareness, the secretariats of regional seas can help to shift sectoral perceptions and approaches to the development and implementation of sustainable, climate-resilient and inclusive blue economy policies.

4. Regional seas build and strengthen long-term action across diverse stakeholders

The scale and dynamic nature of the ocean means that solutions depend on long-term and coordinated efforts between diverse stakeholders, including women, indigenous peoples and youth. Secretariats of regional seas have pioneered cross-sectoral partnerships, building links between academia and the public, private and civil sectors, as well as multilateral environmental agreements and regional fishery bodies. This is relevant to Goal 17 and is summarized in figure 2. Regional seas perform a unique and vital role in providing a space to establish a unified vision for the regions; formulating and implementing regional policies and strategies; facilitating the sharing of knowledge, best practices and capacity; and translating international commitments and agreements into national and regional action. Some initial steps have also been taken towards mainstreaming gender in relevant policies and strategies (relevant to Goal 5) (for

example, SPREP, 2016; UNEP/MAP, 2018; and UNEP, 2019b).

5. Regional seas enhance monitoring and science-based decision-making at both the national and regional levels

The secretariats of regional seas can convene dedicated working groups of scientists from contracting parties and other regional or global organizations. Working groups enable capacity to be shared and bring significant efficiencies at the national level. Operating at a regional scale also adds significant value through, for example, the development of consistent monitoring and assessment approaches, which increase efficiency and enable more effective national and regional science-based decision-making. Programmes such as the training of trainers on topics including the management of MPAs and data collection and analysis have been hugely popular and effective in supporting progress towards the achievement of Goal 14.

6. The future impact of regional seas will be enhanced by increased funding, collaboration between secretariats and multisectoral working

Regional seas have a vital role to play at this pivotal moment of biodiversity and climate crisis. Over the next 10 years, as the world strives to deliver on the Sustainable Development Goal targets, to implement and monitor a post-2020 global biodiversity framework, and to develop and implement an international legally binding instrument on the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction, the institutional frameworks, characteristics and experience of the secretariats of regional seas make them well placed to support the coordinated, collaborative and ambitious action that is needed. That poses a major challenge, but increased collaboration within and between the secretariats of regional seas, enhanced multisectoral cooperation facilitated by regional seas and increased resourcing are all factors that will contribute to future success.





1. Introduction

1.1: Purpose of the report

In 2015, the 2030 Agenda for Sustainable Development was adopted by all United Nations Member States. It provides a shared blueprint for a better and more sustainable future for all. The Agenda is built on 17 Sustainable Development Goals and 169 associated targets that seek to stimulate action in areas of critical importance to humanity and the planet.

Owing to the scale and ambition of this universal agenda, action is required at all levels, from local to global, and it needs collaborative partnerships across society, including governments, the United Nations system, local authorities, indigenous peoples, women and youth, the private sector, and the scientific and academic communities.

The present report shows what can be achieved by working together at a regional scale and how, through coordination, greater impact can be achieved. The report highlights the unique role that regional seas conventions and action plans (hereafter “regional seas”) have played in protecting and conserving the marine environment for more than 45 years and the crucial role they play in relation to the Sustainable Development Goals, in particular Goal 14: Life below water.

Through 10 targets, Goal 14 aims to improve the protection and management of marine and coastal ecosystems by reducing threats from pollution, ocean acidification and illegal fishing and by enhancing the conservation and sustainable use of ocean-based resources. It focuses on the entire marine ecosystem, and

because of that, achieving those 10 interlinked targets requires partnerships and coordinated efforts at the national, regional and global levels. It is also important to recognize that, because of the interconnected nature of the Goals, success in one area can have a positive impact on other areas (for example, towards Goals 1, 2, 5, 12, 13 and 17, relating to poverty, zero hunger, gender equality, sustainable consumption and production patterns, climate action and partnerships for implementation).

Using a series of case studies, the present report showcases how, through cooperation and collaboration, regional seas have helped to advance progress towards each of the 10 targets of Goal 14 and how that serves as a successful model to stimulate action in other areas. (Detailed case studies are presented in a supplement.)

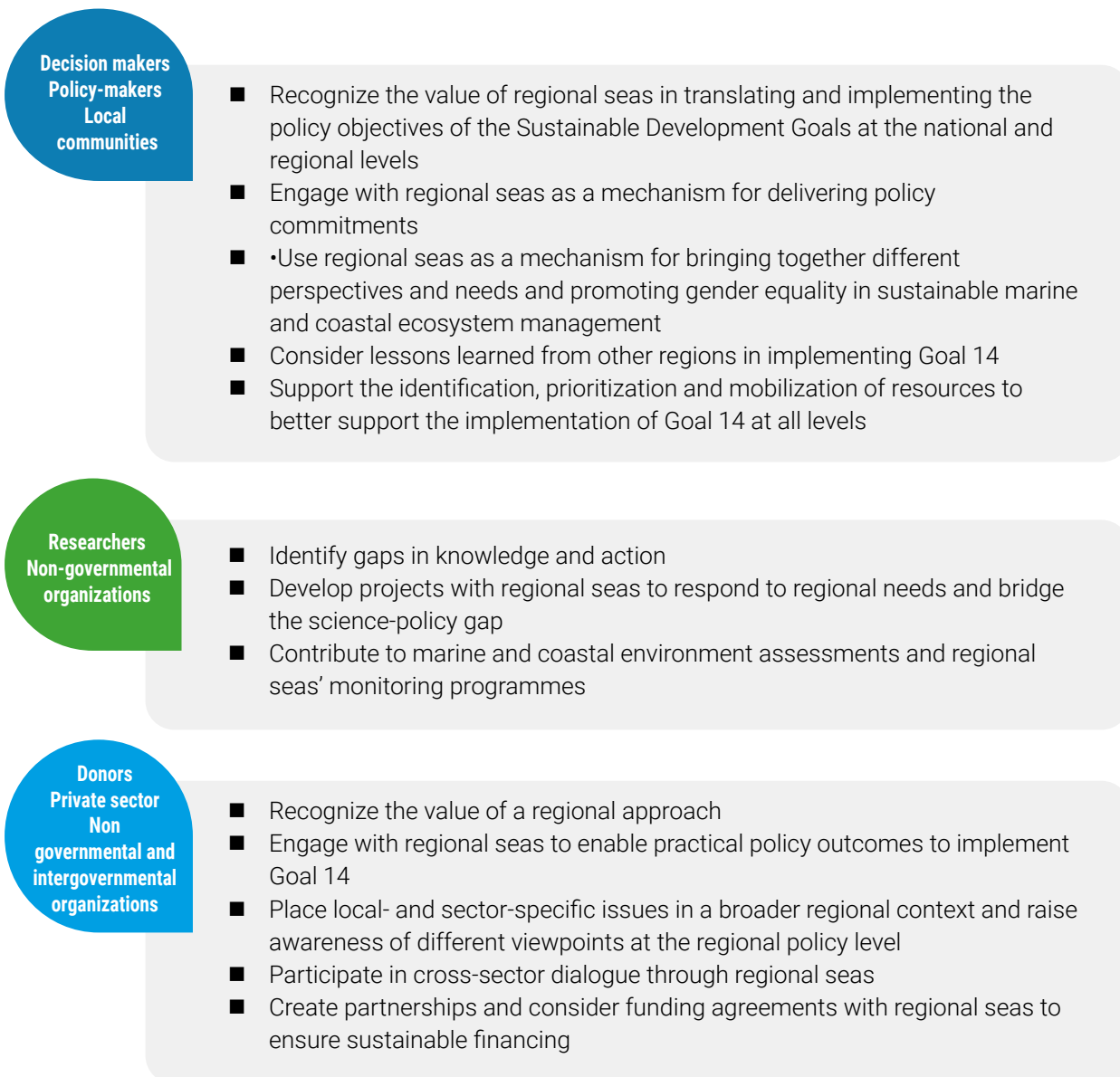
The present report provides a “toolbox” to point decision makers, policymakers and other stakeholders towards different types of solutions, helping to support science-based action and results, as illustrated in **figure 3**.

This report highlights the unique role of Regional Seas in supporting progress towards the achievement of SDG 14.

Case studies are used to demonstrate the importance of regional governance, partnerships, innovation and evidence-based decisions and actions.



Figure 3: Purpose of the report: audiences and intended impact.



Source: UNEP-WCMC

1.2: A global problem

The importance of coastal and marine ecosystems to people and the planet is indisputable, yet they are under threat

Marine and coastal ecosystems provide essential services (MEA, 2005) that are vital to the livelihoods of more than 3 billion people on Earth. For instance, they provide food, water and shelter; protect against storms and other natural phenomena; play a major role in climate regulation; and support spiritual and recreational experiences (**figure 4**).

The ability to provide such services is dependent on the healthy functioning of the environment. However, climate change, pollution from land- and sea-based sources and the continued loss of biodiversity are driving significant changes in how the marine environment functions, the services it provides and its resilience to future human and environmental impacts (Worm et al. 2006; Palumbi et al. 2008). Furthermore, environmental degradation disproportionately affects women in their gendered roles (for example, as household managers, caregivers and food producers) and their health (through food and water shortages, inadequate health care and exposure to contaminants) (UNEP/GWA, 2019). A first step in protecting and restoring our oceans is understanding and managing the key drivers of change in ocean health.

Drivers of environmental change

Over the past 50 years, the rate of global change in biodiversity and ecosystems has accelerated (IPBES, 2019). Drivers of change are “the factors that, directly or indirectly, cause changes in nature, anthropogenic assets, nature’s contributions to people and a good quality of life” (IPBES, 2021). Direct drivers of change (those with direct physical and behaviour affecting impacts on nature (IPBES, 2021)), with the greatest global impact on marine and terrestrial ecosystems are:

Figure 4: Services provided by marine ecosystems.



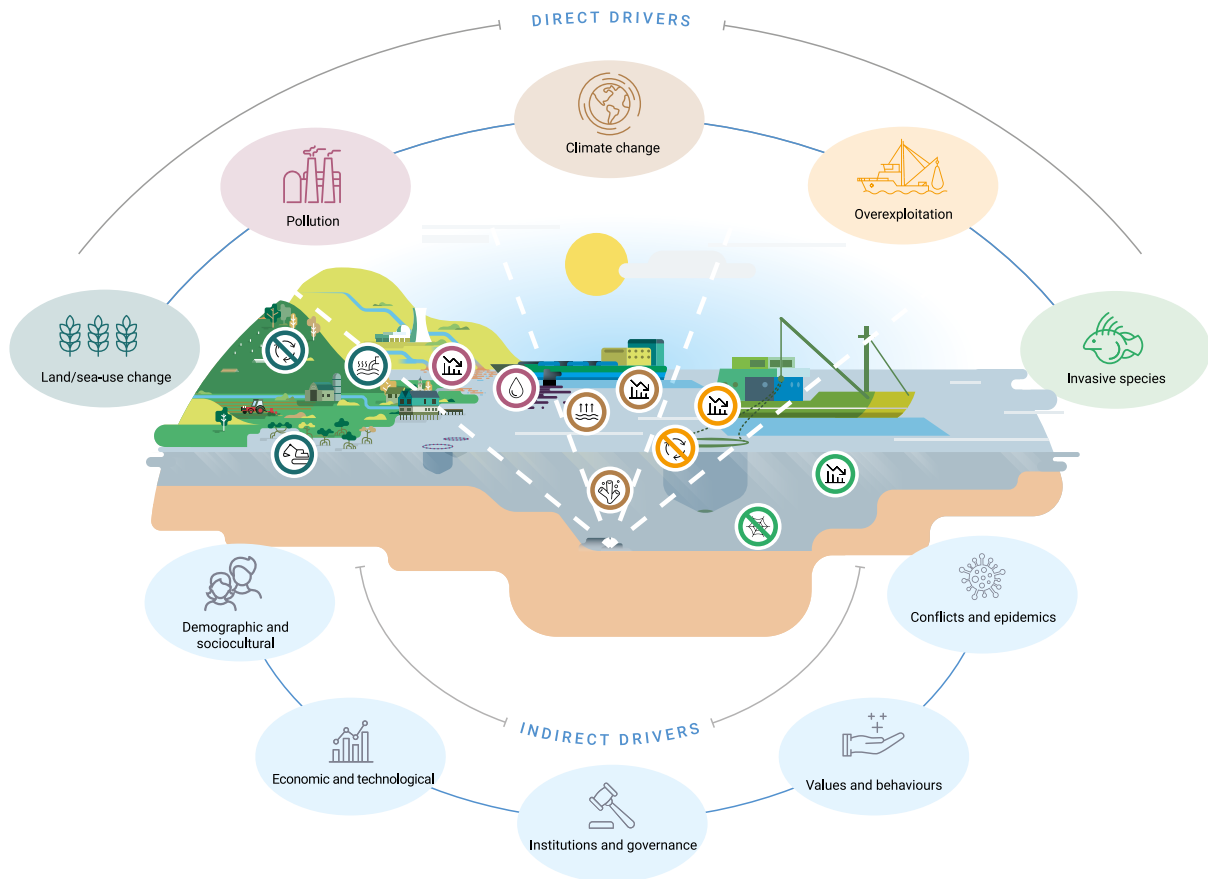
Source: UNEP-WCMC

- ▶ Changes in land and sea use (including habitat destruction)
- ▶ Direct exploitation of organisms
- ▶ Climate change
- ▶ Pollution
- ▶ Invasion of alien species

The impact of these drivers has been made worse by indirect drivers of change, which include unsustainable patterns of economic growth, population and demographic trends, and weaknesses in governance frameworks (IPBES, 2019) (**figure 5**).



Figure 5. Five main direct drivers of change and key indirect drivers of change as identified by IPBES (2019) in marine and coastal ecosystems. Various activities affecting marine and coastal ecosystems and a non-exhaustive list of sample impacts are also shown.



LEGEND

● Land/sea-use change	Destruction of habitats	Run-off of land-based pollutants	Loss of ecosystem services
● Pollution	Habitat and species declines	Long-lived pollutants	
● Climate change	Ocean warming	Ocean acidification	Habitat and species declines
● Overexploitation	Loss of ecosystem services	Habitat and species declines	
● Invasive Species	Food web interruptions	Habitat and species declines	

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1.3: Regional contributions to solving global problems

Environmental decision-making and action generally occur at the national or subnational level. However, because oceans are interconnected (ecologically, environmentally and through human use), a regional approach is essential to coordinate, streamline and maximize the management of ecosystems that cut across national borders (van Tatenhove, 2013).

Over the past 45 years, that has been realized and put into practice through the development of regional-scale legal and policy frameworks, such as regional seas, as well as other regional projects, such as those implemented through the large marine ecosystem approach or regional fisheries management organizations (RFMOs).

What are regional seas?

One of the earliest and most comprehensive examples of regional-scale legal and policy frameworks is the United Nations-led Regional Seas Programme, which aims to bring all relevant stakeholders together to address the accelerating degradation of the world's oceans and coastal areas through a "shared seas" approach. Since its establishment in 1974, 146 countries have joined 18 regional seas, through which neighbouring countries cooperate to support the conservation and sustainable use of the marine environment. As a legal framework for protecting the marine and coastal environment, regional seas bridge the gap between national and global efforts, translating global policy into local, national and regional actions and supporting countries in addressing ecosystem-scale and transboundary issues.

The Regional Seas Programme of the United Nations Environment Programme (UNEP)

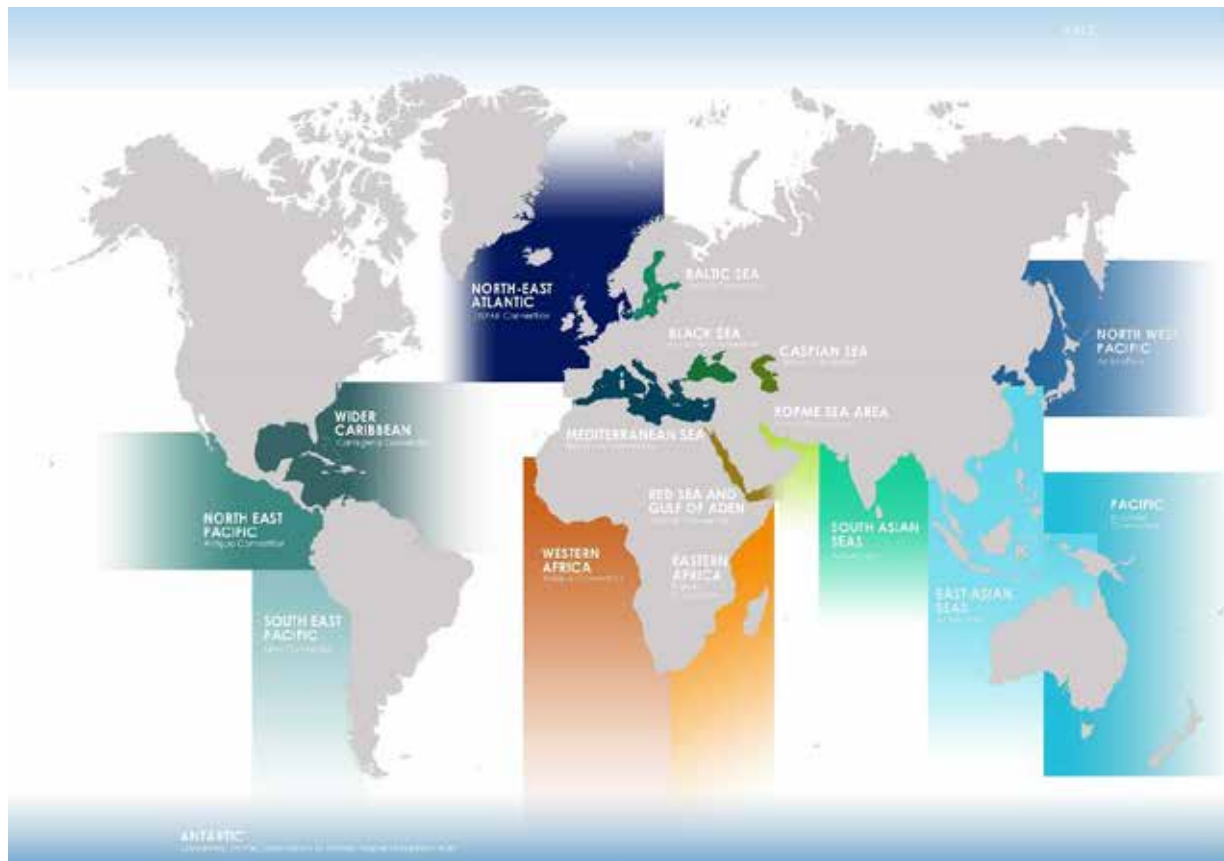
encompasses three types of administrative structures in 18 regions (**figure 6**):

- ▶ UNEP administered: established and directly administered by UNEP, which provides secretariat functions, finance and resource management and technical assistance
- ▶ Non-UNEP administered: established under the auspices of UNEP, but a specific non-UNEP regional body provides secretariat and administrative functions
- ▶ Independent: not established by UNEP, but cooperates with the Regional Seas Programme, attending meetings and exchanging experiences

Each of the regional seas was established on the basis of the needs and administrative capacities of its region at the time of its creation, and they all play an important role in the protection, restoration and conservation of the marine and coastal environment. To encourage a coordinated approach across regions, a United Nations-led set of strategic directions for the Regional Seas Programme has been adopted and is updated every three years (UNEP, 2016a). The strategic directions provide high-level priorities for regions to take into consideration when developing strategies and workplans, aligning regional activities with ongoing global processes and encouraging consistent approaches across all regions. Those priorities are packaged under key themes that capture the essence and ambition of the programme, including pollution, climate change, ocean acidification, extraction (of both living and non-living resources) and governance (UNEP, 2016a). The development of the strategic directions is influenced by emerging issues, different regional contexts and the UNEP midterm strategies (the current iteration covers the period from 2022 to 2025), which set out strategic approaches in relation to key issues (for example, improving responses to gender equality and human rights, increasing access to and use of environmental data and bolstering resource mobilization) (UNEP, 2021a).



Figure 6: Map showing geographic areas of Regional Seas. This map does not highlight explicit geographical boundaries. The boundaries and names shown, and the designations used on this map do not imply official endorsement or acceptance by the United Nations.



Source: UNEP

How do regional seas operate?

The mandates of regional seas cover the conservation and sustainable use of the marine and coastal environment. They exclude a number of human activities relating to specific sectors, for example, fisheries and shipping activities, which are governed under separate regional and global legal frameworks and organizations.

Activities across regions are organized through action plans that are agreed upon and adopted by contracting parties on the basis of key issues and needs in the region. The action plans set out strategies to achieve success, indicators to measure progress and often steps to secure sustainable funding.

Recognizing the key role of marine ecosystems in supporting social, economic and environmental objectives, secretariats of regional seas cooperate with sector-specific organizations to promote coordinated management approaches. Those may be set out in action plans or in voluntary commitments to other regional or global processes, such as the United Nations Ocean Conference. Action plans are not legally binding, although they can become binding if underpinned by a legal framework, such as a convention and associated protocols. Some secretariats of regional seas have adopted conventions, action plans and strategies for implementation, whereas others have not, resulting in differences in the terminology used to describe each of them (See **annex I** for details).

Regional seas support progress towards the achievement of the Sustainable Development Goals and other global processes

Over the past 45 years, regional seas have been delivering outcomes that have helped to pave the way for the development of new measures, policies and ambitions, including global frameworks such as the Sustainable Development Goals. As a result, the fundamental role of action at the regional scale to achieve a healthy and sustainable ocean has been recognized as a key component of the successful delivery and monitoring of the Goals. For example, secretariats of regional seas play a critical role in supporting countries to progress towards delivery of the Goals and provide an established mechanism to facilitate coordinated and integrated ocean solutions across diverse and multisectoral stakeholders. They do this by:

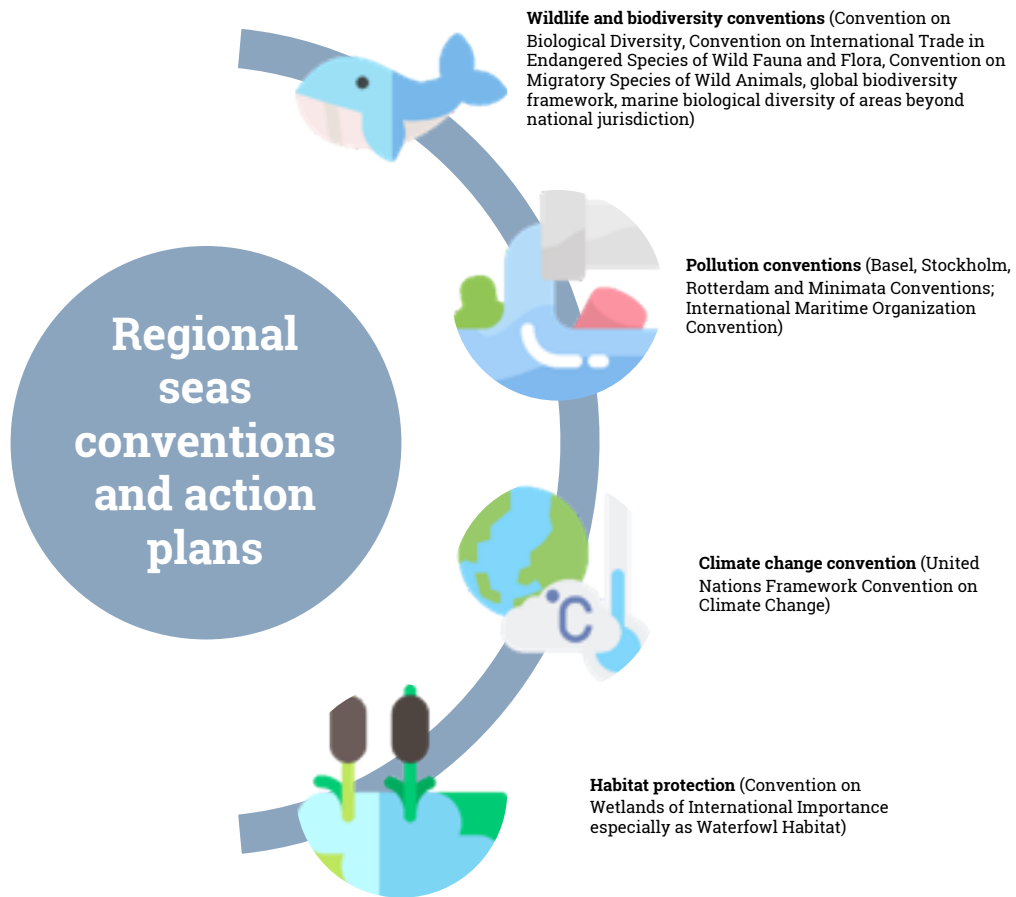
- ▶ Collecting data and information in regional outlook reports to inform action in line with national, regional and global mandates (UNEP, 2018)
- ▶ Sharing resources, data, lessons learned and best practices (including gender-responsive approaches)
- ▶ Addressing capacity needs (including those of women, youth and indigenous peoples) through capacity-building and sharing
- ▶ Mobilizing financial and technical resources to support research and implementation at the local, national and regional levels
- ▶ Developing and streamlining methodologies and indicators to coordinate the monitoring, assessment and evaluation of ocean conditions, pressures and policy responses
- ▶ Supporting voluntary national reporting against global and regional policy obligations
- ▶ Supporting the joint implementation of management measures and tools, such as MPAs, marine spatial planning and integrated coastal zone management (including gender integration in such management) (Rochette and Billé, 2012)
- ▶ Strengthening relationships between parties to improve diplomatic cooperation in order to solve common or transboundary issues
- ▶ Providing a platform for parties to cooperate in addressing marine accidents, extreme weather and natural disasters and recognizing the key role of women in disaster-risk reduction initiatives (UNEP/ GWA, 2019)
- ▶ Collaborating with regional and international organizations to improve knowledge, identify common issues and develop joint actions, including multilateral environmental agreements, regional fishery bodies and sectoral organizations
- ▶ Acting as a united group of countries in international negotiations

For example, to facilitate an ecosystem approach and improve the monitoring of progress towards regional ecological objectives, the Regional Seas Indicators Working Group was established in 2014. In 2015, it adopted 22 core indicators with the aim of developing common methodologies for each indicator. The indicators were mapped against the objectives under each of the regional seas policy frameworks, as well as against the Sustainable Development Goals and the Aichi Biodiversity Targets (CBD, 2020). Through that exercise, the secretariats of regional seas identified and explored existing practices and data and learned how best to assist contracting parties in monitoring progress towards the Goals, incorporate regional contributions into national reporting (such as state of the environment reports) and fill the gaps between regional targets and the Goals.

In addition to the 2030 Agenda, the core work of regional seas is fundamental to several global processes across all elements of a sustainable environment, including the current strategic plan of the Convention on Biological Diversity (CBD) and the post-2020 global biodiversity framework (**figure 7**).



Figure 7: Examples of other types of ongoing global processes to which the core work of Regional Seas is closely aligned.



Source: UNEP-WCMC



Source: UNEP-WCMC

An aerial photograph of a stunning coastal landscape. The water is a vibrant turquoise, transitioning to a deeper blue as it extends into the distance. Two boats are visible in the water: a larger white motorboat and a smaller sailboat. The surrounding land is covered in dense, green vegetation, with some rocky outcrops visible. The overall scene is serene and picturesque, highlighting the natural beauty of the region.

2. Contributions of regional seas to Sustainable Development Goal 14

Solutions for sustainable oceans

Addressing key marine and coastal issues requires a scaling-up of ocean-related action supported by science and innovation, cooperation and coordination, capacity-building, gender responsiveness and strategic and coordinated ocean governance.

The present section of the report provides a snapshot of the innovation and success achieved through the work of the 18 regional seas. It does not represent an exhaustive list. Rather,

the examples have been selected to provide a balanced global overview of the ongoing core work, as well as specific activities relating to the voluntary commitments of Sustainable Development Goal 14 (United Nations, n.d.)

Key categories of actions are indicated using icons.

Throughout the current section, actions and outputs are **emboldened in black** and outcomes and impacts are in **green**.

Icon legend



Partnerships



Capacity building



Technical support & expertise



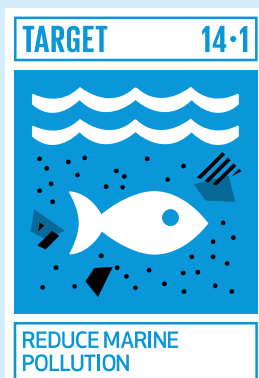
Policy measures



Network approach



Data collection and sharing



▶ 14.1 – Reducing marine pollution

<p>Eleven regional seas marine litter action plans have been developed</p>	<p>Twenty-one legally binding agreements relating to marine pollution have been adopted</p>
<p>Several secretariats of regional seas have developed regional protocols concerning land-based sources of pollution, control of oil and pollution from highly noxious substances, and support of capacity-building and coordination activities to facilitate implementation. Many of those are a first for their regions.</p>	
<p>Caspian Sea countries were convened under the Framework Convention for the Protection of the Marine Environment of the Caspian Sea (Tehran Convention) to establish legally binding protocols to combat pollution</p>	<p>The Helsinki Commission (HELCOM) Nutrient-Reduction Scheme reduced nitrogen and phosphorus concentrations by 12 per cent and 26 per cent respectively, in the Baltic Sea through coordinated action between 1997 and 2018</p>
<p>The Regional Action Plan on Marine Litter Management for the Wider Caribbean Region was developed to reduce the negative impacts of solid waste, marine litter and plastics.</p> <p>To support its implementation, the Cartagena Convention secretariat partnered with national governments to establish the Trash-Free Waters initiative, with a view to improving solid waste management in the region</p>	<p>Legally binding measures on marine litter management in the Mediterranean have been adopted through MAP and are the first of their kind across regional seas</p>
<p>Interregional cooperation between the Black Sea Commission (BSC) and MAP resulted in a Marine Litter Monitoring Programme for the Black Sea</p>	<p>Coordinated efforts under an early warning system and online pollution-reporting system initiated by Northwest Pacific Action Plan (NOWPAP) reduced impacts from the 2018 Sanchi oil tanker spill in the Northwest Pacific Ocean</p>
<p>The secretariat of the Pacific Regional Environment Programme (SPREP) established the Moana Taka Partnership with Swire Shipping (the liner shipping division of the China Navigation Company) to transport recyclable waste from Pacific island countries and territories to countries with adequate recycling facilities.</p>	<p>The SEA circular initiative implemented by the Coordinating Body on the Seas of East Asia (COBSEA) and UNEP prevents plastic pollution by promoting market-based solutions, evidence-based marine litter planning and harmonized monitoring programmes</p>
<p>The Programme for the Environment of the Red Sea and Gulf of Aden (PERSGA) Emergency Mutual Aid Centre in the Red Sea and Gulf of Aden supports collaboration and capacity-building in addressing oil spill incidents</p>	

Pollution of the marine and coastal environment continues to rise as a result of increasing human activities on land and at sea (**figure 8**). It is often a transboundary issue because of the interconnectedness of oceans.

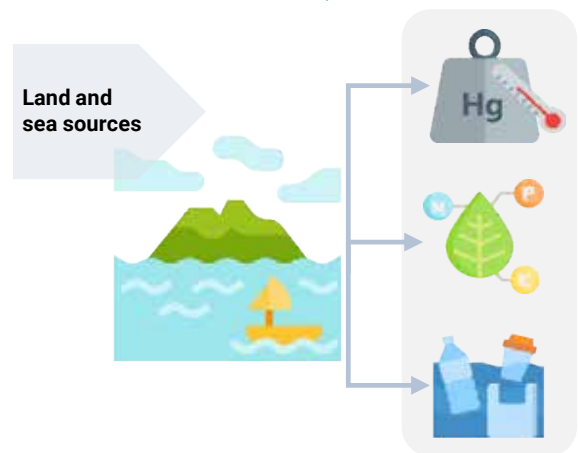
Marine and coastal pollution severely affects the health and condition of entire ecosystems, habitats and species. It drives a decline in their range and numbers and increases their vulnerability to additional stresses, such as climate change. Marine pollution also poses a threat to the health and well-being of people who rely on the ocean for their livelihoods. Furthermore, people are exposed to marine pollution (including marine litter and plastic pollution) disproportionately and in different ways, depending on their gender, ethnicity, age, class and geographical location. To tackle the transboundary issue effectively, collaborative, coordinated and gender-responsive approaches are required.

Regional approaches are well placed to support efforts to tackle transboundary pollution

Because of the transboundary nature of pollution, in terms of both its cause and its impact, regional seas are well placed to tackle it and have helped to address nutrient overload (known as “eutrophication”); spills of oil and other highly noxious substances; poor management and recycling of domestic waste, litter and wastewater; and contamination of marine food webs.

The secretariats of regional seas support countries in tackling marine pollution in a multitude of ways, providing essential communication channels or spaces in which countries and organizations can come together to develop joint or coordinated management approaches. They support the identification, assessment and monitoring of pollution through dedicated scientific programmes and early warning systems, including indicators and data-sharing schemes. Furthermore, many secretariats have adopted action plans or strategies to guide such activities at both the national and

Figure 8: Pollutants from human activities on land and at sea. Sources mainly include heavy metals (e.g., mercury), nutrients (e.g., nitrogen and phosphorus), solid wastes (e.g., plastic) and hydrocarbons (e.g., oil and oil derivatives).



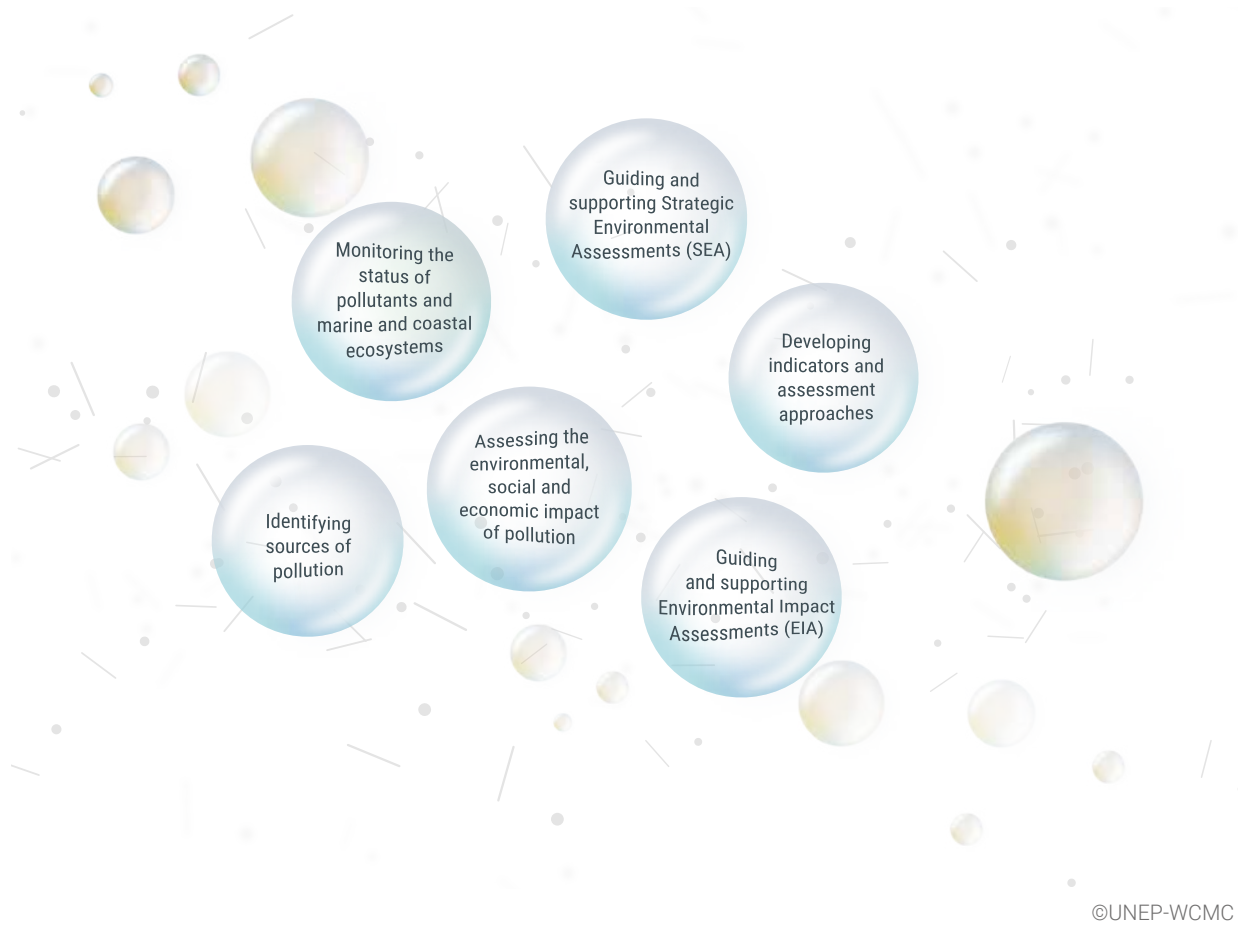
Source: UNEP-WCMC

regional levels, including action plans for nutrient reduction, marine litter and oil spills and methods such as the “polluter pays” principle, precautionary or ecosystem-based management approaches, cross-sectoral partnerships with industry and private sector organizations and investment in coastal ecosystem conservation. Examples of key actions taken by secretariats of regional seas are illustrated in **figure 9**.

Further details of each case study can be found in a supplement. It is important to highlight the fact that further efforts are required with regard to the mainstreaming of gender into regional approaches to tackling marine pollution, although some secretariats of regional seas have already taken initial steps to make that a reality. One example is the South Asia Co-operative Environment Programme (SACEP), which developed *A Roadmap for Sustainable Waste Management and Resource Circulation in South Asia, 2019–2030* that outlines gender-related guiding principles and terms, such as “participatory and inclusive”, “commitment to human rights and gender equality” and “equity”, to ensure gender mainstreaming, elimination of child labour, and worker safety in waste management industries (SACEP, 2019a).



Figure 9: Key actions by secretariats of regional seas to control, reduce and mitigate pollution of the marine environment



Achievements by regional seas in tackling marine pollution

Protocols, action plans and legally binding measures



The adoption of pollution-related treaties and protocols by many regional seas have proved important in creating opportunities for dialogue and cooperation between countries.

For instance, under the Tehran Convention, the **establishment and ratification of the 2011 Aktau Protocol** (Regional Preparedness, Response and Cooperation in Combating Oil Pollution Incidents) and the **2012 Moscow Protocol** (Protection of the Caspian Sea against Pollution from Land-Based Sources) have **enhanced communication and coordination** between contracting parties in order to improve preparedness to combat oil pollution incidents and spills in the Caspian Sea.

In the Red Sea and Gulf of Aden, **three regional protocols** that combat marine pollution have been established by the regional organization of the Programme for the Environment of the Red Sea and Gulf of Aden (PERSGA) under the Jeddah Convention for the Conservation of the Red Sea and Gulf of Aden Environment. They include the Protocol Concerning the Regional Cooperation in Combating Pollution by Oil and other Harmful Substances in Cases of Emergency (1982), the Protocol Concerning the Protection of the Environment from Land-Based Activities in the Red Sea and Gulf of Aden (2005) and the Protocol Concerning Technical Cooperation to Borrow and Transfer Experts, Technicians, Equipment and Materials in Cases of Emergency (2009). The protocols have improved dialogue and collaboration between the six PERSGA member countries, resulting in the **establishment of a regional centre for mutual aid** during marine emergencies, the development and regular update of regional and national oil spill contingency plans and the establishment of regional capacity-

building programmes on priority issues (including wastewater, marine litter and marine-pollution preparedness).

In the wider Caribbean, the ratification of the **Cartagena Convention Protocols** concerning Cooperation in Combating Oil Spills (1986) and Pollution from Land-based Sources and Activities (2010) have played an integral role in **strengthening the region's response to preventing, reducing and controlling marine pollution**.

In relation to marine litter, **11 regional seas** have **regional marine litter action plans**. They contain a mix of voluntary and legally binding actions and set out approaches for coordinated management, monitoring and indicators. For example, in the Baltic Sea, the Regional Action Plan on Marine Litter, established in 2015 by the Helsinki Commission (Baltic Marine Environment Protection Commission), also known as HELCOM, contains a series of **regional and voluntary national actions** addressing litter on beaches and the sea floor and in the water column (HELCOM, 2015).

The first legally binding instrument to comprehensively address marine litter (the **Regional Plan on Marine Litter Management in the Mediterranean**) was established in 2013 under the Barcelona Convention (UNEP, 2013). It sets out policy, regulatory and technical measures and obligations for waste management, sustainable consumption and production, monitoring and enforcement of national legislation as well as partnerships and coordination among all marine actors. Since the plan was established, more than 20 "Fishing-for-Litter" and "Adopt-a-Beach" participatory approaches and measures have been applied in 10 Mediterranean countries, and a 2019 analysis observed **a 39 per cent reduction in beach marine litter and sea floor macrolitter** compared with 2016 baselines (MAP and Plan Bleu, 2020).



Partnerships for action



Numerous partnerships between marine stakeholders have been established or strengthened by the secretariats of regional seas through formalized mechanisms, such as memorandums of understanding, and collaborative platforms, such as the **Regional Cooperation Platform on Marine Litter in the Mediterranean**, which has more than 25 members from regional and international organizations.

A **formalized interregional partnership** between the permanent secretariat to the Black Sea Commission (BSC) and MAP (the Barcelona Convention) was established through an MoU in 2016, following proposals by Turkey, which is a party to both conventions. That provided a mechanism for cooperation and knowledge-sharing between the two regions and has enabled BSC to work directly with the MAP Marine Litter Mediterranean project (2016–2019) to strengthen bilateral collaboration and has resulted in the development of the **Black Sea Regional Action Plan on Marine Litter and Marine Litter Monitoring programme**.

The secretariats of regional seas have also **partnered with regional and international organizations** to develop projects and initiatives in relation to marine pollution. In the South Asian Seas region, SACEP partnered with the UNEP Global Programme of Action and Bay of Bengal Large Marine Ecosystem project to control nutrient loading and fertilizer use and prevent the expansion of the Bay of Bengal “dead zone”. The project delivered **policy recommendations that were reiterated by contracting parties** in November 2019 to encourage further regional and national action to combat nutrient pollution.

Furthermore, SACEP has established an MoU with the International Maritime Organization to enhance regional cooperation and preparedness in the event of an oil or chemical spill in the South Asian Seas region. Under the MoU, **regional oil spill contingency plans** have been developed and

are regularly updated. They provide a mechanism for mutual assistance and coordinated responses between SACEP coastal member countries and were implemented to **mitigate the impact of an oil tanker collision** outside the port of Kamarajar, India, in January 2017.

UNEP and the Coordinating Body on the Seas of East Asia (COBSEA) partnered to implement the **SEA circular initiative**, which **promotes stakeholder engagement** to reduce marine plastic pollution at source. The initiative builds on the COBSEA Regional Action Plan on Marine Litter to deliver positive changes throughout the plastic lifecycle by **promoting market-based solutions, strengthening national planning, monitoring and evidence-based decision-making** and enabling regional networking. The initiative developed a dedicated study and policy briefs that investigated the relationship between marine litter and gender to inform future gender-responsive approaches to tackling the matter (UNEP/COBSEA/SEI, 2019a, 2019b, 2019c).

Many secretariats of regional seas have also established **regional and national partnerships** to address marine pollution at the national level, such as the **Trash Free Waters initiative** in the wider Caribbean region. The initiative addresses solid waste pollution and is a partnership between the Cartagena Convention secretariat, the UNEP regional office for Latin America, the UNEP subregional office for the Caribbean, the United States Environmental Protection Agency and the Governments of Jamaica and Panama. Jamaica and Panama have successfully implemented community pilot projects to **raise awareness and improve solid waste management practices** to prevent land-based waste from entering watersheds and reaching the Caribbean Sea.

Public-private partnerships involving regional seas have delivered many successful outcomes. In the Pacific region, SPREP and Swire Shipping established the **Moana Taka Partnership** to address waste management issues. The partnership enables the use of empty shipping containers leaving Pacific island ports to **transport recyclable waste to countries with**

appropriate facilities. SPREP supports its member countries in accessing the programme by facilitating communication between them and Swire Shipping, providing information on eligibility and waste details and managing port transfer logistics (such as customs checks and container cleaning).

Network approaches



In many cases, marine pollution activities are coordinated by a central hub. For instance, five secretariats of regional seas currently act as **regional nodes** under the **Global Partnership on Marine Litter (GPML)**, which was launched in 2012 in response to a request to implement the Manila Declaration on Furthering the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities and which covers the Mediterranean, Northwest Pacific, Pacific, South Asia and wider Caribbean regions. As nodes, secretariats of regional seas aim to:

- ▶ Create an effective regional network of public and private bodies to promote the objectives of GPML
- ▶ Ensure representation from relevant governance, industrial/commercial, academic and citizens' groups and other organizations
- ▶ Promote implementation of GPML by developing regional communication channels, encouraging exchange of expertise and good practices, providing advice and training, developing cost-effective monitoring programmes and undertaking practical exercises to raise awareness

Hubs and activity centres



To facilitate coordinated marine pollution-related activities under a regional approach, most regional seas have established activity centres or expert groups. For instance, in the Northwest Pacific region, the **Marine Environment Emergency Preparedness and Response Regional Activity Centre**, established by the Northwest Pacific Action Plan (NOWPAP) secretariat, has developed an online pollution-reporting system, which acts as an early warning system and information-sharing platform. In 2018, it was successfully used to allow information-sharing between member countries and organizations to **inform effective action to mitigate and contain the Sanchi oil tanker spill**, the largest marine pollution incident since the 1989 Exxon Valdez oil spill.

PERSGA has similarly established the **Emergency Mutual Aid Centre** in the Red Sea and Gulf of Aden to coordinate regional pollution prevention and preparedness in the event of an oil spill. In such an event, the centre simulates the potential spread of oil pollution and suggests appropriate mitigation measures. This has improved capacity, collaboration and coordination throughout the region and has resulted in **greater member country incident preparedness**.

As one of the components of MAP, the **Programme for the Assessment and Control of Marine Pollution in the Mediterranean (MED POL)** assists contracting parties to the Barcelona Convention in preventing and eliminating sources of land-based pollution of the Mediterranean Sea. The Programme supports countries in meeting their obligations under the Convention, the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities, and the Protocol for the Prevention of Pollution in the Mediterranean Sea by Dumping from Ships and Aircraft, by planning and coordinating initiatives and actions, including promoting and catalysing synergies and investment programmes. Furthermore,



it **facilitates the implementation of national action plans** to address land-based pollution and related legally binding policies and continuously assess the status and pollution trends in the Mediterranean to achieve the “good environmental status” related to ecological objectives on marine pollution, including litter and noise.

Technical support, guidelines and information exchange



The secretariats of regional seas have undertaken significant research and engagement to develop guidelines and provide technical support to marine stakeholders.

In order to facilitate an ecosystem approach and improve the monitoring of progress towards regional ecological objectives, the **Regional Seas Indicators Working Group** was established in 2014. The interregional group **adopted 22 core indicators**, with the aim of developing coherent and coordinated methodologies for each indicator (UNEP, 2016b). Furthermore, the indicators were mapped against the Sustainable Development Goal indicators and the Aichi Biodiversity Targets, as well as against the objectives under respective regional frameworks. Of the 22 indicators, eight have been directly mapped as relevant to target 14.1. Through that exercise, the secretariats of regional seas have identified and explored how those indicators can be used to measure progress towards Goal 14, focusing on existing practices, data and information gaps; how they can be used to assess gaps between regional targets and the Goals; and how they can be best used to assist member countries in monitoring progress towards the Goals and incorporate regional contributions into national reporting (such as state of the environment results). Those considerations and the important role of regional seas in monitoring the Goals have been incorporated into a recent manual developed by UNEP to guide countries in reporting on Goal 14 target indicators for which they are the custodian agency (targets 14.1.1a, 14.1.1b, 14.2.1 and 14.5.1) (UNEP, 2021b). For example, data on

surface water concentrations of chlorophyll a are collected as part of the core indicators of regional seas and used as a proxy indicator for coastal eutrophication, allowing for progress to be tracked towards target 14.1.1 (UNEP, 2021b (appendix 2); 2021c). The **Nutrient Reduction Scheme** was introduced as part of the HELCOM Baltic Sea Action Plan in 2007 and revised in 2013, with the aim of achieving a Baltic Sea unaffected by eutrophication, as agreed by Baltic Sea countries. The scheme sets out maximum allowable inputs of nutrients and country-allocated reduction targets, representing a coordinated regional approach with agreed responsibilities at the national level. As a result, **substantial reductions in nutrient inputs throughout the Baltic Sea have been observed** (12 per cent decrease in nitrogen and 26 per cent decrease in phosphorus between the reference period (1997 – 2003) and 2018) (HELCOM, 2020).

In the Arctic region, the Protection of the Arctic Marine Environment (PAME) Working Group established an expert group to assist the secretariat with a Desktop Study on Marine Litter, including Microplastics, in the Arctic. Completed in 2019, the study represents the first investigation of the situation regarding marine litter covering the circumpolar Arctic, helping to improve understanding of the status and impact of marine litter, particularly plastics, in the region. The results were used to inform the **development of a regional action plan on marine litter**.



▶ **Target 14.2: Strengthening sustainable marine management for a healthy ocean**

<p>Dedicated ecosystem monitoring programmes on a regional scale support responsive and precautionary ocean management</p>	<p>Nearly every regional sea has produced guidelines to support countries in integrated planning for sustainable marine resource use</p>
<p>The Convention on the Conservation of Antarctic Marine Living Resources (CAMLRL Convention) Ecosystem Monitoring Programme informs the development of regulations that manage krill fishing in the Antarctic region, consistent with an ecosystem-based precautionary approach</p>	<p>The Cartagena Convention secretariat helped to establish a forum for MPA managers to exchange experiences and a database to track MPAs in the wider Caribbean region</p>
<p>PAME supported the creation of guidelines for implementing an ecosystem approach to the management of Arctic marine ecosystems, which are the first guidelines of their kind for the Arctic</p>	<p>COBSEA jointly established the Green Fins initiative to conserve coral reefs through internationally recognized environmental standards for the diving and snorkelling industry</p>
<p>Regional guidelines for integrated coastal planning and management have been developed in the NOWPAP region</p>	<p>The Regional Organization for the Protection of the Marine Environment under the Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution (ROPME) signed an MoU with the Regional Commission for Fisheries to establish a framework for cooperation</p>
<p>PERSGA established a project to implement ecosystem-based management principles and improve community livelihoods</p>	<p>The Integrated Monitoring and Assessment Programme (IMAP) was instrumental in the development of the 2017 quality status report for the Mediterranean by MAP</p>

Marine and coastal ecosystems support a breadth of economic activities, including tourism, fisheries, shipping and energy production. However, increasingly intensive and overlapping human use is placing significant pressure on those ecosystems, resulting in habitat destruction and biodiversity loss. Reducing the impact of human activities requires a balance between economic, environmental and social objectives

through gender-sensitive and participatory coordinated planning, monitoring programmes and stakeholder partnerships.



Regional seas are well placed to support coordinated management approaches

Regional seas bring together marine actors from a variety of groups and sectors, operating at all levels, to collectively identify priorities and common issues and agree on coordinated responses. This key role facilitates an adaptive management approach by enabling timely responses to changing priorities and circumstances. As shown in **figure 10**, the secretariats of regional seas have supported coordinated efforts across countries, through a range of actions including the establishment of partnerships and memorandums of understanding; the development and implementation of guidelines and protocols

relating to sustainable management; the conduct of scientific programmes to identify, assess and monitor activities; and the provision of training to marine and coastal users to support sustainable use.

The secretariats of regional seas have used a number of tools and approaches to enhance the sustainability of marine resources, including:

- ▶ Integrated land use planning and management
- ▶ Integrated coastal zone and watershed management
- ▶ Marine spatial planning
- ▶ Environmental impact assessments and strategic environmental assessments
- ▶ Ecosystem-based management

Figure 10: Examples of key actions that Regional Seas take to support sustainable marine management.



Source: UNEP-WCMC

- ▶ Economic valuation of ecosystem services and disservices (Schaubroeck, 2017)

Furthermore, in 2016, the fundamental importance of the role of regional seas in achieving sustainable ocean use was recognized by Member States of the United Nations Environment Assembly, who called for stronger intersectoral coordination to support the integrated management and application of an ecosystem approach.

Achievements by regional seas in strengthening sustainable marine management

Partnerships for action



In many regions, the secretariats of regional seas have developed partnerships with key organizations from various sectors, such as regional fishery bodies, research groups and the

International Maritime Organization.

For example, the PERSGA secretariat established a working group to collaborate with organizations to develop a **regional ecosystem-based management strategy** in the Persian Gulf and the Gulf of Oman.

In 2018, the Regional Organization for the Protection of the Marine Environment (ROPME) secretariat signed an **MoU** with the Regional Commission for Fisheries that provides a basis for **joint projects and knowledge exchange** and demonstrates recognition at the national level of the value of cross-sectoral cooperation to achieve ecosystem-based management in the ROPME Sea Area, which covers the Arabian Gulf and Gulf of Oman.

Furthermore, several regional seas have registered **voluntary commitments** under the

United Nations Ocean Conference to establish or strengthen partnerships with other competent institutions in order to support coordinated action. Examples include the partnership between MAP and the Food and Agriculture Organization of the United Nations General Fisheries Commission for the Mediterranean (GFCM); between the Commission of the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) and the North-East Atlantic Fisheries Commission (NEAFC); and between the Caribbean Environment Programme (CEP) and OSPAR.

Guidelines and codes of conduct



Through the development of guidelines and codes of conduct, regional seas have supported contracting parties by improving their technical knowledge, awareness and skills relating to sustainable marine and coastal management.

In the Northwest Pacific, for example, the NOWPAP Pollution Monitoring Regional Activity Centre established the **Integrated Coastal Area and River Basin Management Working Group**. Following a review of existing marine spatial plans and ecosystem-based management approaches in the region, NOWPAP and Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) developed **regional guidelines for integrated coastal planning and management**. NOWPAP and PEMSEA continue to jointly deliver capacity-building and integrated coastal zone management and marine spatial planning training, **improving understanding of integrated coastal and river basin management among parties**. Furthermore, joint NOWPAP-PEMSEA training materials are used in Asian Pacific universities to support future coastal zone management and spatial planning.

In 2007, following an Arctic Council request, PAME established the **Ecosystem Approach Expert Group** to agree on a definition, principles and recommendations for the use of that management approach in the Arctic. In 2011, the



Group was integrated into three Arctic Council working groups: the Conservation of Arctic Flora and Fauna Working Group, the Arctic Monitoring and Assessment Programme and the Sustainable Development Working Group. Recommendations from the Expert Group were adopted as part of the Kiruna Declaration, which was published by the Arctic Council in 2013 and which led to the 2019 publication of practical guidelines to assist different marine actors in the **implementation of a unified ecosystem-based management approach** to support sustainable development of Arctic marine ecosystems.

In the Red Sea and Gulf of Aden, PERSGA, in collaboration with the World Bank, implemented a regional **strategic ecosystem management project**, which convened stakeholders from governments, non-governmental organizations and the civil sector. Under the project, **existing legislation and management practices were revised, and tailored guidelines for ecosystem-based management were produced**. The project also promoted community-based alternative livelihoods in ecotourism and sustainable fisheries to demonstrate the co-benefits offered by marine resources and MPAs, particularly in relation to poverty reduction, food security and job creation.

Protocols, action plans and legally binding measures



Under the Barcelona Convention, Mediterranean countries adopted the **Protocol on Integrated Coastal Zone Management** in 2008. Entering into force in 2011, it has provided a **legal basis for coordinated implementation** of national integrated coastal and marine management policies.

Awareness raising and capacity-building



Many secretariats of regional seas have undertaken awareness-raising activities and promoted local training and capacity-building to support healthy marine ecosystems and sustainable use.

In the East Asian Seas region, the COBSEA secretariat, the Reef-World Foundation, the Phuket Marine Biological Centre and UNEP established the **Green Fins initiative**, the world's only internationally recognized set of business standards for diving and snorkelling. The initiative brings together marine users across all sectors (including the private sector) to raise awareness and foster environmental stewardship in coastal tourism at the national level. To date, it has been **adopted by 600 marine tourism companies in 11 countries**, expanding into the Caribbean, Red Sea and Pacific regions; studies show that dive operators following this approach in the Philippines have significantly lower reef contact (and hence reef damage) rates than other operators (Roche et al., 2016).

In the wider Caribbean region, the Cartagena Convention secretariat partnered with the Government of Italy to deliver **training and capacity-building activities** to increase institutional capacity to implement ecosystem-based management approaches. In addition, complementary **training of trainers** exercises have been hosted in 22 countries under the Caribbean Marine Protected Areas Management Network and Forum. The training has **strengthened MPA management and collaboration** among managers by improving methodological and operational ecosystem-based management-decision support systems and increasing use of marine spatial planning approaches and technical and financial support from public and private organizations.

Environmental monitoring and data collection



Monitoring and data collection at the regional level play an important role in addressing transboundary issues, and many secretariats of regional seas have established monitoring,

data-collection and data-sharing programmes.

In the Southern Ocean, the **Ecosystem Monitoring Programme** of CCAMLR was established to detect and record significant changes in key components of the marine ecosystem and attribute changes to the harvesting of commercial species or natural environmental variability. The population size and breeding success of indicator species (such as krill, penguins, seals and birds) are assessed in line with robust and extensive monitoring, reporting and analysis standards, **enabling precautionary and adaptive management of krill fisheries** in the region. Data flows from monitoring activities are managed by the CCAMLR secretariat, which coordinates international data exchange between contracting parties to inform management decisions.

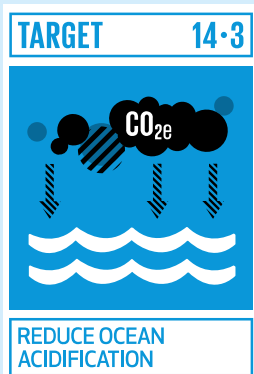
In the wider Caribbean region, the **Caribbean Marine Protected Areas Management database**, established under CEP, contains a wealth of

information for 1,069 Caribbean MPAs, including an interactive map and easy search and download options. It is used to support the **tracking of progress towards the achievement of indicators at the national, regional and global scale**.

Recently, the Cartagena Convention secretariat supported an independent evaluation of the database, updating information for more than 80 MPAs in the region.

Under the Barcelona Convention, Mediterranean countries adopted the **IMAP**, to bolster the implementation of the ecosystem approach, which enables quantitative integrated monitoring and assessment of the status of the Mediterranean Sea and its coastal areas. IMAP encompasses 11 ecological objectives and related targets and 27 common indicators, covering pollution, marine litter, biodiversity, non-indigenous species, coastal ecosystems and hydrography. The adoption of IMAP was instrumental in the development of the **first quality status report for the Mediterranean** by MAP in 2017. Quality status reports based on IMAP monitoring will be produced every six years to assess trends and progress in relation to the good environmental status in the Mediterranean and to support the development of evidence-based policies and measures for the sustainable management of the Mediterranean Sea and its coastal areas.





▶ **Target 14.3: Mitigating ocean acidification**

<p>Regional seas play a key role in raising awareness and improving scientific understanding of ocean acidification and its impact</p>	<p>Regional seas support countries in monitoring and reporting on ocean acidification in line with national, regional and global frameworks</p>
<p>HELCOM supports the collaborative development of an operational marine acidification indicator</p>	<p>SPREP coordinates the Pacific Partnership on Ocean Acidification in collaboration with the University of the South Pacific and the Pacific community</p>
<p>The Cartagena Convention secretariat and The Ocean Foundation have partnered to implement monitoring and assessment programmes for ocean acidification</p>	<p>The Nairobi Convention is supporting the development of an action plan on ocean acidification</p>

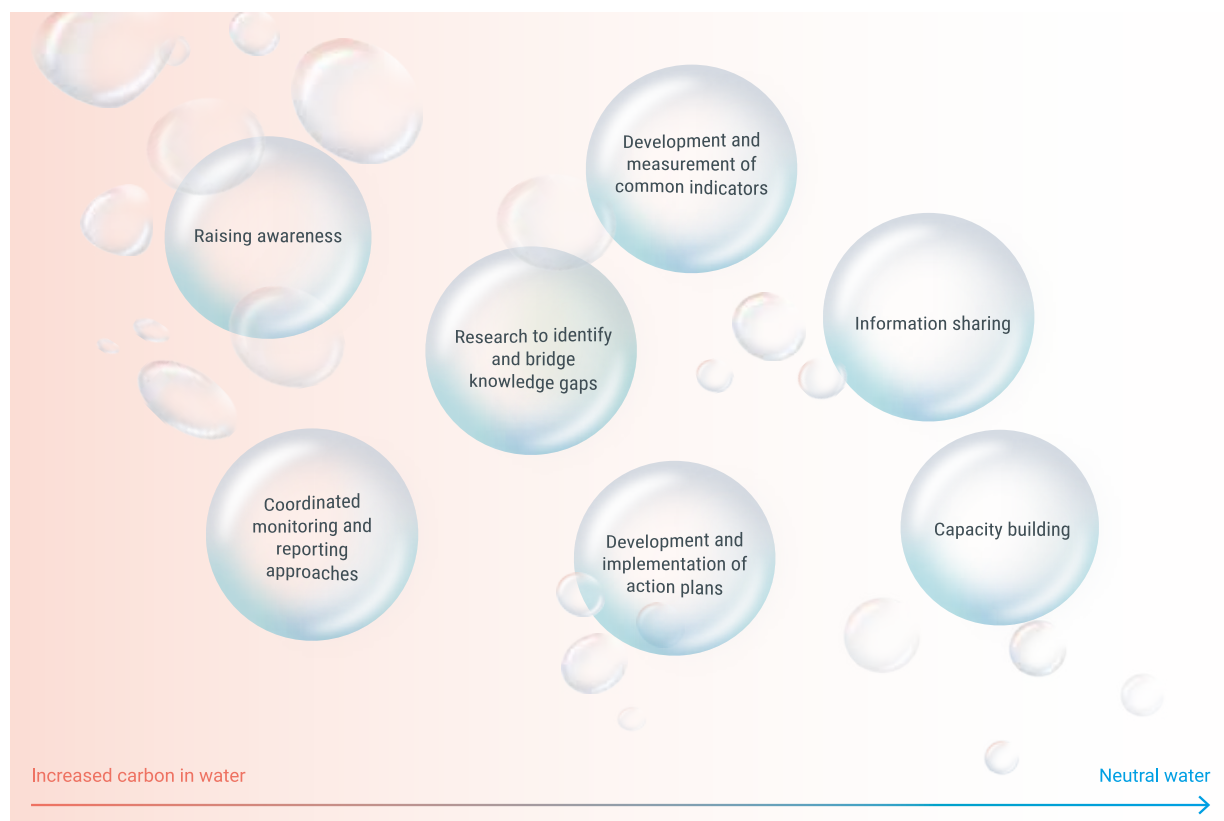
Ocean acidification occurs when excess atmospheric carbon dioxide is absorbed by the ocean, increasing its acidity. Increased ocean acidity threatens many marine organisms, particularly those with carbonate shells or skeletons, such as corals and molluscs, thus impacting ecosystem functioning. Increasing pressure from human activities, including habitat removal and destruction, and pollution, intensifies the impact of ocean acidification, placing additional stress on species and making it harder for ecosystems to function.

Regional seas support coordinated efforts to better understand, mitigate and manage the impact of ocean acidification

Ocean acidification is an ocean-wide phenomenon. To address its causes and reduce and mitigate its impact, the secretariats of regional seas recognize that coordinated, targeted and transboundary efforts across all regions,

sectors and marine users are essential. They thus support efforts by member countries in recognizing this threat and play a leading role in raising awareness and bridging information gaps through dedicated studies and information products. In certain regions, efforts relating to ocean acidification, including capacity-building and the establishment of training programmes and monitoring networks, have been formalized through specific strategies and action plans. Furthermore, the secretariats of regional seas encourage both intra- and interregional cooperation and coordination through partnerships, information-sharing networks and new or existing communication channels (**figure 11**).

Figure 11: Example key actions that Regional Seas take to support the reduction and mitigation of ocean acidification.



Source: UNEP-WCMC

Achievements by regional seas in mitigating ocean acidification

Strategies and action plans



In 2020, in the Western Indian Ocean, the Nairobi Convention secretariat worked closely with partners to develop the **Ocean Acidification Action Plan**. To guide the plan's development, two regional workshops were jointly hosted in 2017 and 2019 with the IUCN-chaired Ocean Acidification International Reference User Group and the Western Indian Ocean Marine Science Association. The workshops assessed existing regional knowledge and ongoing actions to combat ocean acidification and set out recommended actions that are now under way,

such as the establishment of a regional network of practitioners and **institutional capacity-building for monitoring and assessing the impact of ocean acidification**.

In the wider Caribbean region, contracting parties to the Cartagena Convention provided the secretariat and its regional activity centres with the mandate to update its **Regional Strategy for the Protection and Development of the Wider Caribbean Region** to include emerging issues such as ocean acidification. Further joint work is ongoing under the United Nations Development Programme/Global Environment Facility Caribbean and North Brazil Shelf Large Marine Ecosystem Project (UNDP/GEF CLME+) to document and respond to the impact of ocean acidification on critical marine habitats and develop a regional strategy and action plan (Caribbean Environment Programme, 2020). The endorsement by contracting parties has **improved collaboration between MPA managers, strengthened partnerships and generated**



greater technical and financial support from public and private organizations.

Partnerships for action



In the Pacific region, SPREP, the University of the South Pacific, and the Pacific community jointly coordinate the **Pacific Partnership on Ocean**

Acidification, which aims to

build resilience to ocean acidification in Pacific Island communities and ecosystems. Under the partnership, SPREP also works with international partners, including The Ocean Foundation and the Global Ocean Acidification Observation Network, to **provide training and resources to local scientists to build monitoring and reporting capacity in relation to Sustainable Development Goal indicator 14.3.1**. Further work is ongoing to identify priority sites and stakeholder needs in order to inform the development of appropriate adaptation measures, including practical nature-based solutions to restore habitats and reduce secondary stresses.

In October 2019, an **MoU** between the Cartagena Convention secretariat and The Ocean Foundation was established to provide a framework for collaborative efforts towards shared goals and capacity-building to monitor the effects of ocean acidification in the Caribbean (UNEP/The Ocean Foundation, 2019). The MoU is the result of a request from contracting parties to jointly develop and implement strategies and projects to support progress towards the 2030 Agenda for sustainable development (UNEP, 2019a).

Joint implementation of ocean acidification monitoring and mitigation projects in key marine

ecosystems has begun between contracting parties to the Specially Protected Areas and Wildlife (SPA) Protocol.

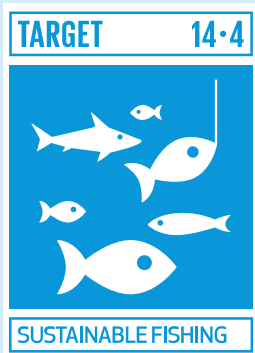
Indicators to track acidification



In 2018, ministers agreed that the preparedness of HELCOM to respond to climate change impacts should be increased and noted key actions for the secretariat in order to update

the Baltic Sea Action Plan and improve scientific understanding. To that end, the **Operational Marine Acidification Indicator project** was launched to collaboratively develop a regional marine acidification indicator. Through extensive consultation with representatives and experts from four Baltic Sea countries, the HELCOM secretariat and international working groups, a candidate indicator has been created. Experts have been identified to lead the finalization and sustainability of the indicator beyond the life of the project and to work closely with regional stakeholders to encourage acceptance and uptake.

In the Red Sea and Gulf of Aden, **two status indicators** for ocean acidification were included in the updated set of regional State of the Marine Environment Report indicators in 2018, which was approved at the PERSGA focal points meeting in 2019. The new indicators monitor the number of sites with pH high-accuracy measurements and change in pH values.



▶ **Target 14.4: Reducing illegal, unreported and unregulated fishing**

<p>Regional seas cooperate with regional fishery bodies to support efforts to reduce illegal, unreported and unregulated fishing and ensure integrated ocean management</p>	<p>Regional seas and regional fishery bodies share capacity and scientific expertise through cooperation agreements that support science-based decision-making</p>
<p>BSC was granted observer status, enhancing coordination and information exchange with GFCM</p>	<p>CCAMLR introduced legal requirements for port inspection and a catch document scheme for toothfish to ensure that illegally landed fish cannot easily enter trade</p>
<p>CPPS played a key role in enabling its member countries to adopt and implement the international Agreement on Port State Measures</p>	<p>The Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region (the Abidjan Convention) supports the implementation of the African Common Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa</p>

Illegal, unreported and unregulated fishing severely impacts the health and productivity of fish stocks, marine habitats and non-target species such as sharks and seabirds. It also undermines ecosystem and fisheries management efforts, contributing to the overexploitation of managed fish stocks – forcing local fishers to harvest alternative species for food and income – and undermining efforts to mitigate the impact on ecological food webs. That in turn places increased pressure on fish, aquatic mammals, reptiles and birds and ultimately threatens ecosystem health. Owing to the vast, remote and dynamic nature of oceans, the effective monitoring of illegal, unreported and unregulated fishing is a challenge and requires significant technical skill and financial capacity,

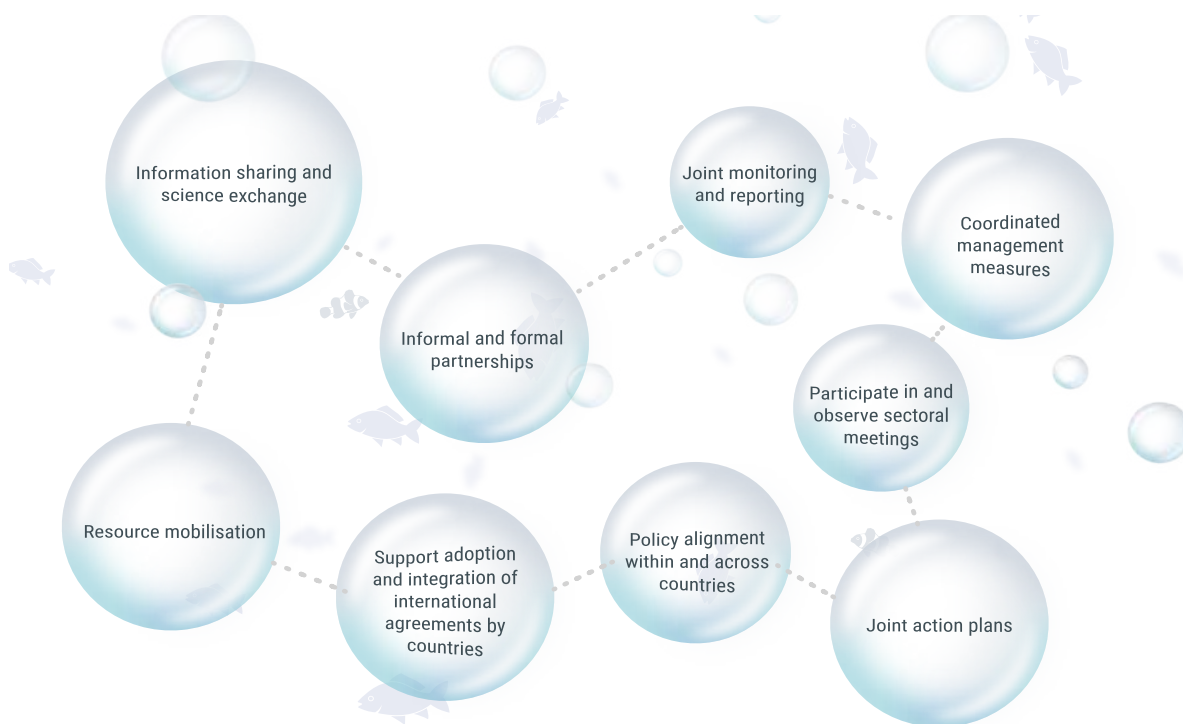
as well as national cooperation to coordinate activities across exclusive economic zones.

Regional collaboration supports efforts to reduce illegal, unreported and unregulated fishing

At the regional level, fisheries management falls within the mandate of RFMOs, which support countries in managing their fish stocks through regional and global guidelines and binding and non-binding decisions. Fisheries are generally not part of the core mandate of regional seas (with the exception of CCAMLR, the Permanent Commission for the South Pacific (CPPS) and PERSGA). However, the geographic area covered by regional seas often overlaps with that of one or



Figure 12: Examples of key actions that Regional Seas take to support reductions in IUU fisheries.



Coordinated activities

Source: UNEP-WCMC

more RFMOs, and thus they share contracting parties and areas of interest. As a result, the secretariats of regional seas can support other entities in delivering on institutional mandates that align with the Sustainable Development Goal targets (for example, those under the 2016 Agreement on Port State Measures, which helps to prevent fish caught illegally from entering markets). The key role of regional seas in relation to illegal, unreported and unregulated fishing is based on improving communication, cooperation and coordination with RFMOs to apply a broader ecosystem-based management approach (for example, through informal or formal partnerships, joint monitoring and reporting programmes and information exchange mechanisms; and through efforts to align institutional policies and develop complementary objectives) (figure 12).

Achievements by regional seas in supporting a reduction in illegal, unreported and unregulated fishing

Partnerships for sustainable management



The first MoU that **formalized cooperation between a regional sea and a RFMO** was signed in 2012 between MAP and GFCM. Building on that, in the Black Sea, BSC has formalized partnerships relevant to illegal,

unreported and unregulated fishing through an **MoU** with GFCM and the Agreement on the Conservation of Cetaceans of the Black Sea,

Mediterranean Sea and contiguous Atlantic area, which was established in 2002. The MoU facilitates coordinated efforts for sustainable management across the region by enabling BSC to attend meetings with GFCM and parties to the agreement (with observer status). That has enhanced the **sharing of expertise and information and improved mutual understanding of priorities and issues. That, in turn, has led to complementary actions (such as aligned indicators) to improve fisheries management and use an integrated ecosystem approach.**

In 2016, the Bucharest Declaration on fisheries reiterated the need to address environmental challenges in the Black Sea. It has thus created new opportunities for joint activities in areas such as illegal, unreported and unregulated fishing.

In 2017, parties to the Abidjan Convention established the **Abidjan Aquatic Wildlife Partnership**, a multi-stakeholder collaboration between the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Convention on Migratory Species of Wild Animals, CBD, the Food and Agriculture Organization of the United Nations (FAO), OceanCare and Born Free, among others. The Partnership focuses on raising awareness and encouraging action among governments, relevant industries and local communities in West, Central and Southern Africa to reduce overharvesting of coastal and marine species for aquatic wild meat, wildlife trade and fishing bait. **The mapping of capture and trade hotspots** and a **threat assessment** have been undertaken by the West Africa Biodiversity and Climate Change programme and the Abidjan Convention secretariat to raise awareness of the extent of the issue. The partnership also facilitates the exchange of information on threatened aquatic species, helping to optimize resource use and support the implementation of the African Common Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa.

Supporting the adoption of international agreements



In the Southeast Pacific region, CPPS initiated a **regional project, *La Pesca Illegal, No Declarada y No Reglamentada*, or *Pesca INDNR***, to strengthen capacity among its four member countries to address illegal, unreported and unregulated fishing. The project **facilitated the adoption of the Agreement on Port State Measures** by identifying good practices, inconsistencies, and gaps in national legislation. Furthermore, CPPS convened a **series of regional meetings and workshops** to build capacity and strengthen collaboration on illegal, unreported and unregulated fishing in the wider region, including neighbouring countries and the South Pacific RFMO, which provided the basis for dialogue on a potential centre for the monitoring of illegal, unreported and unregulated fishing.

Supporting the implementation of illegal, unreported and unregulated fishing management actions



In the Southern Ocean, the unique institutional and legal underpinnings of CCAMLR provide a mandate that enables the secretariat to implement measures directly related to fishing activities. CCAMLR has adopted a **series of conservation measures** to address the threat of illegal, unreported and unregulated fishing for toothfish. These include lists of illegal, unreported and unregulated fishing vessels (conservation measures 10-06 and CM-10-07), compliance measures for contracting party nationals (conservation measure 10-08), port inspection requirements (conservation measure 10-03) and a catch document scheme for toothfish (conservation measure 10-05) to ensure that toothfish from illegal, unreported and unregulated fishing cannot easily be traded. Furthermore, CCAMLR has an active **engagement programme** for non-member countries that encourages them to cooperate with CCAMLR and not trade



in toothfish that do not have legitimate catch documents and to provide details of possible or known illegal, unreported and unregulated fishing vessels in the convention area. Since those measures were established, **illegal, unreported and unregulated fishing activities have decreased from around 33,000 tons in 1996–1997 to less than 1,000 tons by 2008–2009** (Osterblom and Bodim, 2012). Sightings of illegal, unreported and unregulated fishing vessels have also continued to decline since 2008, with none sighted in 2017 or 2018 (Working Group on Fish Stock Assessment, 2018).

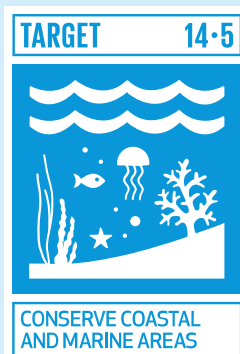
In the Red Sea and Gulf of Aden, the PERSGA special programme for living marine resource management provides **capacity-building workshops and institutional support in**



fisheries management to its member countries. Regional guidelines for priority issues have been developed, including the management of sharks, ornamental fish and sea cucumber fisheries. **Measures to prohibit shark and ornament overfishing have been adopted by national regulations in all PERSGA member countries.** The programme has also organized regional workshops on illegal, unreported and unregulated fishing and an ecosystems approach to fisheries management. This work directly informs the ongoing work to develop a new regional protocol on cooperation in the management of fisheries and aquaculture in the Red Sea and Gulf of Aden.



Source: UNEP-WCMC



▶ **Target 14.5: Enhancing marine and coastal area protection**

<p>Many regional seas have dedicated activity centres and technical groups to support area-based protection activities</p>	<p>Regional seas have developed MPA guidelines and action plans to protect marine and coastal environments.</p>
<p>Nineteen Mediterranean countries have prepared a National Biodiversity Strategy and Action Plan, including a dedicated section on MPAs</p>	<p>Increased regional collaboration supported by ROPME has helped stakeholders to leverage funding, pool knowledge and expertise, share best practices and jointly address common challenges related to MPAs</p>
<p>The Nairobi Convention secretariat has produced a regional outlook on MPAs to inform policymaking for enhanced coastal and marine conservation</p>	<p>The Abidjan Convention is collaborating with the Regional Network of Marine Protected Areas in West Africa to build capacity to support protected area designation and management</p>
<p>OSPAR has established MPAs in areas beyond national jurisdiction, based on OSPAR’s regulatory regime, to protect unique and ecologically important habitats and bring measures in areas beyond national jurisdiction within the OSPAR maritime area</p>	<p>PAME has developed a framework for a pan-Arctic network of MPAs to support an ecologically coherent network</p>
<p>PERSGA has established a regional network of MPAs in the Red Sea and Gulf of Aden through a regional protocol that has strengthened relationships between countries</p> <p>Three MPAs in the network have been designated as UNESCO World Heritage Sites</p>	<p>The Cartagena Convention secretariat is developing a plan to facilitate cooperation between MPAs listed under the SPAW Protocol and create a functional network of MPAs in the wider Caribbean region</p>

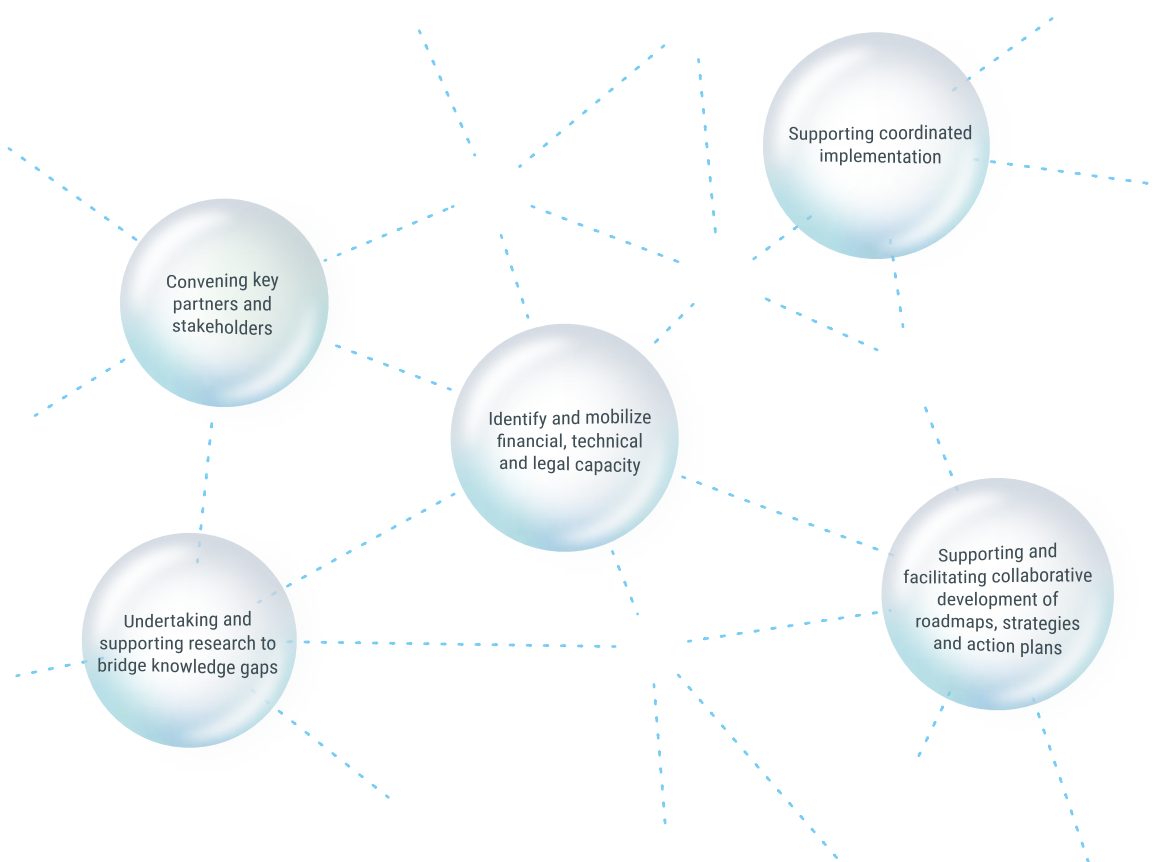


Marine ecosystems and species do not recognize national borders. Ocean currents and organisms cross exclusive economic zones and move in and out of areas beyond national jurisdiction. Networks of ecologically coherent MPAs provide a tool to account for that dynamism; however, many countries lack the technical capacity and resources to designate and effectively manage protected areas. Those gaps highlight the need for collaborative action to leverage funding, pool knowledge and expertise and share best practices.

Regional approaches facilitate the designation and management of MPAs and MPA networks

The secretariats of regional seas play an important role in supporting the designation and effective management of MPAs by promoting the exchange of information and best practices and providing access to and mobilizing vital technical and financial resources. They also provide a mechanism through which different marine users can convene and communicate individual priorities and objectives. That enables the development of appropriate MPA designation and management practices that enable sustainable use and conservation. Key actions by secretariats of regional seas are illustrated in **figure 13**.

Figure 13: Examples of key actions that Regional Seas take to support MPA designation and management.



Source: UNEP-WCMC

Achievements by regional seas in enhancing marine and coastal protection

Road maps, strategies and action plans



ROPME has supported the development of an MPA network and the effective management of MPAs in the ROPME Sea Area through the first ever **regional assessment**

of MPA management effectiveness. The assessment has increased regional collaboration; helped stakeholders to **leverage funding, pool knowledge and expertise and share best practices;** and allowed for **common challenges related to MPAs to be addressed.** In turn, that has provided regional measures to regulate human activities and established general principles and common criteria for designating MPAs.

The Barcelona Convention has bolstered regional and national efforts to conserve marine and coastal species and habitats in line with the **Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean** and the **Strategic Action Programme for the Conservation of the Biological Diversity in the Mediterranean Region.**

Facilitating a network approach



In the Northeast Atlantic region, the Convention for the Protection of the Marine Environment of the North-East Atlantic (the OSPAR Convention) has adopted a **recommendation**

to develop a network of ecologically coherent and well-managed MPAs (OSPAR, 2010). OSPAR has collectively designated MPAs in areas beyond national jurisdiction of the OSPAR maritime area in accordance with its legal mandate, as set out in the regulatory regime (OSPAR, 2021). The achievement of the conservation objectives of

MPAs is facilitated by a **collective arrangement**, which serves a forum for multilateral dialogue. Through the arrangement, the regional RFMO and NEAFC **collaborate with OSPAR to implement area-based management in line with their respective mandates.** MPA information is managed and shared through the OSPAR MPA database. To support the aims of the MPA network, OSPAR has created guidelines to manage MPAs. Guidance on how to assess the ecological coherence and management effectiveness of the MPA network has also been developed, and contracting parties are requested to provide information on implementation to support annual assessments.

In the Arctic region, PAME has developed a **framework for a Pan-Arctic Network of MPAs**, which sets out a **common vision for international cooperation in MPA network development and management.** The framework builds on extensive work on the ecosystem-based management and arctic biodiversity approach conducted previously by several working groups. The framework is not binding; each Arctic State proceeds with MPA-network development based on its own priorities and timelines. However, the common vision supports and enhances the work of individual States, allowing them to achieve national objectives and international commitments. Furthermore, in order to support the implementation of the framework, PAME developed an **MPA network toolbox and guidance** for decision makers, practitioners, indigenous peoples and stakeholders in the region.

PERSGA created a **network of MPAs** in the Red Sea and Gulf of Aden. It includes MPAs from each member country and, as such, has helped to **strengthen relationships between countries by opening a dialogue between MPA managers.** This has included the transformation of small community settlements into ecovillages and their inclusion in the MPA network. Ownership and environmental stewardship have increased across the region as a result of this improved engagement (for example, an **increase in management effectiveness** in the Wadi el



Gemal National Park, Egypt, as determined via a management effectiveness tracking tool evaluation). Furthermore, a key success of this network is the designation of **three of its MPAs as UNESCO World Heritage Sites**.

In the Mediterranean, only 10 per cent of marine areas covered by conservation measures have management plans owing to a lack of financial resources and technical skills and gaps in the existing legal and policy frameworks. To improve regional MPA management, the Barcelona Convention, supported by the Regional Activity Centre on Specially Protected Areas, led a participatory process to develop and adopt a **road map for a comprehensive and coherent network of well-managed MPAs**. It aims to strengthen networks of protected areas, improve effective and equitable management, promote the sharing of environmental and socioeconomic benefits of the Mediterranean and enhance financial sustainability. The road map provides guidance on harmonizing MPA implementation and management at the local, national and regional levels in line with Sustainable Development Goal target 14.5 (and Aichi Target 11). A key to the success of the road map is the **existence of MedFund**, a **sustainable financing mechanism** providing funding for MPAs in the Mediterranean, launched by France, Monaco and Tunisia in 2013.

Partnerships for action



The secretariats of regional seas support the establishment of partnerships to develop transboundary MPAs.

The Abidjan Convention secretariat and the Regional Network of Marine Protected Areas in West Africa have signed an **MoU** and are collaborating with member countries (Cape Verde, Gambia, Guinea, Guinea Bissau, Mauritania, Senegal and Sierra Leone) to establish MPAs. The collaboration provides opportunities for those countries to **exchange best practices, build on lessons learned and develop capacity** through the conduct of training and awareness-raising activities and the development of guidelines.

The Abidjan Convention secretariat is working with Côte d'Ivoire to establish the country's first MPA and with Liberia and Ghana to establish transboundary MPAs between Côte d'Ivoire and Ghana and between Côte d'Ivoire and Liberia.

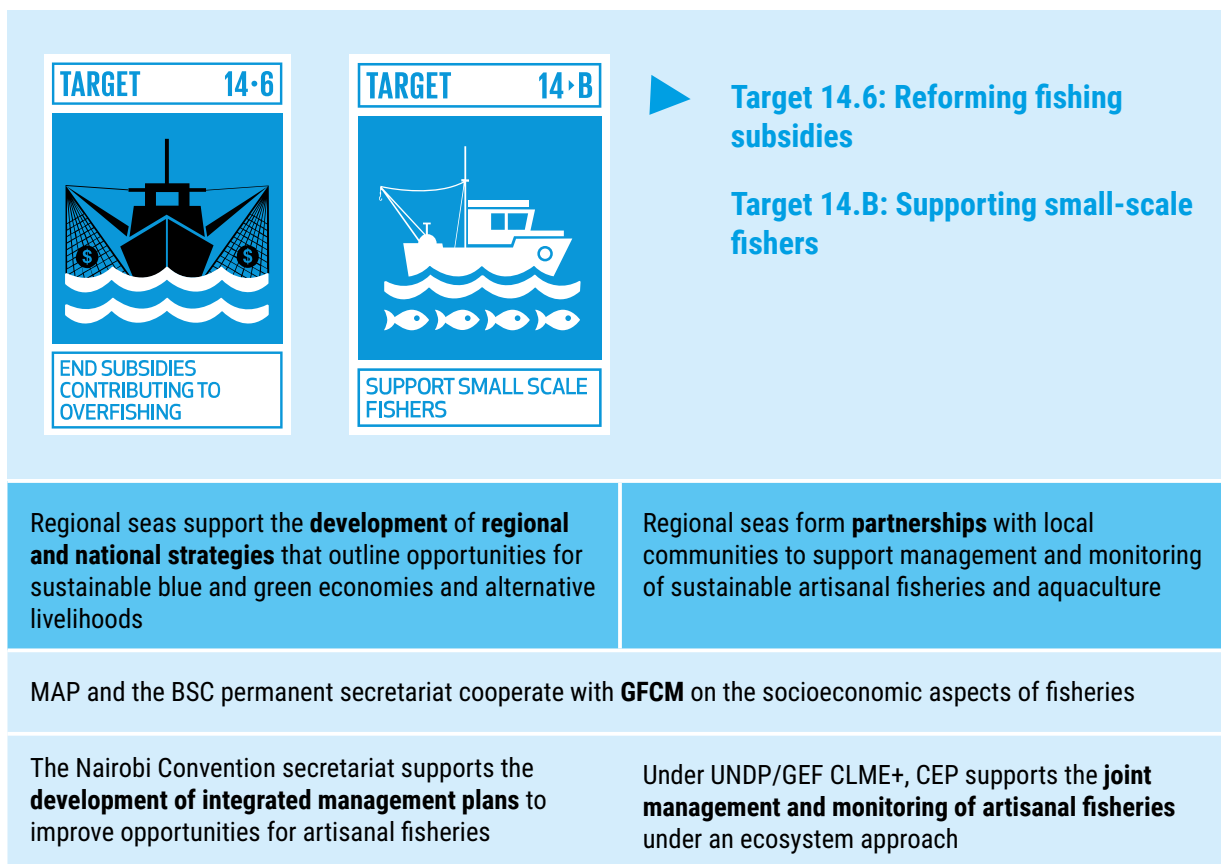
In the framework of an agreement between MAP and the Italian Ministry of the Environment, Land and Sea Protection, **Developing and Strengthening an Effective Management of Specially Protected Areas of Mediterranean Importance** is an innovative twinning programme that focuses on sharing management and monitoring knowledge, building management capacity and supporting the involvement of civil society. The programme is important not only because of its expected contribution to the conservation of marine and coastal biodiversity but also because it is **proof of the enhanced cooperation** among Mediterranean countries that share the same objectives.

Monitoring, assessment and evaluation



Across many regions, MPA monitoring and assessment is supported by regional seas. For example, in the Red Sea and Gulf of Aden, MPA **monitoring and evaluation** is supported and coordinated by PERSGA. Two **standardized regional indicators** are applied by regional State of the Marine Environment Report assessments, which include scores for "areas of legally recognized MPAs" and "MPA management effectiveness".

In the Western Indian Ocean, the Nairobi Convention secretariat has produced an **outlook report of MPAs in the region**, which details the spatial extent and management effectiveness of existing coastal and marine conservation efforts. The report also **provides recommendations for enhanced management and details of proposed MPAs for the region**. It contributes to a wider process under which future recommendations for countries to use area-based management approaches to achieve global targets – including



through the use of other effective area-based conservation measures – are being developed.

The effects of harmful fishing subsidies – financial transfers from public entities to private actors – are well documented and contribute to overfishing by supporting more fishing capacity than needed to harvest a maximum sustainable yield. Such subsidies can also create unfair competition between large- and small-scale fisheries, driving increases in food insecurity and financial poverty.

Regional seas support the achievement of fisheries-related goals and targets

Fisheries are generally not part of the core mandate of regional seas (except for CCAMLR, CPPS and PERSGA). As such, few secretariats of regional seas are able to take direct action to address the topics covered by targets 14.6 and 14.B. However, overcapacity and overfishing affect the marine ecosystems and biodiversity

that regional seas are mandated to protect. Therefore, secretariats of regional seas can and do collaborate with other sectoral organizations and governments to support this area of work indirectly. They do so by supporting and guiding countries in developing and implementing sustainable management and blue economy strategies and identifying alternative livelihoods to reduce pressures on a particular habitat or species. The secretariats also play a key role in bridging the divide between biodiversity and fisheries-related economic pressures by actively cooperating with fishery bodies, other secretariats of regional seas and national governments, and encouraging interministerial coordination (**figure 14**).



Figure 14: Examples of key actions that Regional Seas can take to support small-scale fishers and reformation of fisheries subsidies.



Source: UNEP-WCMC

Road maps, strategies and action plans



The secretariats of regional seas support the development of regional and national **blue economy strategies and action plans** and encourage the integration of sustainable

resource use principles and integrated ecosystem approaches. Examples include the cooperation between MAP, BSC and GFCM on socioeconomic aspects relating to the environmental impact of large-scale fisheries in the Mediterranean and Black Seas, and the development of blue economy strategies in other regions, including the Northwest Pacific under NOWPAP. Such actions support national governments by **providing sustainable options** for small-scale fishers in the blue and green economies, while reducing the need for harmful subsidies that threaten fishers' livelihoods and the health of the ecosystem.

Partnerships for sustainable management



Several secretariats of regional seas **collaborate and coordinate activities with the Global Environment Facility (GEF) Large Marine Ecosystem** projects, which

include fish and fisheries as a key area of work. To date, 10 secretariats of regional seas have coordinated activities relating to large marine ecosystems in their regions, seeking to identify transboundary issues and develop strategic actions. For instance, in the wider Caribbean region, CEP supports the ecosystem-based **joint management and monitoring** of artisanal shrimp and lobster fisheries under UNDP/GEF CLME+. In the Red Sea and Gulf of Aden, PERSGA encourages its member countries to **implement ecosystem-based approaches to fisheries and aquaculture**.

In the Western Indian Ocean region, the SAPPHIRE project represents a unique collaboration between the Nairobi Convention, the Southwest Indian Ocean Fisheries Commission and FAO on fishery issues in the region. The project's timeframe runs from 2017 to 2023 and **five pilot projects** are currently under way to support integrated approaches and economic development in relation to small-scale fisheries in the region. The pilots aim to raise awareness of marine and coastal ecosystem services and goods among local fishing communities and support the integration of ecosystem-based management approaches into economic activities. Improved integration will be achieved through the **creation of integrated small-scale fisheries management plans** in line with local and national policy, and that will help to identify and **strengthen opportunities for alternative livelihoods**.





▶ **Target 14.7: Increasing economic benefits to small island developing States and least developed countries**

Regional seas create opportunities to mobilize and direct technical and financial resources to support countries in increasing economic benefits

SPREP and its partners have developed regional, sector-specific **environmental impact assessment guidelines** for coastal tourism to ensure sustainable development

The Abidjan Convention supports the **sustainable management of marine and coastal habitats** essential to sustainable economic growth and livelihoods

Partnerships between OSPAR and the Cartagena Convention secretariat support **knowledge-sharing and sustainable resource management**

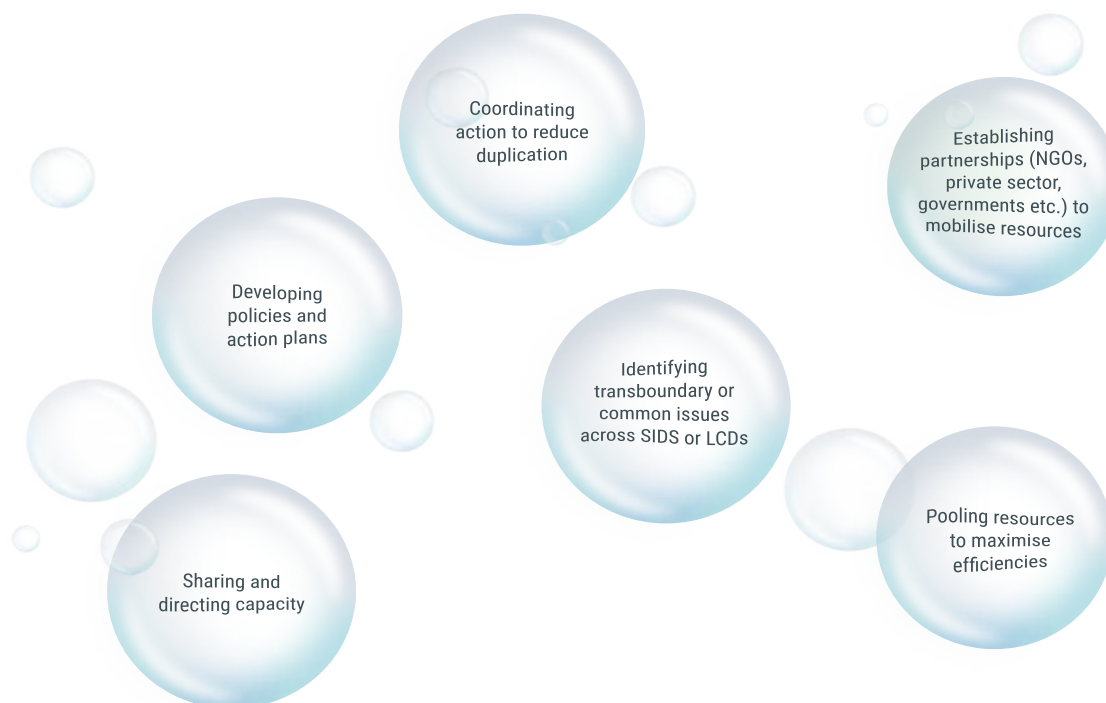
Many people in small island developing States and least developed countries rely on marine ecosystems as their primary source of food and income.

To ensure sustainable ocean-related livelihoods in these regions in the future, a balance between use and conservation is required to prevent increased poverty, hunger, overexploitation and habitat degradation (Sustainable Development Goals 1, 2 and 8). A coordinated approach to information-sharing and to access to technical and financial resources throughout these regions is thus required, making it possible to monitor and track human activities and impact, develop management measures and support new research to bridge gaps in data and scientific knowledge.

Regional seas support resource mobilization and research for sustainable development in small island States and least developed countries

Regional seas provide a framework through which marine stakeholders (including governments, non-governmental organizations and research organizations) can convene to identify issues and priorities, develop joint action plans and strategies and undertake joint research. Through their convening power, the secretariats of regional seas create opportunities to mobilize and direct technical and financial resources to where they are needed most. The sharing and directing of capacity and resources to address common issues and priorities create economies of scale throughout small island developing States and least developed countries and provide opportunities for contracting parties to address multiple issues in parallel. That helps to reduce duplication in spending and effort and decreases

Figure 15: Examples of key actions that Regional Seas take to support resource mobilization and research to support SIDS and LDCs.



Source: UNEP-WCMC

the likelihood of undermining the activities of another institution, country or region.

The secretariats of regional seas also support contracting parties in reducing and preventing the negative impact of marine and coastal tourism on the environment (such as habitat destruction, population displacement and marine pollution) by developing policies and actions such as area-based management to minimize coastal degradation, restore and maintain essential ecosystem services and lessen potential impact on local employment. Examples of key actions relating to this goal are shown in **figure 15**.

Achievements by regional seas in supporting economic benefit flows

Action plans, protocols and guidelines



In the Pacific region, tourism is an important source of income, contributing an estimated 11.6 per cent of total gross domestic product across Oceania, including Pacific island countries and territories (WTTC, 2021)). To help mitigate the adverse impact of tourism on marine and coastal ecosystems, SPREP has partnered with the South Pacific Tourism Organization to produce **regional coastal tourism environmental impact assessment guidelines**. The guidelines



promote best practices to protect environmental, social and cultural assets and build the awareness and capacity of the region and the local tourism sector to undertake them. The guidelines have also catalysed further dialogue on sector-based planning and the need for strategic approaches to improve sustainable development. Recent national action has included a **strategic environmental assessment** to inform implementation of an integrated “ridge-to-reef” approach, which will enhance ecosystem services and support local livelihoods.

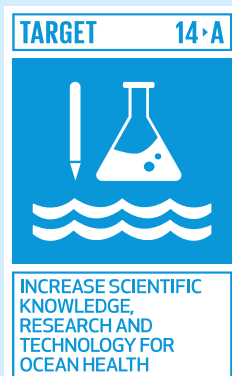
In West Africa, recognizing that 50 per cent of the region’s GDP is generated in coastal areas, the USAID-funded West Africa Biodiversity and Climate Change programme and its partners, including the Abidjan Convention, have developed and implemented a **sustainable mangrove management protocol**. To test the main principles of the protocol, two pilot projects on coastal resilience and mangrove regeneration are currently under way in Sierra Leone and Côte d’Ivoire. The secretariat will **support parties in developing their action plans** to implement the protocol at the national level. Once the plans have been approved, the secretariat will coordinate and monitor their implementation and provide technical assistance to the parties.

Partnerships to support action



Collaboration and coordination between the secretariats of regional seas can increase impact, especially where issues of mutual concern are identified. In 2010, OSPAR

established a twinning programme with the Abidjan Convention, exchanging best practices and supporting capacity-building for ecosystem-based management. In 2017, OSPAR registered a voluntary commitment with the Cartagena Convention secretariat to explore opportunities for interregional cooperation to support progress towards the Sustainable Development Goal targets. The collaboration has strengthened the relationship between the two regions, which are connected by the Atlantic Ocean, and has **built capacity in relation to MPAs, marine litter and nutrient pollution**. Recent successes include the publication of a **manual on harmonizing marine litter monitoring in the wider Caribbean region** (Caporusso & Hougee, 2019), the development of a project proposal on MPA management capacity-building and an evaluation and set of recommendations for the Caribbean Marine Protected Area Management Network and Forum.



▶ **Target 14.A: Improving scientific knowledge**

Information exchange is a key area of work of regional seas, with many having dedicated mechanisms to ensure exchange across regions and with other competent organizations to support evidence-based decision-making

A **science-policy platform** is integrated into the Nairobi Convention to support the consideration of robust scientific information in government decision-making

Collaboration between CPPS member countries through the **Programme for the Regional Study on the El Niño Phenomenon** provides a forum for the exchange of technical guidance and scientific knowledge, helping to minimize risks from El Niño events

An **MoU** has been signed between PERSGA and the Intergovernmental Oceanographic Commission to promote information exchange

The Cartagena Convention secretariat has published reports on the **state of its convention area** (the first of its kind in the region) and the **state of the marine habitat** under UNEP/GEF CLME+ and GEF IWEco projects (state of Cartagena Convention area financing) and forthcoming collaboration will produce other regional assessment reports

OSPAR has supported the exchange of scientific knowledge and best practices by becoming a **member of the advisory boards and steering committees** of regional seas projects

The Barcelona Convention supports the strengthening of **science-policy interfaces** in the Mediterranean region for enhanced monitoring and assessment of the environmental status of the Mediterranean Sea



Many countries have insufficient capacity and access to financial resources to take advantage of marine technologies and monitoring systems. Furthermore, there is a need for improved data collection, including sex-disaggregated data, for the Sustainable Development Goals and wider indicators to be used to track progress towards national, regional and global targets, including gender-specific indicators (UNEP, 2021c). A forum that encourages learning and exchange between countries with advanced technologies and resources and those that require support is an effective way of bridging that gap. Regional seas provide the ideal mechanism for that type of exchange.

Regional seas play a critical role in coordinating and strengthening the exchange of knowledge

The secretariats of regional seas cooperate and coordinate with scientific organizations to obtain technical support and build capacity in order to translate Sustainable Development Goal

indicators into national and regional action. The report Regional Seas Strategic Directions (2017–2020) (UNEP, 2016a) recognizes the important role that regional seas can play in facilitating and promoting dialogue, knowledge exchange, science-based decisions and the use of relevant tools and techniques. That role also constitutes the central focus of the 2021–2024 version of the regional seas strategic directions report, which is currently at the draft stage.

The secretariats of regional seas support progress towards this by establishing networks and partnerships to undertake research and monitoring and to share information and resources across organizations and regions. Significant effort has been made to harmonize scientific monitoring and assessment approaches and methodologies, enabling streamlined reporting of progress and lessons learned. Research undertaken by and in partnership with the secretariats of regional seas has also improved knowledge of oceanographic, meteorological and ecological conditions, thus

Figure 16: Examples of key actions that Regional Seas take support advances in scientific knowledge.



Source: UNEP-WCMC

helping to predict extreme weather events and inform the development of ecosystem-based management and mitigation measures. Through those efforts, the secretariats support contracting parties in the development and implementation of integrated ocean policies and management measures. Those key actions are shown in **figure 16**.

Achievements by regional seas in improving scientific knowledge

Enhancing the scientific knowledge base



In the Southeast Pacific, CPPS has established two programmes relating to the El Niño phenomenon and tsunamis: the **Programa para el Estudio Regional del Fenómeno El Niño en el Pacífico Sudeste** and the **Southeast Pacific Tsunami Warning Working Group**. Under the former, contracting parties conduct annual coordinated research cruises to assess oceanographic conditions, which are used to improve climate forecasting and produce an annual risk forecast for El Niño events. The programme also publishes guidance documents for those cruises, such as a protocol and a methodological handbook, to support technical collaboration and exchange of data. The Working Group increases coordination among and the preparedness of focal points through regular training sessions and annual meetings. After a tsunami in 2010, the working group **established a communications system for issuing tsunami alerts** to the general public throughout the region.

The NOWPAP Special Monitoring and Coastal Environment Assessment Regional Activity Centre has developed the NOWPAP **Common Procedure for Eutrophication Assessment** and the NOWPAP **Eutrophication Assessment Tool**, which use chlorophyll a satellite data to detect potential

dead zones in the Northwest Pacific. As a result, the NOWPAP **Ecological Quality Objective targets are in alignment with Sustainable Development Goal indicator 14.1.1**.

Science-policy exchange



In the Western Indian Ocean region, the Nairobi Convention secretariat supports several regional research organizations in undertaking sustainable ocean management research (for example, through the GEF-funded SAPPHERE project and the WIO-SAP project (Implementation of the Strategic Action Programme for the Protection of the Western Indian Ocean from Land-based Sources and Activities)). In 2018, a **science-policy platform** was established to strengthen links between regional scientific institutions and contracting parties to the Nairobi Convention. The platform provides a formal mechanism through which robust scientific information on regional issues can be considered at the ministerial level and used to support decision-making. To support the platform and encourage knowledge-sharing, the **Consortium for the Conservation of the Coastal and Marine Ecosystems in the Western Indian Ocean Region**, a network of local scientific organizations, non-governmental organizations and universities, was established. That has catalysed several partnerships with intergovernmental and research organizations and donors to implement specific projects in the region, each of which has contributed scientific information to the platform. Since the establishment of the platform, the scientific evidence has **informed 60 per cent of the decisions made by the Conference of Parties to the Nairobi Convention**. Those decisions cover a range of topics, including climate change adaptation, management of marine litter, marine spatial planning and enhanced cooperation and partnerships.

In the Mediterranean basin, as part of the implementation of the ecosystem approach and to strengthen the implementation of **IMAP**, the Barcelona Convention is supporting efforts



to bridge existing gaps between the scientific and policymaking spheres, in particular through the EU-funded EcAp MED II project. Between 2015 and 2019, **scientists and decision makers attended workshops to exchange knowledge and best practices**, and an analysis and recommendations were produced on strengthening the science-policy interface in the Mediterranean.

Partnerships for action



In many regions, the secretariats of regional seas have established formal partnerships with regional and international research organizations through an MoU. PERSGA encourages greater collaboration between research institutes and signed an **MoU with the Intergovernmental Oceanographic Commission** to promote the exchange of scientific information in the Red Sea and Gulf of Aden. That includes the **joint hosting of capacity-building workshops** to train participants from PERSGA member countries on best practices in the collection, analysis and exchange of data.

Interregional partnerships have also been established by some secretariats of regional seas to exchange scientific knowledge and best practices between regions. For instance, the OSPAR secretariat has become a member of the advisory boards and steering committees of projects in other regional seas areas. Through that membership, OSPAR **shares scientific knowledge to inform discussions and the subsequent development of policies and management measures**. For example, a representative from the OSPAR secretariat attends meetings of the General Assembly for the EU-funded Joint European Research Infrastructure for Coastal Observation (JERICO-next) project. The project aims to build a framework to provide high-quality marine data, expertise and infrastructure for Europe's coastal seas. In addition, an OSPAR representative chairs the user engagement panel for the project, which engages data users and provides recommendations for data providers

to adapt and improve access to virtual sites and services to better suit user needs.

To support ecosystem-based management, the ROPME secretariat is producing a **regional ecosystem-based management strategy for the ROPME Sea Area**, taking a step-by-step approach and involving multiple sectors. ROPME engaged first with the fisheries sector and has established a working group to support the development of the strategy. It has also developed a formal cooperation framework with the Regional Commission for Fisheries.


Agendas and strategies to guide and coordinate scientific research



In the Northeast Atlantic, the OSPAR secretariat has developed the **OSPAR Science Agenda**, first released in 2015 and updated in 2019 with improved insights into knowledge gaps and future science needs (OSPAR, 2019). It sets out a prioritized list of 44 knowledge gaps, with the aim of improving future assessments in the OSPAR region (for example, quality status reports). It also outlines recommendations for bridging knowledge gaps, including strengthened cooperation with partner organizations such as the International Council for the Exploration of the Sea. To date, the Agenda has been used to **guide the development of national and regional project proposals to fund innovative scientific research**.

Many examples discussed in the previous sections, notably those covering targets 14.1, 14.2, 14.3 and 14.5, are also relevant to Sustainable Development Goal target 14.A. These linkages are indicated in the above sections by the “data collection and sharing” and “technical support and expertise” icons.

TARGET **14.C**



IMPLEMENT AND ENFORCE INTERNATIONAL SEA LAW

▶ **Target 14.C: Implementing international sea law**

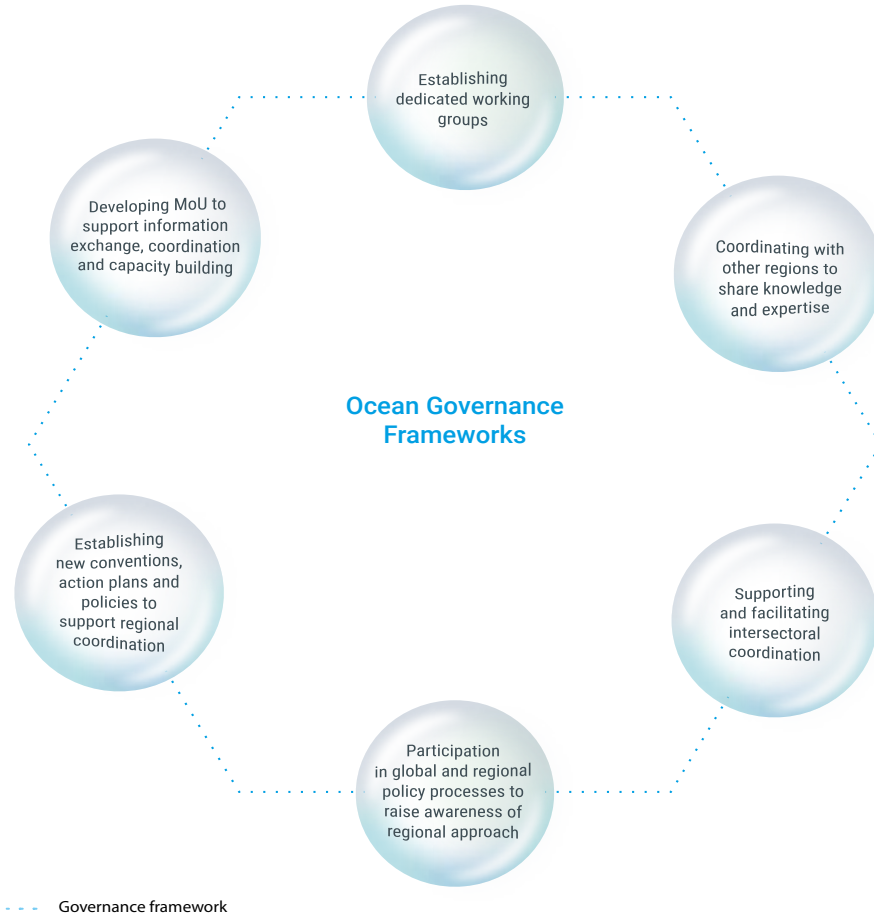
<p>Regional seas support countries in fulfilling their obligations under global multilateral environmental agreements through regional governance approaches</p>	<p>Through agreements and strategies, regional seas facilitate intersectoral coordination to reduce fragmentation in ocean governance</p>
<p>In many regions, regional seas represent the only legally binding agreements specific to the protection and sustainable development of marine and coastal resources</p>	
<p>A collective arrangement exists for the Northeast Atlantic, enabling OSPAR to engage with other competent authorities</p> <p>OSPAR and NEAFC have deepened their collaboration through this multilateral forum and are working to broaden the agreement by inviting other authorities to participate</p>	
<p>The Nairobi Convention secretariat has led the multisector stakeholder engagement and agreement to develop a regional ocean governance strategy for the Western Indian Ocean region</p>	<p>The Tehran Convention is a historic breakthrough, providing a framework for sustainable collective action in the marine environment of the Caspian Sea</p>

Clear and dedicated ocean governance frameworks are required to conserve and sustainably use marine and coastal ecosystems and resources. While the overarching legal instrument is the United Nations Convention on the Law of the Sea (UNCLOS), individual sectors, such as fishing, shipping and sectors relating to the environment and biodiversity, have specific mandates covering their work, and multiple organizations often operate in the same marine space. Coordination between institutions with relevant mandates is required to enable an ecosystem-based approach to ocean management, conservation and sustainable use.

The secretariats of regional seas have developed innovative solutions to coordinate with the secretariats of global multilateral environmental agreements and other institutions, such as regional fishery bodies, while building on the existing UNCLOS framework. They do this by establishing memorandums of understanding, building capacity and developing coordinated reporting and management measures. Examples of actions are shown in **figure 17**.



Figure 17: Key actions that Regional Seas take to support the implementation of international law.



Source: UNEP-WCMC

Achievements by regional seas in supporting the implementation of international law of the sea

Strategies to support implementation of global multilateral environmental agreements



In the Caspian Sea, the establishment of the Tehran Convention, a multilateral environmental agreement to take joint action on the marine environment, represents

a historic breakthrough in the region. The agreement was established following eight years of intergovernmental negotiations and provides a powerful example of the value and success of multilateral dialogue to address environmental issues. Since its establishment, the agreement has supported increased dialogue between the five contracting parties and has supported a more **coordinated implementation of international law in the region** in relation to sustainable marine management.

In the South Asian Seas region, SACEP and the South Asian Seas Programme (SASP) have supported the implementation of the CBD Strategic Plan for Biodiversity through the joint development of a **regional marine and coastal biodiversity strategy with UNEP.** The strategy complements and supports the national biodiversity strategies and action plan process and provides a **framework for coordination and collaboration** between the countries to achieve the Aichi Biodiversity Targets and the Sustainable Development Goals, in particular Goal 14. The strategy has also been developed on the basis of principles such as equity and equality, to encourage gender-sensitive and gender-responsive implementation (SACEP, 2019b). In 2019, SACEP member countries adopted the regional strategy for implementation, and SACEP

and SASP will play a key role in its monitoring, resource mobilization and capacity-building activities. At the recommendation of member countries, SACEP and SASP are also developing project proposals to support the implementation of the strategy.

Strategies to integrate gender equality in line with multilateral environmental agreement recommendations

In numerous multilateral environmental agreements, gender equality and human rights principles are highlighted to guide the activities of contracting parties. These include the Aichi Biodiversity Targets (Target 14), the 2030 Agenda for Sustainable Development and the Paris Agreement under the United Nations Framework Convention on Climate Change. It is also becoming increasingly apparent that synergistic gender equality (Goal 5) and marine and coastal management (Goal 14) approaches are required to achieve holistic sustainable development of a marine environment that is socially equitable, economically efficient and environmentally sustainable (UNEP/GWA, 2019). In line with that, intergovernmental organizations such as the United Nations have made recommendations to encourage parties to integrate gender-equality principles into their marine and coastal activities. For example, in its resolution 71/312, entitled "Our ocean, our future: call for action", the General Assembly explicitly **recognizes the crucial role of women** and youth in the conservation and sustainable use of marine resources and **encourages the inclusion** of all relevant stakeholders, including indigenous peoples, women and youth, in activities relating to Goal 14 (United Nations, 2017). Furthermore, United Nations Environment Assembly Resolution 4/17 invites States to **prioritize the implementation of gender policies** and action plans developed under the multilateral environmental agreements to which they are a party (United Nations, 2019).

In some regions, these principles and recommendations have been translated into



regional policies. That includes a gender mainstreaming strategy developed by MAP to provide “tailored action points to improve the gender status quo in the countries” and encourage gender-responsive activities and policymaking (MAP, 2018), and the SPREP gender policy, which mainstreams and integrates gender considerations into the work of SPREP and its member countries (SPREP, 2016).

Intersectoral cooperation and coordination



The **collective arrangement** developed for the Northeast Atlantic region has facilitated **increased cooperation and coordination** between OSPAR and NEAFC as well as

information exchange with other authorities and organizations, such as the International Seabed Authority, the International Maritime Organization, the North Atlantic Marine Mammal Commission and FAO. For example, a new proposal in OSPAR to establish an MPA in areas beyond national jurisdiction to protect seabirds sought input and facts from other authorities at an early stage, increasing awareness about the proposed MPA and strengthening the information basis for an eventual designation. Information exchange through collective arrangements ensures that protective area-based measures taken by several authorities are not undermined by one another’s efforts and enable sustainable use of the marine environment.

In response to resolution 2/10 on oceans and seas, adopted by the United Nations Environment Assembly of the United Nations Environment Programme at its second session, which encourages contracting parties to regional seas to consider the possibility of increasing regional coverage of their respective legal instruments (United Nations, 2016), a number of regional seas have **established working groups** or undertaken research to explore issues in areas beyond national jurisdiction. Currently, five secretariats of regional seas have mandates to operate in areas beyond national jurisdiction and work with

other competent organizations – such as the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization and the International Council for the Exploration of the Sea – to support research into the high seas. Furthermore, several secretariats of regional seas are **supporting contracting parties in engaging directly in the ongoing intergovernmental process** to establish a new legally binding instrument for the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction (known as “the BBNJ process”). To date, those secretariats have participated in projects related to areas beyond national jurisdiction, such as the GEF-funded ABNJ Deep Seas project and the IKI-funded STRONG High Seas project.

In the Western Indian Ocean region, in order to help prevent uncoordinated and inconsistent sectoral management approaches, the Nairobi Convention secretariat has produced a background paper outlining potential collaboration mechanisms to develop a **regional ocean governance strategy**. The secretariat has facilitated regional multisectoral discussions with relevant entities and stakeholders, including the regional economic communities that are considered the “arms” of the African Union (the Intergovernmental Authority on Development, the Common Market for Eastern and Southern Africa, the Southern African Development Community and the East African Community). As a result, member countries have **agreed on a process that will provide a regionally accepted multisector and multi-stakeholder mechanism** to encourage and facilitate cooperation among Western Indian Ocean countries to address issues of common concern. Those include connectivity between exclusive economic zones and areas beyond national jurisdiction – a topic currently being discussed under the BBNJ process – and linkages between the proposed mechanisms and the sustainable blue economy policies and strategies of the African Union.

Key elements enabling regional seas to support sustainable development

Regional seas play a significant role in supporting progress towards multiple Sustainable Development Goals. Their successes are underpinned by several key characteristics, which include:

An agreed mandate for action. Secretariats of regional seas have clear mandates agreed by their contracting parties to take decisive and collective action on issues relating to the conservation and sustainable use of the marine and coastal environment.

Shared challenges, priorities and vision. The various regional seas share many of the same or similar environmental and societal challenges and constraints. Owing to the dynamic nature of the marine environment (for example, the movement of fish stocks and pollution across national borders), a shared vision is required to address the many problems facing it. Working collaboratively allows secretariats to develop and implement efficient and holistic actions and policies.

Frameworks for long-term planning. Many challenges facing marine and coastal ecosystems are long term, as are potential solutions. The regional seas framework enables protracted strategic planning and decision-making, which require extensive dialogue and the building of mutual understanding and trust. It takes time to develop, adopt and implement appropriate and comprehensive measures and agreements (such as new protocols, strategies and action plans).

Technical and scientific expertise. Secretariats of regional seas have access to scientific knowledge and technical expertise to inform their decision-making. This knowledge comes from national, regional and global organizations, academic partners and the United Nations system. In addition, the sharing of knowledge and capacity between regional seas helps to support those areas in which there are gaps in knowledge or lower capacity.

Financial resources. Secretariats of regional seas can mobilize financial resources from international bodies (such as GEF and the World Bank), governments and other funding sources to support regional projects and deploy scientific expertise, with collective action providing economies of scale for contracting parties.

Legal nature of contracting party decisions. Parties to regional seas can take legally binding decisions to address marine and coastal issues, often translating international marine law to national or regional contexts. That provides an incentive for contracting parties to implement the required actions for the good of the region and ensures adequate resources are set aside or sourced to do so.

Stakeholder engagement. Extensive stakeholder engagement and participatory approaches enable the identification of individual and regional priorities, as well as common issues, which is critical to the development of action plans and measures by the secretariats of regional seas that will be regionally accepted and attract commitment from stakeholders.

Formal and informal relationships and partnerships. Strong partnerships between the secretariats of regional seas and other national, regional and global entities (such as competent authorities, academia, and non-governmental and intergovernmental organizations) allow for knowledge-sharing and capacity-sharing. Such partnerships also enable coordination across different sectors with complementary mandates (for example, RFMOs) to work collectively towards sustainability and biodiversity conservation.

Greater ambition. More ambitious shared goals can be set through a consensual regional approach, where contracting parties need not fear punitive measures. Such goals are often inspired by the recognition of common issues among stakeholders and political leadership. The secretariats of regional seas (and other organizations) can drive progress towards higher targets, encouraging contracting parties to try new approaches and strive towards more ambitious environmental goals.





3. Regional Seas beyond 2021

3.1: A pivotal time

We are in a climate and biodiversity crisis and society is at a crossroads. The decisions and actions taken now will have implications for future generations. While the coronavirus disease (COVID-19) pandemic has exposed our fragility as humans and our dependence on a healthy environment for our well-being, it has also highlighted the existing inequitable and unequal systems that currently govern our environment. In doing so, the pandemic has provided a stark reminder of the need to hasten work towards achieving an equitable, equal and sustainable environment that can continue to provide for generations to come.

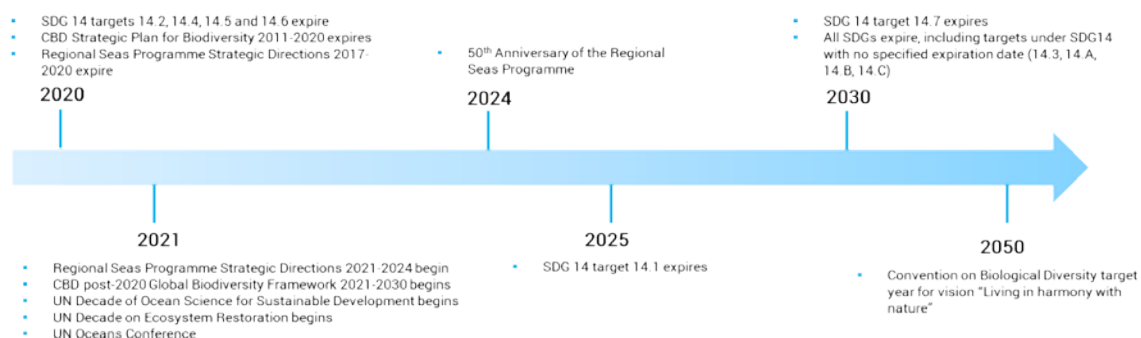
This is a pivotal time. Decisions are being made and frameworks are being developed that will guide the way society responds to the ongoing challenges of sustainable development. These include:

- ▶ Delivering on the Sustainable Development Goals. The year 2021 marks the entry into the final decade for implementing the 2030 Agenda for sustainable development and delivering the Sustainable Development Goals. Many targets under Goal 14 expired in 2020 (**figure 18**), while others will remain outstanding for achievement by the end of 2030.

- ▶ Replacing the 2011–2020 CBD Strategic Plan for Biodiversity with a new global biodiversity framework. That will act as a stepping stone towards the 2050 Vision for Biodiversity of “living in harmony with nature”.
- ▶ Bringing together more than 30,000 delegates at the twenty-sixth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, held in Glasgow, Scotland, in 2021. Heads of State, climate experts and campaigners met to agree on further coordinated action to tackle climate change.
- ▶ Developing an international legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.
- ▶ Presenting the challenges and opportunities of ocean sustainability at the second United Nations Ocean Conference in 2022. The conference will provide an opportunity for the secretariats of regional seas to report on their progress with regard to voluntary commitments pledged at the first Ocean Conference, held in 2017, and to register new voluntary commitments.

The year 2021 also marks the start of the United Nations Decade on Ecosystem Restoration and the United Nations Decade of Ocean Science for Sustainable Development. Opportunities must be seized to “build back better” in response to the

Figure 18: Timeline of key dates and events of strategic importance to marine conservation and sustainable development and the work of Regional Seas.



Source: UNEP-WCMC



fallout from COVID-19 and ignite transformative change across environmental, economic, political, social and technological areas (UNEP, n.d.).

3.2 Role of regional seas

The objectives of current conventions and the United Nations “decades” reflect what the secretariats of regional seas have been striving towards and implementing for years: sustainable consumption and production, and the conservation and restoration of marine and coastal ecosystems through coordinated efforts. Consequently, the secretariats can play a significant role at this pivotal time because they are fully integrated into local, national, regional and international decision-making and action and can support contracting parties in implementing sustainable ocean management targets.

Secretariats of regional seas have developed new strategic directions for the period from 2021 to 2024 and have provisionally outlined four core goals:

- ▶ To secure healthy, resilient and productive marine ecosystems by combating climate change and biodiversity loss with nature-based solutions.
- ▶ To move towards a circular economy by enhancing sustainable consumption and production patterns and mitigating marine pollution mainly from land-based sources.
- ▶ To support information and knowledge management and science-policy dialogue on marine issues.
- ▶ To increase the reach and integration of the regional seas through political support and dialogue for promoting action.

While specific objectives are still to be agreed, the alignment of regional seas with ongoing global processes (such as the Sustainable Development Goals and the post-2020 global biodiversity framework) will ensure transparent monitoring and reporting of their contributions. In addition, the secretariats of regional seas have evolved to respond to emerging regional and global issues

and have proactively embodied modern concepts in their operations (for example, the ecosystem approach, integrated management, the sustainable blue economy, twinning and gender mainstreaming). Their rich legacy demonstrates their flexibility and adaptability in supporting countries in responding to existing and emerging issues. That, in addition to the secretariats’ technical knowledge and expertise and their regional convening role, makes them well positioned to play an important role in addressing the current climate and biodiversity crisis.

The secretariats of regional seas can play a key role beyond 2020 by:

- ▶ Formulating and implementing regional policies and strategies, demonstrating the importance and benefits of regional governance for all marine users.
- ▶ Translating international commitments and agreements into national and regional action through subregional and regional partnerships, frameworks and capacity- and information-sharing processes. Action taken at the regional level can play a key role in guiding and supporting the implementation of decisions, measures and actions to deliver on biodiversity-related targets and ambitions.
- ▶ Supporting and building the capacity of governments, technical agencies and stakeholders to sustainably use marine resources by engaging with their institutional networks to support the exchange of knowledge. That can be done through participatory approaches that encourage women and indigenous peoples to become involved in policymaking and science-based decision-making.
- ▶ Providing a forum to foster a holistic and unified voice for key stakeholders and interested parties in the region (irrespective of gender, age, ethnicity, religion or class) to stimulate action, build a sense of ownership and drive change.

3.3 Recommended actions to enhance the impact of regional seas

As we move into this pivotal time, recommendations to enhance the impact of regional seas include:

Improve synergies and coordination between secretariats of regional seas

Improving collaboration and coordination across all regional seas will enable greater impact and progress towards sustainable development and the conservation of marine and coastal ecosystems, in line with global targets.

Efforts to streamline monitoring and reporting are already under way through the work of the Regional Seas Indicators Working Group, which aims to develop common methodologies for the set of 22 core indicators (UNEP, 2016b). The continued engagement of secretariats of regional seas in this ongoing process will facilitate the sharing of knowledge and solutions to common problems and emerging issues. It should also be recognized that there is a need for improved collection of sex-disaggregated data and the use of gender-specific indicators for tracking progress against targets. Data and indicators will be useful for fine-tuning gender mainstreaming to local marine and coastal use and management contexts (UNEP, 2021c).

As already demonstrated in a number of regions, coordination between regions can also be enhanced through the concept of “twinning”, which enables regions to share lessons, scientific information and data, and to build capacity. Greater exploration of the potential for twinning, including with regions that have not yet had the opportunity (or prior need) to embark upon this concept, and opportunities for other types of interregional partnerships can strengthen the sharing of capacity, methodologies and technologies to achieve regional and global goals.

Strengthen intersectoral cooperation and coordination

Strengthening coordination between secretariats of regional seas and other institutions with relevant mandates is critical for an ecosystem-based approach to sustainable ocean management. The secretariats can harness multiple sectoral, regional and global agreements and organizations to facilitate the exchange of knowledge and guide the alignment of policy and management approaches across different sectors. They can thus play a key role in supporting countries in aligning their national priorities and activities (including monitoring and reporting) across the complementary sectoral agreements to which they are party. To do so, the secretariats can encourage and support the establishment or expansion of national and regional intersectoral committees to facilitate greater policy coordination and capitalize on synergies across areas of work.

As demonstrated in **Chapter 3** the secretariats of regional seas have successfully established a variety of formal coordination arrangements with other types of organizations, including the International Maritime Organization, the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, and RFMOs. That has enabled them to identify opportunities to expand on existing arrangements – or establish new ones – to formalize intersectoral coordination (for example, memorandums of understanding, joint working groups, cross-sectoral projects and participation in meetings as observers). Such arrangements can provide a strong basis on which to bring regional stakeholders together, create incentives for cross-sectoral communication and information-sharing and provide transparency in sectoral activities to support integrated management. Secretariats of regional seas can also ensure clarity and transparency with regard to priority areas of work and objectives in new arrangements, which may help other organizations to identify where new partnerships with regional seas would be beneficial.



Increased coordination at the global level also assists in consensus-building around emerging issues (as has happened, for example, with plastic pollution and is now happening with sargassum seaweed – an increasing problem in the Atlantic Ocean, affecting the environment, human health and the economy in the Gulf of Mexico, Caribbean and North-west Africa (Robledo et al. 2021)). In addition, it enables participation in ongoing intersectoral initiatives, such as the CBD Sustainable Oceans initiative, and will facilitate the integrated approach to marine management that is vitally needed. As the global fisheries advisory body, FAO has a role to play in increasing cooperation between organizations through meetings with RFMOs and regional seas to encourage harmonization. UNEP can also play an important role for those regional seas it administers (and others) by supporting the links between them and global sectoral bodies such as FAO and CBD to facilitate communication and, ultimately, cooperation.

Promote and support approaches to sustainable blue economies

As demonstrated, much of the ongoing work of secretariats of regional seas embodies elements of a sustainable blue economy. Beyond 2020, the secretariats can play a key role in raising awareness and recognition among sectoral, regional and national marine actors of the value of a healthy natural environment to sustainable economic development and human well-being. The conduct of outreach and awareness-raising campaigns, economic assessments and state of the environment studies will support that, and in so doing, the secretariats can help to shift sectoral perceptions and approaches toward the development and implementation of sustainable, climate-resilient and inclusive blue economy policies. Furthermore, strengthening efforts to integrate sustainable blue economy objectives into the activities carried out under regional seas will provide guidance for countries as part of a coordinated regional effort.

Strengthen regional seas resource mobilization and capitalize on emerging economic opportunities to support sustainable ocean economies

Access to sustainable funding and resources is a challenge faced by many organizations, and the secretariats of regional seas are no exception: beyond 2020, the full achievement of their potential role will demand further mobilization of resources. Opportunities exist to access and mobilize resources towards sustainable economic activities, including funds specifically oriented towards the environment. The secretariats can build on their work to support sustainable economic development in order to identify opportunities for funding. They can also help support parties to access and direct such resources through clear guidance and the transparent setting of objectives.

The secretariats of regional seas can also better capitalize on opportunities for the development of joint large-scale projects that can bring financial and technical capacity to their region. To do so, they can enhance their outreach to potential large-scale funders and partners. In particular, strengthened regular engagement with intergovernmental organizations such as UNEP and GEF may help to facilitate joint project development and identify opportunities for support. In addition, secretariats can improve communication of their “funding stories” (for instance, by being clear about the key challenges faced and what solutions might be possible if sufficient funds were available) and continue to highlight their availability to participate in the development and implementation of projects.

There is also significant potential for the secretariats of regional seas to strengthen outreach and communication of key successes to wider audiences in order to generate donor funding opportunities. That will require consistent and unified representation at regional and global events and ongoing presentation of the key role of a regional approach in global ocean management

at, for example, high-level political events such as the United Nations Ocean Conference, sessions of the United Nations Environment Assembly and meetings of private sector entities, and taking every opportunity to promote regional approaches and catalyse new partnerships.

Strengthen the capacity of secretariats of regional seas to support the reporting, implementation and delivery of the Sustainable Development Goals

At present, custodian agencies for several target indicators of Sustainable Development Goal 14 (for example, 14.1.1 and 14.2.1) collect national reporting data through regional seas. Beyond 2020, the secretariats of regional seas have opportunities to further support national reporting on the Sustainable Development Goals through their regional mechanisms.

Efforts to streamline monitoring and reporting are already under way through the work of the Regional Seas Indicators Working Group, which aims to develop common methodologies for the set of 22 regional seas core indicators. The establishment of clear links between those indicators and Sustainable Development Goal targets and indicators will make it possible to implement a [clear and simple system to support national reporting and capture the successes of regional seas in relation to Goal 14](#). Such a system will help to champion regional seas, as it can streamline or reduce reporting burdens and facilitate the regular reporting of successes to the wider sustainable development community for maximum impact. Discussions are already under way to map out how the 22 indicators can feed directly into the UNEP World Environment Situation Room, an online platform that provides access to environmental data in near-real time and access to information to support and monitor the progress of the 2030 Agenda for sustainable development.

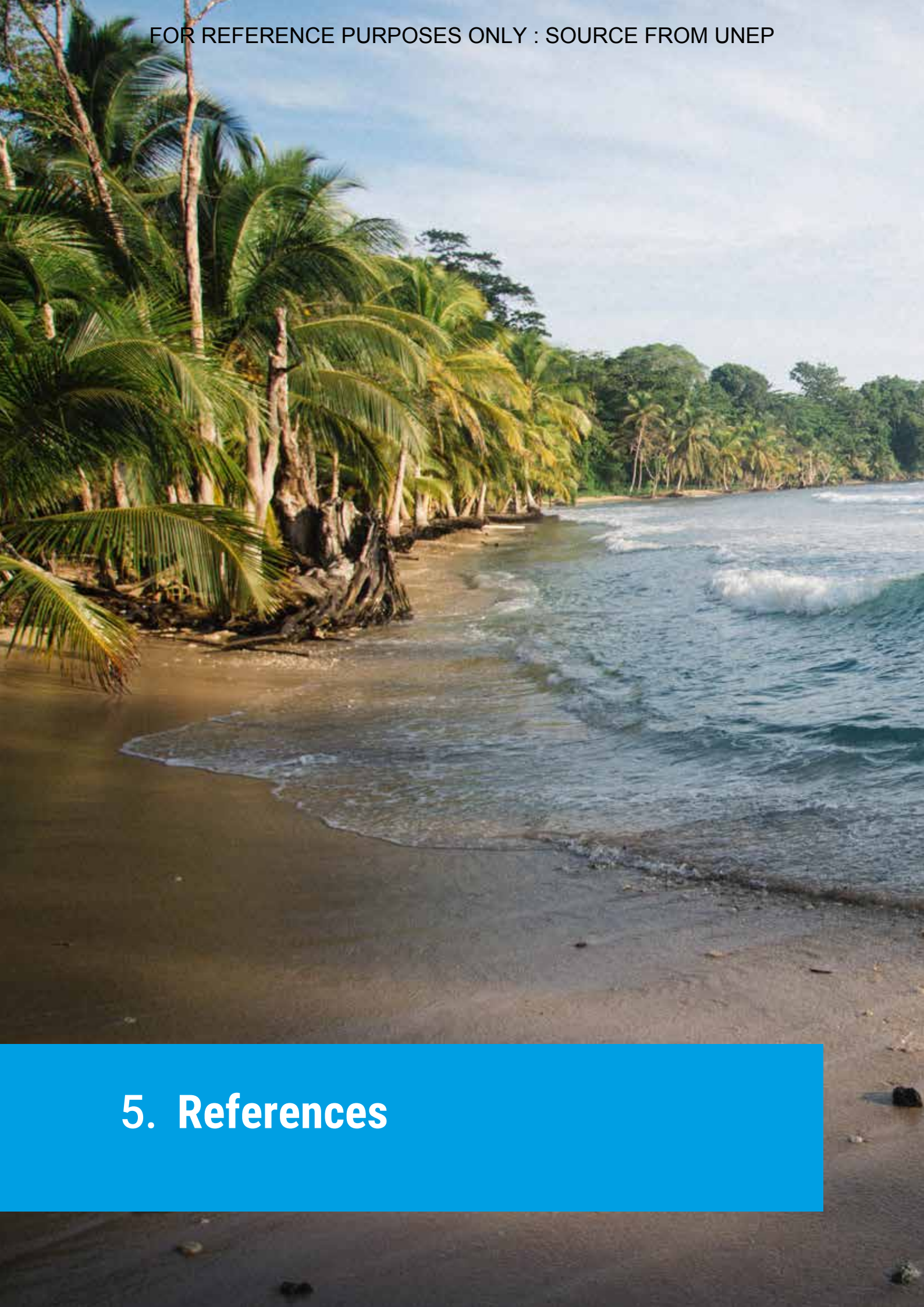
Enhance the voice of regional seas

The present report has explored and documented the broad and diverse scope of the work of the regional seas, their positive impact with respect to Sustainable Development Goal 14 and their potential effectiveness beyond 2020. However, the true impact of the regional seas remains broadly under-appreciated; efforts should thus be made to publicize and champion them. That can be done through improved and consistent recording of accomplishments across regions (building on knowledge platforms such as the World Environment Situation Room), the creation of dedicated materials highlighting successes (such as the present report), the pledging of voluntary commitments and continued participation in ongoing global processes.

3.4 Conclusion

Success stories are important in generating motivation. Regional seas are a story of success in responding to emerging issues. The examples of action towards Goal 14 – to conserve and sustainably use the oceans, seas and marine resources for sustainable development – show that regional seas have a valuable role to play. Their success also bears testament to the hard work, energy and dedication of hundreds of people: national governments, focal points, secretariats, scientists, non-governmental and intergovernmental organizations, representatives of the private and civil sectors and support staff. The next steps are critical at this turning point in 2021. Regional seas provide an established mechanism for action. However, their secretariats cannot act alone. They need support from across the governments that constitute them, they need funding in order to deliver the scientific programmes and action plans that have been developed and they need continued trust to deliver. We all need success stories in order for our children and grandchildren to be able to enjoy a healthy ocean, both now and in the future. Regional seas have an important role to play in making that happen.





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Annex 1

Regional Seas information

Region	Name of agreement	Short name	Type of agreement	Year of adoption	Year of entry into force	Responsible institution	Type of regional sea
Mediterranean	Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean	Barcelona Convention	Convention	1975	1976	UNEP/MAP coordinating unit	UNEP-administered
Pacific	Convention on Conservation of Nature in the South Pacific	Apia Convention	Convention	1976	1990	SPREP	Non-UNEP administered
Pacific	Convention for the Protection of Natural Resources and Environment of the South Pacific Region	Noumea Convention	Convention	1986	1990		
Pacific	Convention to Ban the importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement of Hazardous Wastes within the South Pacific Region	Waigani Convention	Convention	1995	2001		
ROPME Sea Area	Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution	Kuwait Convention	Convention	1978	1979	ROPME	Non-UNEP administered
Antarctica	Convention on the Conservation of Antarctic Marine Living Resources	CAMLR Convention	Convention	1980	1982	CCAMLR secretariat	Independent
East Asian Seas	Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the East Asian Seas Region	East Asian Seas Action Plan	Action Plan	1981	1981	COBSEA	UNEP-administered





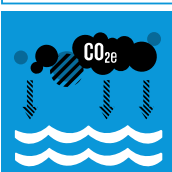


Region	Name of agreement	Short name	Type of agreement	Year of adoption	Year of entry into force	Responsible institution	Type of regional sea
Southeast Atlantic	Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region	Abidjan Convention	Convention	1981	1984	Abidjan Convention secretariat	UNEP-administered
Southeast Pacific	Convention for the Protection of the Marine Environment and Coastal Zones of the South-East Pacific	Lima Convention	Convention	1981	1986	CPPS	Non-UNEP administered
Red Sea and Gulf of Aden	Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment	Jeddah Convention	Convention	1982	1985	PERSGA	Non-UNEP administered
Wider Caribbean	Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region	Cartagena Convention	Convention	1983	1986	CAR/RCU	UNEP-administered
Western Indian Ocean	Amended Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean	Nairobi Convention	Convention	1985	1996	Nairobi Convention secretariat	UNEP-administered
Black Sea	Convention on the Protection of the Black Sea Against Pollution	Bucharest Convention	Convention	1992	1994	Black Sea Commission	Non-UNEP administered
Baltic	Convention on the Protection of the Marine Environment of the Baltic Sea Area	Helsinki Convention	RSP Convention	1992	2000	HELCOM	Independent
Northeast Atlantic	Convention for the Protection of the Marine Environment of the North-East Atlantic	OSPAR Convention	RSP Convention	1992	1998	OSPAR secretariat	Independent
Northwest Pacific	Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the North-West Pacific Region	NOWPAP	Action Plan	1994	1994	NOWPAP regional coordination unit	UNEP-administered
South Asian Seas	South Asian Seas Programme	SASP	Action Plan	1995	1995	SACEP	Non-UNEP administered






Region	Name of agreement	Short name	Type of agreement	Year of adoption	Year of entry into force	Responsible institution	Type of regional sea
Arctic	Declaration on the Establishment of the Arctic Council	Ottawa Declaration	Treaty	1996	1996	Arctic Council	Independent
Northeast Pacific	Convention for Cooperation in the Protection and Sustainable Development of the Marine and Coastal Environment of the North-East Pacific	Antigua Convention	Convention	2002			Non-UNEP administered
Caspian	Framework Convention for the Protection of the Marine Environment of the Caspian Sea	Tehran Convention	Convention	2003	2006	Tehran Convention secretariat	UNEP-administered



Annex II

Sustainable Development Goal 14 targets

<p>TARGET 14-1</p>  <p>REDUCE MARINE POLLUTION</p>	<p>By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.</p>
<p>TARGET 14-2</p>  <p>PROTECT AND RESTORE ECOSYSTEMS</p>	<p>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.</p>
<p>TARGET 14-3</p>  <p>REDUCE OCEAN ACIDIFICATION</p>	<p>Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels.</p>
<p>TARGET 14-4</p>  <p>SUSTAINABLE FISHING</p>	<p>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.</p>
<p>TARGET 14-5</p>  <p>CONSERVE COASTAL AND MARINE AREAS</p>	<p>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.</p>

<p>TARGET 14-6</p>  <p>END SUBSIDIES CONTRIBUTING TO OVERFISHING</p>	<p>By 2020, prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation.</p>
<p>TARGET 14-7</p>  <p>INCREASE THE ECONOMIC BENEFITS FROM SUSTAINABLE USE OF MARINE RESOURCES</p>	<p>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.</p>
<p>TARGET 14-A</p>  <p>INCREASE SCIENTIFIC KNOWLEDGE, RESEARCH AND TECHNOLOGY FOR OCEAN HEALTH</p>	<p>Increase scientific knowledge, develop research capacity and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to developing countries, in particular small island developing States and least developed countries.</p>
<p>TARGET 14-B</p>  <p>SUPPORT SMALL SCALE FISHERS</p>	<p>Provide access for small-scale artisanal fishers to marine resources and markets.</p>
<p>TARGET 14-C</p>  <p>IMPLEMENT AND ENFORCE INTERNATIONAL SEA LAW</p>	<p>Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the Sea, 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".</p>





**Contributions of Regional Seas
Conventions and Action Plans to
a Healthy Ocean**

Supplement

Overview

The present supplement outlines case studies from the 18 regional seas conventions and action plans (hereafter “regional seas”) in relation to the 10 specific targets under Sustainable Development Goal 14. The case studies highlight key issues and the actions taken by the various secretariats of the regional seas to generate positive outcomes. Their work is extensive; the

supplement contains only a selection of that work, with the aim of ensuring the representation of each region across the set of targets. The absence of a region from a particular target does not imply that activities relating to that target are not taking place in the region. The information herein has been reviewed by representatives from all 18 regions and edited by the authors for consistency.

Icon legend



Partnerships



Capacity building



**Technical support
& expertise**



Policy measures



Network approach



**Data collection
and sharing**



Target 14.1

Framework Convention for the Protection of the Marine Environment of the Caspian Sea: combating pollution in the Caspian Sea

Problem



Before the establishment of the Tehran Convention, the Caspian Sea did not have a regional strategy to combat pollution.

The oil and gas sector in littoral countries had grown rapidly and the Caspian Sea was subject to pollution from oil extraction and refining, transportation, offshore oil fields and other oil-handling facilities, such as ports. Despite those growing pressures, there was no overarching strategy in place to deal with oil-related emergencies and accidents and the health of the Caspian Sea's ecosystem continued to decline. Efforts to address the issues were undertaken independently by national governments, with little coordination or information exchange between countries in the region.

Action

The Tehran Convention, established in 2003, brought together the five littoral countries of the Caspian Sea (Azerbaijan, the Islamic Republic of Iran, Kazakhstan, the Russian Federation and Turkmenistan) to address issues related to environmental protection and security. Several crucial pollution-related treaties followed.

In 2011, the Protocol Concerning Regional Preparedness, Response and Co-operation in Combating Oil Pollution Incidents (the Aktau Protocol) was established to combat oil pollution incidents and increase preparedness to deal with oil-related accidents and spills. At the fourth meeting of the Conference of the Parties to the Tehran Convention, held in 2012, the Protocol for the Protection of the Caspian Sea against Pollution from Land-Based Sources and Activities to the Framework Convention for the Protection of the Marine Environment of the Caspian Sea (the Moscow Protocol) was signed, targeting land-based sources of pollution. At the same meeting, the parties commenced work on a regional environmental monitoring and reporting programme to harmonize the exchange of information and data in the region. In 2014, the parties established the Protocol for the Conservation of Biological Diversity to the Framework Convention for the Protection of the Marine Environment of the Caspian Sea (the Ashgabat Protocol), which encourages countries to work together more effectively and coherently on biodiversity management and protection.

Result

The legally binding protocols established by the Tehran Convention opened a dialogue between the five Caspian Sea countries to combat pollution issues jointly. As a result of the Aktau Protocol, all countries in the region have increased their preparedness to deal with oil pollution incidents. National contingency plans that identify likely sources of oil discharges have also been established, as have mechanisms to share innovative solutions to oil pollution between countries. Clear reporting procedures ensure that all parties are informed of oil pollution incidents, and the countries have pledged to share resources and support one another in the event of emergencies. Furthermore, a regional environmental information centre has been established, providing all countries in the region with equal access to environmental data and information. That supports the monitoring of pollution in the Caspian Sea and the development and implementation of effective measures in a timely manner and where they are most needed.

Enabling factors

The legally binding protocols were established under the guidance and finances of the secretariat of the Tehran Convention. The Convention was administered by the United Nations Environment Programme (UNEP) from 2003 to 2015, after which the parties decided to rotate the administration of the Convention among themselves. The United Nations Development Programme and Global Environment Facility (UNDP/GEF) joint project “The Caspian Sea: Restoring Depleted Fisheries and Consolidation of a Permanent Regional Environmental Governance Framework”, the European Commission and other multilateral agencies and organizations, such as the Food and Agriculture Organization of the United Nations (FAO), the International Maritime Organization (IMO) and the World Bank, have further supported the protocols both financially and thematically.

Secretariat of the Pacific Regional Environment Programme (SPREP): collaborating with the private sector to remove waste

Problem



Waste management and pollution control is one of the priorities of SPREP. The Pacific island countries and territories face an immense waste management challenge

because they have insufficient landfill space to store waste, inadequate waste treatment facilities and a lack of financial resources to ship recyclable waste off the islands. As a result, a large amount of recyclable waste ends up in overflowing landfill sites, from where it is washed into the ocean and spread by currents and storms.

Action

To help tackle the issue of landfill sites that are overflowing with recyclable waste, SPREP partnered with Swire Shipping,

the liner shipping division of the China Navigation Company, to set up the Moana Taka Partnership. The shipping company has empty containers throughout the Pacific island countries and territories that need to be moved to other countries, mostly along the Pacific rim. SPREP and Swire Shipping identified that as an opportunity to use the empty containers to move recyclable waste from the Pacific islands to countries with sustainable recycling plants, and formed the Moana Taka Partnership to put the idea into action. SPREP plays a key role in the partnership by giving its member countries access to the programme and facilitating the relationship between the shipping company and the ports. In particular, SPREP:

- ▶ Informs its member countries about eligibility criteria and the type of waste covered by the partnership
- ▶ Establishes contact between SPREP countries and the shipping company
- ▶ Determines and confirms responsibilities at the ports of departure and destination
- ▶ Arranges custom clearance, storage and container-cleaning procedures at destination ports

Result

To date, 50 containers with 686 tonnes of recyclable waste have been transported from the Pacific islands to countries with recycling or disposal capacity.¹

Enabling factors

The strong commitment of Pacific island leaders to tackling waste and pollution has made the partnership possible. Their commitment is evidenced by their repeated pledges and policies to ban single-use plastics. The Pacific Regional Waste and Pollution Management Strategy 2016–2025 (“Cleaner Pacific 2025”) and the

¹ Secretariat of the Pacific Regional Environment Programme (SPREP). (2020). Moana Taka Partnership: A Guide for Pacific Island Countries & Territories. Available at <https://www.sprep.org/sites/default/files/documents/publications/moana-taka-partnership.pdf>.



Pacific Marine Litter Action Plan 2018–2025 also provide SPREP with a strong mandate to support the countries in this region in addressing waste and marine litter issues.

Northwest Pacific Action Plan (NOWPAP): regional oil and hazardous and noxious substances contingency plan

Problem



The Northwest Pacific region is at high risk of pollution from hazardous and noxious substances because of its high levels of shipping activity and extensive industrial and economic development along the coastline. From 1990 to 2018, nearly 320 spill incidents greater than 10 tons in size occurred in the Northwest Pacific, with the majority taking place close to the shores of NOWPAP member countries. Half of those were near the Korean Peninsula, and the remainder close to the Chinese and Japanese coastlines. Of those incidents, 122 were oil spills of between 10 and 50 tons; five spills were of more than 1,000 tons. In 2018 alone, 19 oil spills of more than 10 tons occurred near the coastline of the NOWPAP region.

Action

In 1994, NOWPAP established the Forum for Developing Effective Measures for Regional Cooperation in Marine Pollution Preparedness and Response. In 2001, the forum was renamed the Marine Environment Emergency Preparedness and Response Regional Activity Centre (MERRAC). Its responsibilities include maintaining and updating the contact details for NOWPAP member countries involved in marine pollution prevention and response and recording spill incidents of oil and hazardous and noxious substances.

In 2003, NOWPAP member countries adopted the NOWPAP Regional Oil Contingency Plan, which was revised in 2009 to include spills of hazardous and noxious substances. In addition,

a memorandum of understanding (MoU) on Regional Co-operation Regarding Preparedness and Response to Oil Spills in the Marine Environment of the Northwest Pacific Region was established in 2004. Since those plans and agreements were established, NOWPAP member countries have engaged in the following activities:

- ▶ Within the framework of the contingency plan, MERRAC has organized annual meetings to bring together national agency focal points, experts and representatives of IMO, the United Nations Environment Programme (UNEP) and non-profit organizations. The meetings provide opportunities to discuss and promote measures for more effective regional cooperation. In addition, a series of biannual expert meetings provide scientific and technical advice on a range of issues. Annual meetings between competent national authorities are also used to exchange the latest information on relevant national laws, regulations and policies; case studies and lessons learned from recent spills of oil and hazardous and noxious substances; and national training and exercises.
- ▶ MERRAC has published more than 16 sets of guidelines and reports on sensitivity mapping, shoreline clean-up, dispersant use, hazardous and noxious substances operations and databases, and legislation and practices related to civil liability and compensation.
- ▶ A programme of training courses and practical exercises has been developed and implemented. The NOWPAP Regional Joint Exercises and Guidelines Regarding Oil Spill Preparedness and Response were adopted in 2005. Five exercises have been conducted to date to recreate and practise the roles and actions of leading and assisting members, and 20 alarm exercises were held twice a year to test procedural and communication systems for large-scale oil spills and other maritime incidents. Seven operational exercises were also held once every two years to increase the level of preparedness of NOWPAP member countries to jointly respond to major marine pollution incidents.

- ▶ MERRAC has developed an early warning system and information-sharing platform for oil and hazardous and noxious substance pollution. The system is used by MERRAC and NOWPAP member countries to respond to large-scale spills more efficiently. Through the system, member countries can create reports and share updates and information in real time by fax, email and text messages.

Result

Since 2003, regional cooperation on contingency planning for oil and hazardous and noxious substance pollution has been promoted and implemented. Prevention, response, control and clean-up operations have also been strengthened. NOWPAP member countries provide regular updates relating to such incidents in the region, as well as marine pollution response resources, including equipment, institutions and experts, which has enabled each of them to declare their capacity to respond to and minimize the hazards posed by spills.

Annual focal point meetings provide opportunities for NOWPAP member countries and competent organizations to develop a mutual understanding of capabilities, issues and priorities and discuss and promote effective regional coordination measures. A range of issues have been considered at recent meetings, including oil sample exchange procedures, guidelines on the assessment of oil spill response capability in the NOWPAP region, a regional overview of the use of unmanned aircraft during marine pollution responses and an assessment of oil spill emergency preparedness and response by offshore platforms. Several technical reports have been produced in coordination with national experts to support continued cooperation among member countries.

Guidelines produced by MERRAC, including a manual on oil spill responses, have been used as a baseline for a NOWPAP joint training exercises programme, which has enabled NOWPAP member countries and MERRAC to test their oil spill incident responses and identify

areas for improvement, including in relation to communication. In particular, the guidelines have helped to alleviate gaps in member country response capabilities by encouraging information exchange and improving national competency related to marine pollution response.

NOWPAP member countries consistently use the online pollution reporting system to share information with relevant authorities when major pollution incidents occur or when a threat of such an incident is present in the region. The system was used for the first time in 2018, when the *Sanchi* oil tanker, carrying 136,000 tons of condensate, sank 160 nautical miles from the coast of Shanghai in what was the largest marine pollution incident since the Exxon Valdez oil spill in 1989. Real-time information was rapidly exchanged through the reporting system, including the spill location, the condition of the tanker and the status of ongoing and planned responses. The system enabled timely and effective measures to mitigate and contain the spill.

Enabling factors

The existence of a dedicated regional activity centre has facilitated a coordinated approach to responding to oil and hazardous and noxious substance pollution in the Northwest Pacific region. MERRAC has provided a mechanism for communication and information exchange, allowing for collaboration between NOWPAP member countries.

The robust guidelines were developed as a result of political will, and member countries and competent authorities can now regularly communicate and test their responses.



Helsinki Commission (HELCOM): developing the Nutrient Reduction Scheme

Problem



Eutrophication is one of the main threats to biodiversity in the Baltic Sea. It is caused by the excessive entry of nutrients, in particular nitrogen and phosphorus, into the marine environment.

Marine litter is another rapidly growing concern in the Baltic Sea. It has a major impact on the marine environment and marine organisms, incurs socioeconomic costs and threatens human health and safety.

Action

In 2007, the HELCOM Nutrient Reduction Scheme was introduced and agreed upon by the member countries of the Baltic Marine Environment Protection Commission (HELCOM) as part of the HELCOM Baltic Sea Action Plan. The scheme is a regional approach to sharing the burden of nutrient reduction to achieve the goal of a Baltic Sea unaffected by eutrophication. It was revised in 2013 and adopted at the HELCOM ministerial meeting that year.

The two main components of the scheme are:

- ▶ Maximum allowable inputs of nutrients (that is, the maximum allowable level of waterborne and airborne nitrogen and phosphorus in the five main Baltic Sea subbasins to fulfil the targets for a non-eutrophied sea)
- ▶ Country-allocated reduction targets (that is, how much nutrient input member countries need to reduce compared with the reference period of 1997–2003)

In 2007, HELCOM estimated that for “good environmental status” to be achieved, the maximum allowable annual nutrient pollution inputs into the Baltic Sea would be 21,000 tonnes of phosphorus and about 600,000 tonnes of nitrogen.² Annual reductions of 15,000 tonnes of phosphorus and 135,000 tonnes of nitrogen would be required to achieve the “clear water” objective.

In 2015, Baltic Sea countries also adopted the HELCOM Regional Action Plan on Marine Litter, committing parties to significantly reduce marine litter by 2025. The Plan focuses on measures for preventing and reducing marine litter from its main sources. It requires the development of regional common indicators and associated definitions of good environmental status related to marine litter and the establishment of coordinated monitoring programmes for these indicators. The Plan also emphasizes the need for continued cooperation with relevant regional and global organizations and initiatives. In particular, it calls for cooperation with stakeholders, from civil society groups to business and industry, to promote the removal of litter from the marine environment in a practical, feasible and environmentally sound manner and to develop the best available techniques and best environmental practices for that purpose.

Result

Through the Nutrient Reduction Scheme and the Regional Action Plan on Marine Litter, HELCOM has facilitated a coordinated approach across all Baltic Sea countries to address two of the main threats to marine biodiversity in the region.

Progress towards the targets set by the Nutrient Reduction Scheme is monitored regularly, and results indicate that a significant reduction of nutrient inputs has been achieved. The latest assessment shows that between the reference period (1997–2003) and 2018, the normalized

² Helsinki Commission (Baltic Marine Environment Protection Commission) (HELCOM) (2021). Nutrient Reduction Scheme. [Online] Available at <https://helcom.fi/baltic-sea-action-plan/nutrient-reduction-scheme/>.

input of nitrogen was reduced by 12 per cent and that of phosphorus was reduced by 26 per cent. Most of the nutrient input reductions are a result of improved wastewater treatment practices in the catchment area, but despite good progress, greater effort is needed to further reduce nutrient input and reach the target of a Baltic Sea unaffected by eutrophication.

The Regional Action Plan on Marine Litter is implemented through a country-led approach, and it is regularly reviewed and updated through dedicated workshops under the Pressure Working Group. Work is ongoing to develop three HELCOM indicators on beach litter, litter on the sea floor and microlitter in the water column. HELCOM has already adopted a monitoring subprogramme and monitoring guidelines for beach litter, which contribute to the further development of the indicator.

Enabling factors

Toxic algal blooms resulting from eutrophication hinder summer recreational activities, such as swimming and sailing, in the Baltic Sea region. Because the problem is visible and directly affects people living and travelling in the coastal areas of the region, there is pressure on politicians to solve it. In addition, the technology for removing nutrients from wastewater exists in the region, and funding and loans are available to support further improvements to the wastewater infrastructure.

At the HELCOM ministerial meeting held in 2013, it was recognized that a comprehensive response was required to address the issue of marine litter. That was the starting point for developing and adopting the Action Plan, which was inspired by the Regional Plan on Marine Litter Management in the Mediterranean, adopted in 2013 by the parties to the Barcelona Convention, and the Regional Action Plan for Prevention and Management of Marine Litter in the North-East Atlantic, adopted in 2014 by the Commission of the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR). The drafting process was championed by the German Government.

Coordinating Body on the Seas of East Asia (COBSEA): addressing plastic pollution through the SEA circular initiative

Problem



Rapid growth in plastic production, unsustainable resource use and inadequate waste management are resulting in overflowing landfill sites, open dumping, and plastic leaking into the ocean. Countries in the East Asian Seas region are significant contributors to plastic waste and pollution. They are also heavily affected by the impact of marine litter on their coastal and marine environments, which has implications for human health, food systems and economies.

Action

In 2018, building on the COBSEA Regional Action Plan for Marine Litter, the UNEP regional office for Asia and the Pacific and COBSEA, with support from the Government of Sweden, developed and jointly implemented the SEA circular initiative.

The initiative builds on and uses the existing COBSEA intergovernmental mechanism and the COBSEA Working Group on Marine Litter to guide activities, share experiences and knowledge, promote replication and harmonize approaches for greater efficacy. The SEA circular initiative focuses on the plastic value chain and aims to facilitate positive changes at different stages of plastic production and use and in the collection/sorting/recycling life cycle. The objective of the initiative is to reduce the amount of marine plastic entering waterways by:

- ▶ Promoting market-based solutions
- ▶ Strengthening the evidence base for decision-making, including through harmonized national marine litter monitoring programmes



- ▶ Facilitating regionally coherent marine litter planning
- ▶ Developing people-centred solutions for sustainable plastic value chain management
- ▶ Conducting widespread outreach and awareness activities
- ▶ Catalysing regional learning through the sharing of best practices and experiences

The SEA circular initiative follows an inclusive and participatory approach, engaging stakeholders throughout the value chain in implementing activities in direct collaboration with COBSEA national focal agencies, businesses, research institutions, plastic producers, consumers, waste managers and civil society (such as communities suffering from the impact of plastic pollution) in six target countries: Cambodia, Indonesia, Malaysia, the Philippines, Thailand and Viet Nam. The remaining COBSEA member countries (China, Republic of Korea and Singapore) engage in the initiative as knowledge partners.

Result

Since its inception in 2018, the SEA circular initiative has promoted market-based solutions, strengthened national planning and monitoring, provided evidence for improved decision-making and facilitated regional learning and networking. Key outcomes include:

- ▶ The identification and development of market-based solutions for “less plastic wasted”, with a focus on the beverage, food and retail industries. Those solutions were developed on the basis of the results of plastic value chain and landfill composition analyses, measurements of the plastic footprints of businesses and business round tables.
- ▶ The assessment of leakage and accumulation hotspots, which has allowed for evidence-based planning and decision-making. National marine litter monitoring programmes have been harmonized and research to support policy and management needs has been catalysed.

- ▶ Improved understanding and awareness of the social and economic impact of marine litter among various marine actors, which has advanced and strengthened outreach partnerships and increased consumer awareness through capacity-building, public outreach and information exchange.
- ▶ The establishment of a regional node of the Global Partnership on Marine Litter (GPML) as a knowledge repository to support regionally coherent policies and actions.
- ▶ The hosting of annual “SEA of Solutions” multi-stakeholder events to facilitate knowledge exchange and partnership-building.
- ▶ Continuous dialogue between the COBSEA Working Group on Marine Litter and the intergovernmental meeting. The initiative has also allowed for engagement and coordination with regional frameworks, including the Association of Southeast Asian Nations.

Enabling factors

The COBSEA Regional Action Plan for Marine Litter, originally adopted in 2008 and revised in 2019, provides a regional policy framework to identify common priorities and guide coherent action at the national and regional levels.

A working group on marine litter established through the Action Plan provides strategic and technical guidance. It provides the basis for the SEA circular initiative, which supports countries in addressing common priorities while taking into account the national context, leveraging COBSEA intergovernmental mechanisms and established networks to identify and address knowledge gaps, promote regionally coherent approaches to planning and monitoring, exchange experiences and build capacity. It also ensures sustainability of achievements beyond the life of the project.

Through the COBSEA intergovernmental meeting, member countries can agree upon and adopt appropriate regional-level actions or measures based on project outputs and results.

Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region: increasing public awareness of marine litter

Problem



Solid waste pollution, including pollution from marine litter and plastics, poses a serious threat to healthy and sustainable coastal and marine ecosystems and human health in the wider Caribbean region. Nearly 80 per cent of marine litter comes from land-based sources of solid waste, while approximately 65 per cent of that waste is disposed of in open dumps, inland waterways, coastal water bodies or directly into the Caribbean Sea. Economically important sectors in the region, such as fisheries and tourism, and the livelihoods of Caribbean people, are at direct risk from the impact of pollution caused by solid waste.

Action

Combating solid waste pollution has been a priority for the Cartagena Convention secretariat and its Protocol Concerning Pollution from Land-Based Sources and Activities. The Cartagena Convention is the only regional legal instrument for the protection and development of the marine environment in the wider Caribbean region.

Several actions have been taken to help to reduce the amount of solid waste being dumped into the Caribbean Sea. The Trash Free Waters initiative was developed to reduce the amount of litter entering waterways and the marine environment, and is a partnership between the United States Environmental Protection Agency, the Cartagena Convention secretariat, the UNEP Regional Office for Latin America and the Caribbean and its Subregional Office for the Caribbean, and the

Governments of Jamaica and Panama.

Under the initiative, Jamaica and Panama implemented community pilot projects focusing on improving solid waste management practices to prevent land-based waste from entering watersheds, coastal waters and the Caribbean Sea.

In the parish of Westmoreland, Jamaica, the project concentrated on the Bluefields and Whitehouse communities, which had high levels of solid waste pollution in gullies and on beaches and roadways. Recycling and the production of compost from organic waste increased as a result of the project. Social surveys informed targeted activities for behavioural change, while bins and a better collection service led to overall improvements in waste management. Additional information on the extent of solid waste pollution was obtained through land, underwater and beach surveys. That guided the design and delivery of targeted public education campaigns and training workshops for community members in activities such as composting and upcycling.

In Panama, the project was centred around the Juan Diaz River coastal community and involved public education campaigns for students, the private sector and the general public. Volunteers assisted in educating the local community on the importance of proper waste management, including waste separation.

Result

In Jamaica, there has been a reduction in littering and improvements in solid waste management practices. The provision of more than 200 bins to schools, community centres, a health centre, churches and police stations improved waste disposal practices. Approximately 2,500 lbs of compost were collected and roughly 4,500 lbs of plastic bottles were recycled. Furthermore, new job opportunities were created to support improved solid waste management. Twenty-one community members attended an upcycling workshop and approximately 3,500 people in the two communities were engaged as a result



of outreach activities. The initiative continues to grow, and its impact is ongoing.

In Panama, public awareness of how to better manage waste has increased. People have been trained in proper waste separation and 450 pupils from four schools were educated in waste reduction in the Juan Diaz River coastal community. Some students were also trained in water quality testing to understand the link between pollution and poor water quality. Ten volunteers who assisted in the community training were trained in integrated waste management and assisted in sensitizing the local community on the use of the Juan Diaz River to reduce the impact of solid waste pollution.

Enabling factors

Jamaica and Panama are contracting parties to the Cartagena Convention's Protocol concerning Pollution from Land-Based Sources and Activities. The Cartagena Convention secretariat has been at the forefront of efforts in the wider Caribbean region to reduce marine litter, in line with the Protocol. During the fourth meeting of the Scientific, Technical and Advisory Committee, a decision was made to support an expanded role for the regional activity centres and the regional activity network to implement the Protocol, thereby highlighting the secretariat's commitment to tackling land-based pollution.

The Caribbean regional node of the Global Partnership on Marine Litter, jointly hosted by the secretariat and the Gulf and Caribbean Fisheries Institute, provided a regional framework for raising the visibility of the project and sharing lessons learned in best management practices, tools, technologies and "end-of-pipe" solutions, as well as preventative actions.

The close working relationship between the secretariat and the Sandals Foundation in Jamaica and the technical support from the UNEP Regional Office for Latin America and the Caribbean for activities in Panama were additional enabling factors.

Barcelona Convention: developing a regional plan to tackle marine pollution in the Mediterranean

Problem



Pollution is a critical issue in the Mediterranean Sea and is primarily driven by a densely populated coastline, urban sprawl, a highly developed tourism industry and extensive marine traffic in the region. Nutrients, heavy metals, persistent organic pollutants, pesticides, hydrocarbons and marine litter are the main contaminants. Plastics account for more than 90 per cent of total floating marine litter and between 37 and 89 per cent of seabed marine litter.

As a semi-enclosed sea, the Mediterranean Sea has limited hydrological exchanges with ocean basins (only through the Suez Canal in the east and the Gibraltar Straits in the west). As a result, there is limited dispersal and dilution of pollutants.

Action

The Barcelona Convention secretariat drafted, developed and negotiated the adoption of the Regional Plan on Marine Litter Management in the Mediterranean.³ In 2013, contracting parties to the Barcelona Convention adopted the plan, which was the first legally binding instrument to comprehensively address marine litter prevention, reduction, monitoring and assessment in the region.

The Regional Plan is based on an ecosystem approach and provides a set of policy, legal, institutional, regulatory, economic and technical measures to address different aspects of marine litter prevention and management from

³ The regional plan is available at https://wedocs.unep.org/bitstream/handle/20.500.11822/6012/13ig21_09_annex2_21_07_eng.pdf.

land- and sea-based sources. Measures include obligations related to waste management, prohibition of illegal dumping, sustainable consumption and production, monitoring, and enforcement of national legislation. The plan promotes partnerships and coordination among stakeholders and includes a timetable for implementation.

Since the adoption of the Regional Plan, the Barcelona Convention secretariat has mobilized resources (such as those provided by the European Commission, Global Environment Facility (GEF) and the Italian Ministry of the Environment, Land and Sea Protection) to create the conditions required to implement several of its articles. Those include reduction and prevention measures (articles 9 and 10), monitoring and assessment (articles 11 and 12), research topics and scientific cooperation (article 13), specific guidelines (article 14), technical assistance (article 15), enhancement of public awareness and education (article 16), major groups and stakeholder participation (article 17), regional and international cooperation (article 18) and reporting (article 19).

Result

The Regional Plan on Marine Litter Management in the Mediterranean has created the momentum and enabling environment for contracting parties to the Barcelona Convention to adopt an integrated approach to tackling marine and coastal pollution. Key outcomes include:

- ▶ The development of regional guidelines for negotiating and adopting common approaches to tackling marine litter. Those include implementing the “Fishing-for-Litter” and “Adopt-a-Beach” pilots, phasing out single-use plastic bags, providing reception facilities in ports for the delivery of ship-generated waste and applying reasonable fees to use those facilities.
- ▶ The implementation of more than 25 Adopt-a-Beach pilots in 10 Mediterranean countries. The pilots are participatory and involve the collection by non-governmental

organizations and civil society of marine litter from beaches. Litter collection is based on a standardized protocol and agreed list of items, supplementing the national monitoring programmes for beach marine litter. Fishing-for-Litter pilots have been implemented in four Mediterranean countries and include the participation of small-scale fisheries and scuba divers, who remove marine litter from the sea floor of the South Mediterranean. In 2019, the Mediterranean Action Plan (MAP) and its Programme for the Assessment and Control of Marine Pollution in the Mediterranean carried out a quantitative evaluation using data from the pilots (especially the Adopt-a-Beach pilots) to update the 2016 common indicators baseline values for marine litter as instituted by the Integrated Monitoring and Assessment Programme (IMAP). The preliminary analysis indicated a 39 per cent reduction in beach marine litter compared with the 2016 values as set out in decision IG.22/10.⁴

- ▶ The establishment of national action plans or programmes of measures to address marine litter. To date, 19 Mediterranean countries have participated.
- ▶ The adoption by 17 countries of measures to reduce single-use plastic bags (e.g. total and partial bans, taxes and levies). Technical assistance has been provided to five of those countries (Algeria, Egypt, Lebanon, Morocco and Tunisia) by the Programme for the Assessment and Control of Marine Pollution in the Mediterranean. The aim is to enhance the capacity of public authorities to phase out single-use plastic bags and promote “extended producer responsibility” for food and beverage packaging.
- ▶ Algeria: A feasibility study was conducted to implement an extended producer responsibility initiative in the Governorate of Oran. The Ministry of the Environment and Renewable Energy, the National Waste Agency and the Association of Beverage Producers of Algeria were the main beneficiaries and stakeholders. The study

⁴ See the message on Mediterranean Coast Day (25 September), which is available at www.unep.org/unepmap/news/news/message-mediterranean-coast-day-25-september.



has allowed for a clearer understanding of how the pilot project can be implemented and clarified the roles of and links between the entities involved.

- Egypt: Advice on alternatives to single-use plastic bags was provided and misconceptions regarding the biodegradability of certain plastics were clarified. A national consultation workshop, held in September 2019 and supported by the Ministry of the Environment, was successful in connecting with stakeholders and obtaining feedback on the planned national road map to reduce the use of plastic bags.
 - Lebanon: A comprehensive study on production and consumption of plastic bags was developed within the framework of the project in order to help the Ministry of the Environment to start developing tailored measures to reduce single-use plastic bags.
 - Morocco: Technical assistance was offered to the Secretary of State for Sustainable Development on the adoption of an extended producer responsibility initiative, focusing on plastic packaging waste. Capacity in relation to reducing the production – and the reuse – of single-use packaging was built in terms of possible configurations of the scheme, including particular scenarios for the countries.
 - Tunisia: There was collaboration with the Ministry of Local Affairs and the Environment, involving the provision of technical advice on a draft decree for banning single-use plastic bags and the drafting of preparatory by-laws for the adoption of the decree. Assistance was also provided to the National Institute of Standardization and Industrial Property for the review and update of industrial norms for plastic bags. The decree was approved and published on 16 January 2020 in the official biweekly *Journal of the Republic of Tunisia* (No. 32).
- ▶ The conduct of a state-of-play analysis in Albania, Bosnia and Herzegovina and Montenegro to inform improvements in the collection and recycling of plastic (polyethylene terephthalate, or PET) bottles. Material flows of food and beverage packaging are also being analysed in those countries.
 - ▶ The implementation of pilot projects in seven Mediterranean countries to determine the application of reasonable fees for the use of port reception facilities, or, when applicable, the application of a “no-special-fee” system, with a view to improving the management of sea-based litter in ports and marinas. Reception facilities in ports and the delivery of ship-generated waste (national targeted diagnosis reports) were also provided. National diagnosis reports are under final review.
 - ▶ The conduct of a literature review, in 2018, of existing best practices for the application of fees and of the no-special-fee system for the use of port reception facilities, using examples from the Mediterranean and other European regional seas.
 - ▶ The preparation of a socioeconomic analysis of marine litter best practice for the Mediterranean to prevent or reduce single-use plastic bags and bottles. The report provides a comprehensive description of the key measures implemented in the region, assesses costs and benefits from their implementation, references Mediterranean case studies and introduces fact sheets for all selected measures.
 - ▶ The development of IMAP candidate indicator 24 (marine litter ingested by or entangling marine organisms, focusing on marine turtles) to assess the impact of marine litter on biota. In 2019, an agreement was reached to use marine turtles as an indicator species in the Mediterranean. It was also agreed to harmonize monitoring protocols and develop an operational regional monitoring strategy and a regional monitoring network.

- ▶ The development, in 2019, of the Mediterranean Marine Litter Node with the support of UNEP/Global Programme of Action and GPML. The Node provides a regional hub for knowledge- and information-sharing, networking and partnerships.
- ▶ The establishment, in 2016, of the Regional Cooperation Platform on Marine Litter in the Mediterranean. The platform consists of more than 25 members, including regional and international organizations, and has a mandate to address and manage marine litter issues in the Mediterranean.
- ▶ The provision of assistance and support to the Black Sea Commission (BSC) permanent secretariat in preparing and drafting the Regional Action Plan on Marine Litter Management in the Black Sea, which was adopted in October 2018. Additional support has been provided for the development of a regional monitoring programme for marine litter in the region.
- ▶ The organization, in 2018 and 2019, of three regional and 15 national meetings to build capacity and share best practices and monitoring and assessment tools for marine litter.

Enabling factors

The mandate of MAP and the Programme for the Assessment and Control of Marine Pollution in the Mediterranean to formulate measures on marine litter management is provided for by several protocols to the Barcelona Convention, namely the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities and the Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft, the Regional Plan on Marine Litter Management in the Mediterranean, the Regional Plan on Sustainable Consumption and Production, national action plans to combat pollution from land-based sources and activities, the ecosystem approach road map, IMAP and a number of MAP strategies of a programmatic or thematic nature.

High-level political support has ensured that actions to tackle litter have been implemented. For example, the Naples Ministerial Declaration resulting from the twenty-first meeting of the Conference of the Parties to the Barcelona Convention, held in December 2019, reaffirmed and strengthened existing political commitments, such as the commitment to eliminate plastic input to the sea by 2025. Regional collaboration has been supported by actions at the national level, with 19 Mediterranean countries adopting national action plans, including measures on marine litter management. Each country has also established a national monitoring programme based on IMAP common indicators, addressing beach litter, floating litter and sea-floor litter.

Technical and financial support is provided by the MAP Regional Activity Centre for Sustainable Consumption and Production to develop and update national regulatory frameworks related to non-single-use plastic bags and to promote extended producer responsibility.

MAP has played a significant role in raising awareness of the added value of regional collaboration through its Regional Seas Programme (European regional seas coordination meetings, for example), including the support provided to BSC in the adoption of the Regional Action Plan on Marine Litter Management in October 2018. The Group of Seven (G7) Environmental Ministerial Declaration made in Bologna, Italy, in 2017 and the G7 workshop on marine litter held in Metz, France, in 2019 highlighted the role of the regional seas in establishing and implementing coherent and coordinated regional approaches to marine litter and thus incorporating the G7 Action Plan to Combat Marine Litter into the regional perspective.



BSC and the Barcelona Convention: cooperating on marine pollution

Problem



The Black Sea faces marine pollution issues as a result of coastal development, a growing population and limited hydrological interactions with ocean basins.

Action

In recognition of the hydrological linkages between the Black Sea and the Mediterranean Sea, Turkey, a member of both of those regional seas, put forward a proposal to strengthen cooperation between the two regions to realize mutual benefits. In February 2016, the BSC permanent secretariat signed an MoU with MAP, which provided a formal mechanism for cooperation between the two regions and enabled the sharing of information, experiences and lessons learned.

Result

The MoU and a small-scale funding agreement between MAP and BSC enabled BSC to work directly with the MAP Marine Litter Mediterranean project (2016–2019) to strengthen bilateral collaboration on marine litter matters. With the assistance of the project, a series of dedicated activities were undertaken to:

- ▶ Develop and finalize the Regional Action Plan on Marine Litter Management in the Black Sea. It is the first action plan of its kind on marine litter in the region to be adopted by consensus and is now in force (as of 2018), with countries expected to report to the secretariat on a biennial basis. Many countries are also undertaking national action on marine litter independently of the Action Plan.

- ▶ Develop a marine litter monitoring programme for the Black Sea using the Barcelona Convention agreement on monitoring as a blueprint. The programme has been tailored to the needs and priorities of the Black Sea region and represents a significant step towards a more comprehensive monitoring regime at the regional scale, ultimately supporting efforts to mitigate the transboundary impact of marine litter.
- ▶ Organize annual joint meetings between both secretariats. Since 2017, annual bilateral meetings between BSC and MAP, as agreed in the MoU between the two secretariats, have been organized. At each meeting, regions discuss recent developments and priorities, and produce a joint workplan for the year ahead.
- ▶ Draft a joint workplan between MAP and BSC. The work plan facilitated and encouraged the exchange of knowledge and experiences, facilitated the organization of regional verification workshops to share lessons learned from the MAP regional monitoring programme and strengthened the relationship between the regions, not only with regard to marine litter, but also in integrated coastal zone management, monitoring and assessment, fisheries and other relevant topics of mutual interest.

Enabling factors

The political will of Black Sea and Mediterranean Sea countries to improve cooperation and coordination between the two regions was instrumental in driving the establishment of the MoU. That in turn enabled the two secretariats to develop a joint workplan and ensured continued buy-in to regional strategies for addressing marine litter and Sustainable Development Goal target 14.1. In addition, BSC has worked closely with its member countries to develop a common understanding of matters related to marine litter and generate consensus on required actions, which has played a crucial role in progressing activities in a region where national priorities can vary significantly.

The MoU provided a framework for cooperation and understanding and facilitated collaboration between the parties to achieve their shared goals and objectives. It set out an agreed programme of work, including issues pertaining to marine litter. The agreement constituted more formal recognition of the need for, and willingness of, countries to cooperate.

The existing financial, technical and institutional resources, as well as the relatively advanced state of regional action in the Mediterranean enabled MAP to work closely with BSC to share experiences and lessons learned. That support has improved the knowledge, understanding and capabilities of BSC in responding to marine pollution.

South Asia Co-operative Environment Programme (SACEP): developing a regional oil and chemical pollution contingency plan for South Asia

Problem



The South Asian Seas region imports a large amount of its oil from the Middle East using oil tankers. It also lies close to the main shipping routes between the Middle East and Asia. As a result, the region is at high risk of oil and chemical spills.

Action

The International Convention on Oil Pollution Preparedness, Response and Co-operation (1990) and its Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances (2000) facilitate international cooperation and mutual assistance in preparing for and responding to major oil pollution and spills of hazardous and noxious substances. They encourage States

to develop and maintain adequate capacity to address those emergencies and set out a basic obligation for parties to establish a national system for responding promptly and effectively to such incidents. They also encourage parties to engage with one another to develop bilateral or multilateral agreements for oil pollution and hazardous spill incident preparedness and response.

To that end, SACEP and IMO signed an MoU in June 2019 to enhance cooperation in the event of an oil or chemical spill in the South Asian Seas region and develop a regional oil spill contingency plan. The goal for the plan was to establish a mechanism for mutual assistance and coordinated responses between the SACEP coastal member countries (Bangladesh, India, Maldives, Pakistan and Sri Lanka) in the event of a pollution incident.

In 2012, SACEP and IMO furthered their collaborative work through another MoU to implement a project entitled “Enhancing Regional Cooperation Mechanisms on Marine Pollution Preparedness and Response in the SACEP Region”, funded by the Norwegian Agency for Development Cooperation. The project sought to establish effective cooperation mechanisms to address marine pollution and update and finalize existing national and regional contingency plans. The long-term objective is to implement the Convention and its Protocol in the South Asian Seas region.

Since 2012, the following activities have been carried out under the MoU between SACEP and IMO:

- ▶ In February 2014, the first regional meeting of the national authorities responsible for oil spill preparedness and response took place in Colombo and provided stakeholders with the opportunity to share their experiences and knowledge.
- ▶ In 2014 and 2015, national workshops were held in the five SACEP coastal member countries, following a recommendation from the regional meeting. The purpose of



the workshops was to update and finalize national oil and chemical spill contingency plans and provide recommendations for updating the SACEP Regional Oil and Chemical Spill Contingency Plan.

- ▶ In November 2015, regional training and exercises on oil spill preparedness and response took place in Colombo, as part of the project funded by the Norwegian Agency for Development Cooperation.
- ▶ In August 2016, a regional workshop took place in Malé to finalize and consolidate updates to the Regional Oil and Chemical Spill Contingency Plan and its annexes for the South Asian Seas region. The workshop also identified future training activities and developed a three-year programme of training and exercises to enhance regional capacity-building in oil spill preparedness and response.

Result

As a result of developing the Regional Oil and Chemical Pollution Contingency Plan, South Asia is better prepared for oil and chemical spill incidents. A coordinated, timely response to incidents will decrease the negative impact on the marine environment. The Plan recommends a regional approach to addressing incidents, even if an incident is restricted to the maritime waters of one country, and encourages affected countries to request assistance from other countries where necessary. The Regional Oil Spill Contingency Plan and lessons from a 2015 workshop were put into practice in January 2017, when two oil tankers collided outside of the port of Kamarajar, India (INCOIS, 2017). Such an approach encourages a sense of regional unity and strengthens relations. Lessons learned through the development of the approach could pave the way for similar approaches at the regional level in other aspects of marine environmental protection in the region.

The relationship between SACEP and IMO was further strengthened through the establishment of a new MoU in June 2019, the purpose of which was to increase collaborative activities between

the two organizations beyond that of oil pollution and chemical spill preparedness, including:

- ▶ Improved use of dispersants and aerial surveillance techniques, and the development of related agreements reflected in the regional contingency plans
- ▶ A regional exercise to test communication and operational procedures in the event of an oil spill incident
- ▶ The promotion of the London Protocol to prevent the dumping of waste and other matter into the ocean
- ▶ The management of ballast water to control the spread of invasive alien species
- ▶ Collaboration on the GloFouling Partnerships Project, which aims to control and manage biofouling from ships

Enabling factors

SACEP countries acknowledged the need for a regional oil spill contingency plan to address accidents in the major international shipping lanes crossing from east to west through the South Asian Seas region.

Funding provided through the Norwegian Agency for Development Cooperation project enabled SACEP and IMO to host workshops on knowledge- and experience-sharing. That helped to revitalize efforts and encouraged further cooperation among countries in the region to update the regional contingency plan and identify specific areas in which additional capacity-building might be required.

A formalized MoU with IMO has enabled regular information-sharing between the two organizations, as well as capacity-building in SACEP member countries through IMO training exercises.

SACEP: addressing nutrient loading and eutrophication in the Bay of Bengal

Problem



The use of fertilizers in the South Asian Seas region has sharply increased over the past three decades, with regional demand increasing by 47 per cent from 2000 to 2013, including a 46 per cent increase in demand for nitrogen.⁵ Nutrient inputs released into the Bay of Bengal from agriculture, aquaculture, sewage and industry have increased the concentration of nitrogen in the water, leading to eutrophication and blooms of phytoplankton. When those phytoplankton decompose, oxygen in the

water column is consumed, thereby decreasing the amount of oxygen available for other marine species. This can lead to mass mortality events; changes in species composition, diversity and abundance; and ecosystem collapse. Low-oxygen waters are sometimes referred to as “dead zones”, and they may be temporary or permanent.

The dead zone in the Bay of Bengal is near tipping point.⁶ Further oxygen loss caused by nitrogen loading could result in ecosystem shifts to anaerobic metabolism, stripping the water of key nutrients and upsetting the global nutrient balance. The shift could be triggered by further build-up of nutrient pollution or changes in monsoons as a result of climate change.

⁵ J. Huang, A. Gulati and I. Gregory, eds. *Fertilizer Subsidies: Which Way Forward* (Muscle Shoals, Alabama, International Center for Soil Fertility and Agricultural Development, 2017). Available at www.cabdirect.org/cabdirect/abstract/20173122499.

⁶ A. Ghosh and A. Savio Lobo, “Bay of Bengal: depleted fish stocks and huge dead zone signal tipping point”, *The Guardian Online*, 31 January 2017. Available at www.theguardian.com/environment/2017/jan/31/bay-bengal-depleted-fish-stocks-pollution-climate-change-migration.

Action

In 2012, the SACEP/South Asian Seas Programme (SASP) participated in a regional meeting of South Asian Seas countries to share experiences in addressing land-based sources of marine pollution. Those experiences were to be used to support the GEF-funded Bay of Bengal Large Marine Ecosystem (BOBLME) project. Information was used to identify transboundary environmental issues in the Bay of Bengal (including marine pollution and nutrient loading) and potential actions to address those issues.

Following the meeting, SACEP, UNEP/Global Programme of Action and the BOBLME project jointly developed a project entitled “Controlling Nutrient Loading and Eutrophication of Coastal Waters in the South Asian Seas Region”. The collaborative project established a regional dialogue to address unsustainable nutrient management practices and reduce their impact in the South Asian Seas region. The project sought, in particular, to identify and better understand nutrient inputs into regional waters and develop a regional action plan and policy framework to improve nutrient management across the region. The project was funded by FAO and implemented by the SACEP secretariat, with activities carried out at the national level by SASP national focal points (Bangladesh, India, Maldives, Pakistan and Sri Lanka).

Project activities included:

- ▶ The creation of an inventory of point and non-point nutrient sources to coastal waters
- ▶ The observation of nutrient enrichment in potential hotspots at fixed coastal sites to estimate the possible impact on coastal ecosystems
- ▶ The development of a regional action plan for nutrient control and reduction
- ▶ The reduction of nutrient input from agriculture through dedicated actions, and the use of remedial measures for eutrophication and hypoxia at identified sites
- ▶ the establishment of a regional policy forum to monitor activities and define further action to be undertaken by member countries



The main output of the project was a scoping study of nutrient pollution in the coastal and marine ecosystems of the five maritime countries of South Asia. The study was conducted by a group of consultants from the Indian Nitrogen Group and presented at a regional workshop in May 2014. At the workshop, participants validated the study and tested an ecosystem approach to pollution.

Result

The scoping study of nutrient pollution in the coastal and marine ecosystems of South Asia highlighted nutrient inputs, examined the problem of eutrophication and explored the management actions in place at the time to address excess nutrients. It called attention to policy options for tackling nutrient pollution in the region, including:

- ▶ The development of consistent river conservation and management measures across the region
- ▶ The development of quality standards for coastal waters in the region, including a uniform standard for primary water quality criteria for coastal waters

The study also outlined recommendations for improving the management and control of nutrient pollution in the region, including:

- ▶ The conduct of detailed studies with long-term data collection to support informed decision-making
- ▶ The use of new information technology to facilitate the sharing of data and information between stakeholders, nations and regions
- ▶ The building of capacity for integrated resource management and sustainable fishing

The recommendations from the study were reiterated and re-emphasized at the sixth SASP/intergovernmental meeting of ministers in November 2019, which called for further regional and national action to combat nutrient pollution. There were calls for a South Asian intergovernmental working group or task force

to lead a coordinated and sustainable nutrient management programme, and the potential to build on existing institutional arrangements, such as SACEP and the UNEP/Global Programme of Action, through the BOBLME project was acknowledged.⁷ SACEP is working closely with the team to develop phase II of the BOBLME project to ensure that the recommendations can be incorporated and delivered.

Using the information and experiences shared by SACEP and its member countries, the BOBLME project team agreed on a transboundary diagnostic analysis to identify priority environmental issues and their causes and to develop and obtain support for a collaborative strategic action programme to address those issues, including regional institutional and financial arrangements. In addition, the BOBLME project team has established working groups (to which SACEP contributes) on fisheries statistics, marine protected areas, ecological indicators, pollution and coastal resources management, and transboundary collaboration.

Enabling factors

The existing BOBLME project provided an inter-institutional and cross-sector platform and additional financing and incentives to identify key environmental issues throughout the region and implement management actions to ensure sustainable and integrated coastal and marine management.

The collaborative project between SACEP and BOBLME aimed to initiate regional-level dialogue in order to share knowledge and experiences between stakeholders and institutions, which helped to develop comprehensive studies and actions. The BOBLME project also provided an opportunity for member countries, including Indonesia, Malaysia and Myanmar, and regional organizations, such as COBSEA, to work collaboratively and share experiences.

⁷ SASP, "Report of the sixth inter-governmental meeting of ministers of South Asian Seas (Dhaka, Bangladesh, 5–6 November 2019)". Available at www.sacep.org/pdf/IMM/IMM-06-SASP-Report.pdf.

Protection of the Marine Environment (PAME): addressing marine litter in the Arctic

Problem



Although the Arctic coastal region is sparsely populated and has limited terrestrial transport and industrial infrastructure, maritime activity in certain areas of the Arctic Ocean is intensive, owing to its numerous rich fishing grounds and the increasing number of shipping routes that allow the cost-effective transportation of goods into, and resources out of, the region (especially to and from northern Norway and northwest Russia).⁸ As a result, marine litter, including plastic, is one of the most pervasive problems affecting the Arctic.

Marine litter, including microplastics, is the result of debris input from activities in the Arctic seas and coastal areas. It also results from debris transported by rivers from inland areas and by air currents and distant oceanic areas through global oceanic circulation. The proportion of litter and microplastics of local origin and those of distant origin is unknown. However, they are threatening marine and coastal ecosystems and their services in the Arctic.

Action

PAME conducted a desktop study on marine litter, including microplastics, in the region as part of the first phase of a marine litter project included in its 2017–2019 workplan.⁹ A marine litter expert group was established to assist in that work, in collaboration with other Arctic Council working

groups. A workshop was convened in Iceland in June 2018 in support of the project.

The main objective of the study was to review all relevant existing literature and scientific studies on marine litter in the Arctic in order to better understand its sources and drivers, its pathways and distribution, its interactions with and impact on biota and how to monitor and respond to it.

Result

PAME completed the study in May 2019. It is the first compilation of marine litter information on the circumpolar Arctic, but is by no means comprehensive. It has helped to improve understanding of the status and impact of marine litter in the region, in particular plastic litter and microplastics, and has provided an opportunity to identify potential next steps and inform future work by the Arctic Council.

Building on the results of the desktop study, the Regional Action Plan on Marine Litter in the Arctic was developed and published in May 2021.¹⁰ Work to develop an associated implementation plan for the activities specified in the action plan is under way. The action plan is to be reviewed and updated, where required, every four years, and the implementation plan, every two years to address new information and priorities, necessitating a realistic and flexible structure that remains adaptable.

The action plan addresses both sea- and land-based activities. Its focus on Arctic-specific marine litter sources and pathways will play an important role in demonstrating the stewardship efforts of Arctic States towards reducing the negative impact of marine litter, including microplastics, in the region.

PAME continues to collaborate with other Arctic Council working groups studying marine litter activities in order to ensure that their

⁸ Arctic Council, "Regional programme of action for the protection of the Arctic marine environment from land-based activities", PAME (2009). Available at www.pame.is/images/02_Document_Library/RPA_Reports/RPA_2009/PAME_RPA_layout_031109-jeirtt_nv_09.pdf.

⁹ The desktop study is available at www.pame.is/images/03_Projects/Arctic_Marine_Pollution/Litter/Desktop_study/Desktop_Study_on_marine_litter.pdf.

¹⁰ PAME (2021) Regional Action Plan on Marine Litter in the Arctic. Available at www.pame.is/document-library/pame-reports-new/pame-ministerial-deliverables/2021-12th-arctic-council-ministerial-meeting-reykjavik-iceland/801-regional-action-plan-on-marine-litter-in-the-arctic/file.



work is adequately reflected in the first version of the action plan. That work includes the monitoring carried out by the Arctic Monitoring and Assessment Programme, the work by the Conservation of Arctic Flora and Fauna (CAFF) on the impact of marine litter on wildlife, and the work by the Arctic Contaminants Action Programme on solid waste management. PAME will also continue to develop outreach and communication materials.

Enabling factors

The desktop study was developed by PAME with support from GRID-Arendal and the Marine Litter Expert Group. Both it and the regional plan are based on guidance and direction from the Arctic States, as well as from the Arctic Council's permanent participants, senior officials and ministers. PAME working group meetings, where consensus-based decisions are made and biennial workplans are produced for subsequent approval by the Arctic Council, are held twice a year. The meetings and workplans contributed towards the study.

Programme for the Environment of the Red Sea and Gulf of Aden (PERSGA): combating oil pollution

Problem



Around 7 per cent of global seaborne trade, in addition to a significant proportion of the world's crude and refined oil cargoes, passes through the Red Sea and Gulf of Aden. Marine ecosystems in the region are therefore at serious risk from oil spills and maritime accidents.

Action

The Protocol concerning Regional Cooperation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency was developed under the Jeddah Convention in 1982. Under the protocol, the Emergency Mutual Aid Centre in the Red Sea and Gulf of Aden was established in 2006. The Centre acts as a regional resource for coordinating pollution prevention and control mechanisms among PERSGA member countries. It is unique in the region, owing to its simulation system, which replicates the expected spread of oil pollution in the event of a spill. The centre also maintains a database of the oil pollution-related expertise available in each country in the region.

Result

The centre has fostered collaboration between PERSGA member countries in combating oil pollution by coordinating and facilitating the exchange of information, technical expertise and information systems. It has also coordinated regional training through seminars and workshops. The individual and collective capacity and preparedness of member countries to respond to an oil spill incident has increased as a result.



Target 14.2

Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR): environmental monitoring to support a precautionary approach in the Southern Ocean

Problem



Antarctic krill (*Euphausia superba*) is a crustacean of key importance to Antarctic ecosystem. It is considered a keystone species in the Southern Ocean, as it feeds on phytoplankton and transfers nutrients to animals higher up in the food chain. Prior to the establishment of the CAMLR Convention, krill fishing was unregulated, and large amounts were exploited each year. That risked causing damage to the ecosystem because it was unknown whether the quantities

extracted were sustainable and there was no way to manage the catch.

Action

Precautionary thinking and concerns over the potential collapse of krill populations led to the creation of CCAMLR in 1982 to conserve all Antarctic marine living resources, including through regulation of the krill fishery. In 1985, the CCAMLR Ecosystem Monitoring Programme

was introduced to bring krill fishery management into line with an ecosystem-based precautionary approach. The purpose of the Programme is to detect and record significant changes in critical components of the marine ecosystem within the area covered by the Convention, to serve as a basis for the conservation of Antarctic marine living resources and to distinguish between changes caused by the harvesting of commercial species and changes caused by environmental variability, both physical and biological. Under the Programme, standard monitoring methods were developed, which included methods relating to how data should be collected, formats for submission of the data to the CCAMLR secretariat and procedures for data analysis. The Programme is used to monitor population sizes, breeding success and other parameters in order to ensure effective ecosystem-based management.

That knowledge feeds into the established fishery quotas for Antarctic krill, which are set using ecosystem-based precautionary harvest control rules that take into account the demands of the ecosystem and ensure that the fishery only takes a small proportion of the krill biomass, leaving the rest for predators. Krill biomass is about 60 million tonnes in the Scotia Sea; the current catch limit is 620,000 tonnes, and the catch in 2019 was 390,000 tonnes. Furthermore, the catch is spatially distributed to avoid a concentration of fishing around krill-dependent predators.

Result

Today, CCAMLR is widely regarded as applying a highly precautionary approach to fisheries management, which is consistent with its remit to conserve all Antarctic marine living resources. By closely monitoring and adapting fishing regulations on an annual basis, the area is managed using an ecosystem-based approach that reflects its dynamic nature. By monitoring krill, penguins, seals, birds and other animals, a significant decrease in their populations can be quickly recognized and a response initiated.



Enabling factors

Consensus-driven decision-making has enabled the secretariat of CCAMLR to develop effective precautionary management approaches that have the support of all its member countries. All parties are fully committed to implementing those decisions because they have been active participants in the process.

The role of the secretariat, following the establishment of the CCAMLR Ecosystem Monitoring Programme, was to develop programme materials to assist in monitoring data collection and submission. The monitoring details were identified by the scientific committee.

The secretariat provides ongoing support to the Programme by coordinating international data exchange and management and maintaining the data infrastructure. That includes a high level of data quality assurance and routine reviews of materials and methods to improve Programme outcomes. The secretariat also supports members by analysing Programme data to inform sustainable krill management efforts and conservation objectives and providing regular updates on ecosystem indices at working group meetings.

In addition, and in order to support the precautionary-based approach, the secretariat supports the activities of CCAMLR and the Scientific Committee. Collaboration with other stakeholders is vital, and the secretariat has formal arrangements for cooperation with other regional organizations and exchanges data and information with them. It also engages with organizations such as FAO, industry associations such as the Association of Responsible Krill Harvesting Companies and observers from non-governmental organizations.

Regional Organization for the Protection of the Marine Environment (ROPME): developing an ecosystem-based management strategy

Problem



In recent decades, the ROPME region has experienced one of the highest rates of economic growth globally. The rise in industrialization, increase in population and rapid urbanization have resulted in growing environmental problems. Despite the dedicated efforts of ROPME and its member countries to address pollution and protect the marine and coastal environment, a 2013 report on the state of the marine environment illustrated the continuous degradation of the ROPME Sea Area.¹¹ The report recommended the adoption of an ecosystem-based management approach.

Action

In response, the sixteenth ROPME Council adopted a decision that promoted ecosystem-based management as a road map towards the sustainability of the marine and coastal environment. To implement the decision, the ROPME secretariat proposed a regional ecosystem-based management strategy for the ROPME Sea Area. In consultation with UNEP, ROPME took a step-by-step approach and involved multiple sectors in the development of the strategy. Fisheries were the first sector with which the organization engaged as part of the strategy development process. In 2016, ROPME established a working group for the development of a regional-scale ecosystem-

¹¹ ROPME (2013). State of the Marine Environment Report- 2013. ROPME/GC-16 /1-ii Regional Organization for the Protection of the Marine Environment, Kuwait, 225 p. Available at www.ropme.org/Uploads/Events/EBM/03-SOMER_2013.pdf.

based management strategy, comprising representatives of both the environmental and fisheries sectors from across all member countries.¹² ROPME also reached out to the Regional Commission for Fisheries to establish a formal cooperation framework between the two organizations.

Result

The development of the ROPME ecosystem-based management strategy is ongoing. One successful outcome of the process so far has been the endorsement by member countries of the cooperation between ROPME and the Regional Commission for Fisheries. In 2018, ROPME signed an MoU with that Commission to establish a framework for cooperation in relation to the management of the marine environment and marine biodiversity conservation and to provide a basis for joint projects and knowledge exchange. That shows that countries understand the value of cross-sectoral cooperation, which may serve as an example to encourage other sectors to join the efforts for ecosystem-based management. Through the development of the ecosystem-based management strategy, ROPME is providing a common vision for the sustainable management of the ROPME Sea Area that is shared by all eight member countries. That will help to coordinate management efforts not only by the member countries, but also by individual sectors in the region.

Enabling factors

ROPME has a clear mandate to coordinate the efforts of its eight member countries to protect marine and coastal environments in the ROPME Sea Area against marine pollution, the negative impact of development activities and other drivers of change.

¹² ROPME (2016). Toward the Development of a Regional Ecosystem Based Management Strategy (EBM) for ROPME Sea Area Dubai, UAE, 4-7 April 2016: Draft Terms of Reference of the Working Group on a Regional EBM Strategy for the ROPME Sea Area. Available at [www.ropme.org/Uploads/Events/EBM-WG1/WD/4-ROPME-EBM-WG1-ToR\(Updated\).pdf](http://www.ropme.org/Uploads/Events/EBM-WG1/WD/4-ROPME-EBM-WG1-ToR(Updated).pdf).

NOWPAP: managing integrated coastal zones

Problem



With more than 300 million inhabitants, the NOWPAP region is one of the most densely populated in the world, with a large proportion of the population living in coastal areas. Increasing development and use of marine and coastal areas and resources have resulted in ecosystem changes, including fragmentation, degradation and loss of coastal and marine habitats (including nursery habitats for commercially important species) and shoreline erosion.

Action

In 1994, NOWPAP was established to act as an intergovernmental mechanism to support the wise use, development and management of the Northwest Pacific coastal and marine environments in order to ensure long-term ecosystem development and health benefits. That problem and aspects of NOWPAP's response to it preceded the adoption of the Sustainable Development Goals in 2015; however, much of the work is ongoing and highly relevant to target 14.2 (as well as to Goals 6, 11, 13 and 15).

The NOWPAP Pollution Monitoring Regional Activity Centre implements activities on integrated coastal area planning and management. In 2007, it set up the Working Group on Integrated Coastal Area and River Basin Management to establish a regional dialogue on the issue. The group will be re-established in 2021–2022 to continue and enhance the exchange of experiences among NOWPAP member countries and to share best practices in integrated coastal area and river basin management and marine spatial planning.



NOWPAP has been cooperating with Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) since 2009. With the support of PEMSEA, NOWPAP organized a workshop to review the transboundary transportation of pollutants into coastal and marine waters via rivers – one of the main causes of ecological problems in coastal and marine areas – and discuss options to reduce such pollution. Since then, NOWPAP and PEMSEA have cooperated in integrated coastal area and river basin management activities in the NOWPAP region.

Result

The Working Group on Integrated Coastal Area and River Basin Management conducted a review of marine spatial planning and ecosystem-based management already under way in the region. It aimed to identify and extrapolate lessons from existing experiences that could be used to inform the development of guidelines to support member countries in applying efficient, integrated coastal area planning and management approaches. Two documents were produced in 2015:

- ▶ A regional overview of marine spatial planning and ecosystem-based management in selected areas in the region
- ▶ Regional guidelines for integrated coastal planning and management in the region that supplemented and built on existing PEMSEA guidelines

NOWPAP member countries have made significant progress in advancing legal and policy arrangements to support integrated coastal zone management and marine spatial planning at the national level. However, limited progress on those matters has been made to date on a regional scale.

On the basis of the findings of that work and through dialogue with member countries, NOWPAP recognized the need to build regional capacity for integrated planning and management and has therefore been working with PEMSEA to conduct training in integrated coastal zone management and marine spatial

planning. The training has resulted in a greater understanding of integrated coastal area and river basin management among NOWPAP member countries. In particular, it has helped Russian university teachers, researchers and entrepreneurs to learn from international experience on the topic and better understand its implementation. Consequently, the training materials are now used to teach experts in environmental science and management in universities in the Asian Pacific and the east of the Russian Federation.

In 2019, PEMSEA representatives and the directors of the Russian Academy of Sciences and Far Eastern Federal University participated in a dedicated meeting on integrated coastal area and river basin management, in which the possibility of establishing a centre at the university for expert training on integrated coastal area and river basin management was discussed.

Enabling factors

The NOWPAP intergovernmental mechanism has a mandate to ensure the wise use, development and management of the coastal and marine environment to obtain maximum long-term benefits for the region. That has provided a robust and sustainable basis on which to undertake integrated area-based planning and management activities in the region. The mandate remains highly relevant and sufficiently flexible to encourage further work in line with changing regional and national priorities. The dedicated Working Group on Integrated Coastal Area and River Basin Management has been instrumental in establishing and maintaining dialogue on those issues across NOWPAP member countries.

COBSEA: encouraging environmental stewardship in the tourism industry

Problem



According to the World Travel and Tourism Council, tourism is one of the largest and fastest growing sectors in the world and is a key driver of economic growth in the East Asian Seas region. Coral reefs are an important asset to the tourism industry; however, they are threatened by global climate change, as well as by local pressures from dive tourism, such as anchor damage, direct damage by divers and littering. Significant damage can often be observed on frequently visited reefs. The mitigation of direct local pressures is critical in supporting coral reef resilience in the face of climate change.

Action

In the early 2000s, a COBSEA project highlighted the urgent need to engage with and encourage businesses in the tourism industry to take appropriate and timely action to ensure the sustainability of coral reefs as a blue economy. Subsequently, in 2004, the Green Fins initiative was established by the COBSEA secretariat, the Reef-World Foundation, the Phuket Marine Biological Centre and UNEP to increase public awareness and support improved marine ecosystem management in the East Asian Seas region. The initiative, initially implemented as a pilot project in Thailand, fosters environmental stewardship in the coastal tourism industry and is implemented at the national level using a network approach that brings together industry, government agencies and non-governmental organizations. The approach enables the private sector to become a partner in environmental stewardship.

The initiative has developed a 15-point code of conduct to measure, monitor and reduce the negative environmental impact of dive centres. Continued participation and Green Fins certification is dependent on centres lowering their impact scores every year. Membership, which is free, is offered to any dive and snorkel centre operating in an active Green Fins location that pledges to follow the established environmental practices in the code of conduct.

The initiative offers dive and snorkel companies capacity-building and practical, low-cost alternatives to harmful practices. It also provides strategic training and support and advice to assist businesses and individuals in reducing identified threats. A Green Fins “toolbox” includes consolidated and standardized material, with, among other items, an operational handbook, educational and outreach material and guidance documents.

Result

Green Fins is the world’s only internationally recognized environmental standard for diving and snorkelling. It is responsible for quantifiable improvements in business practices and measurable reductions in the negative environmental impact associated with diving and snorkelling. It provides national governments with an approach to improve the sustainability of marine tourism. Furthermore, the initiative has highlighted the added value of collaborating with the private sector to prevent the degradation of marine ecosystems.

Since its inception as a pilot project in 2004, the Green Fins initiative has been adopted by 600 marine tourism companies in 11 countries. It has expanded beyond the East Asian Seas region to the Caribbean, the Red Sea and the Pacific.

The Green Fins initiative has been used to support the development and strengthening of relevant national regulatory frameworks. For example, in the Philippines, a popular diving destination, the Department of Environment and Natural Resources has integrated the initiative into its



outreach activities and in 2016, it was formalized nationally. That has resulted in a stronger legal and institutional framework to support regional and provincial governments in implementing Green Fins environmental standards. The environmental standards have also been used to complement existing safety guidelines on scuba diving provided by the Philippines Commission on Sports and as a tool to manage tourism.

Collaboration between Green Fins supporters and local government has taken place throughout the COBSEA region, helping to reduce destructive practices through dedicated activities, such as ending a mooring buoy scheme (with potential impact on coral habitats used by mandarin fish) and undertaking regular patrols to protect areas from illegal fishing and other potentially destructive practices.

The Green Fins initiative has raised awareness and empowered local communities to safeguard their coral reef ecosystems. National teams, governments, dive operators and tourists now know how to approach and mitigate a range of threats. The establishment of monitoring schemes has provided a system for regular coral reef assessments.

More than 140 Green Fins certified dive centres operate in the COBSEA region. Globally, more than 4,500 dive staff have been trained on the environmental impact of tourism on coral reefs and low-cost, practical solutions to reduce threats. The approach has been introduced in diving destinations in countries including Indonesia, Malaysia, Maldives, the Philippines, Thailand and Viet Nam. COBSEA has encouraged the expansion of the programme and assisted in outreach activities by, for example, enabling the development of a database and audiovisual materials suitable for use in coral reef public outreach and on coral reef ecosystem service values.

Green Fins supports the achievement of Sustainable Development Goal targets 12.6 and 12.8 by encouraging companies to adopt sustainable practices and raise awareness of

sustainable development and lifestyles, and of targets 14.7 and 14.2 by supporting the sustainable management of marine and coastal ecosystems.

Enabling factors

The Green Fins initiative was developed in response to growing recognition of the threats posed by tourism to coral reefs in the COBSEA region. Awareness of the problem was raised through an earlier COBSEA project in which the importance of tackling tourism for coral reef protection was highlighted.

Green Fins is accessible and easy to join. Free material is provided in several languages and all dive operators have the opportunity to be involved, provided that they are committed to improving their management policies and adhering to the code of conduct.

Stakeholder involvement is a key enabling factor. The Green Fins initiative supports private sector engagement in protecting coral reefs and supporting policy and regulatory efforts as outlined by governments. The establishment, uptake and adoption of the initiative was enabled through cooperation and collaboration with COBSEA partners at the national level.

The adoption and implementation of the Green Fins initiative by authorities, organizations and institutions have proven to be most successful when governmental and non-governmental entities operate in partnership and foster a sense of ownership, with a commitment to supporting long-term implementation. The execution of the initiative as part of a national conservation programme can ensure its long-term sustainability (a key factor in the success of the pilot project in Thailand was the close involvement of a government agency).

The COBSEA institutional and coordination mechanism has facilitated the adoption, scaling-up and replication of the initiative at various sites across COBSEA member countries and beyond. Through ongoing work focusing on

coral reef resilience, COBSEA promotes the initiative to participating countries and partners. One such example is Mapping and Enhancing Natural Resource Governance in Small Island Communities, a two-year regional COBSEA project that was funded by Mangroves for the Future and that enabled expansion of the initiative in the COBSEA region and beyond.

The Green Fins initiative can easily be replicated in other countries and regions through its well-established process and standards and its ability to adapt to the needs of each context (by translating its publications, exhibition and campaign materials and quizzes into local languages, for example). The adaptability of the process and associated materials has increased adoption of the initiative and facilitated the sharing of information.

Furthermore, COBSEA provides a platform for stakeholders across member and non-member countries to share lessons learned and successful implementation strategies to overcome obstacles. Collaboration between the COBSEA secretariat and various stakeholders in COBSEA countries, such as national focal points and ministries, has enabled uptake, adoption and ownership of the initiative.

COBSEA: undertaking coastal spatial planning

Problem



Adverse effects on marine and coastal environments of economic development stem, in part, from poorly conceived planning in coastal and marine areas and the challenges associated with policy processes and frameworks. The impact of climate change impacts is not comprehensively integrated into local and

national coastal zone spatial planning processes. Consequently, adequate consideration is not given to the effects of climate change in coastal and marine development and use, potentially increasing the vulnerability of coastal ecosystems and communities.

Action

In collaboration with national focal points and other national resource management organizations, COBSEA developed the Spatial Planning in the Coastal Zone – Disaster Prevention and Sustainable Development project, which was implemented from 2010 to 2013. The project aimed to reduce the impact of natural disasters and climate change (including rises in sea levels and increasing storm surges) and promote the sustainable development of coastal ecosystems in the region through dedicated spatial planning activities.

The project involved strengthening national and regional capacities to undertake coastal spatial planning, including national adaptation activities and field application tailored to country needs and priorities. Through the project, COBSEA jointly developed, arranged and implemented a regional training-the-trainers course, which was facilitated by a team of three internationally recognized trainers and experts from Bangladesh, Canada and France, who worked in partnership with COBSEA.

Result

The project had a substantial impact in terms of promoting the development of local training and skills and integrating new management concepts into existing local and national spatial planning systems. National and regional training manuals and other education materials were developed, translated into national languages and used as key references to guide training sessions on coastal and marine spatial planning and management in the COBSEA countries. Existing planning guidebooks and toolkits on spatial planning were strengthened to incorporate components on coastal and marine resource management.



In addition to the training materials, a regional resource and guidance document was developed, translated into national languages and adapted to national contexts across the COBSEA region. In the Philippines, the document was used to support the amendment and updating of national comprehensive land-use plan guidebooks to include marine and coastal planning.

The project strengthened national and regional capacity to develop and apply spatial planning for sustainable development, disaster prevention and climate change adaptation measures. Six national teams, consisting of 34 core professionals, were established. Those teams represented marine and coastal spatial planning practitioners in the region who were equipped with the knowledge and skills to design and conduct training programmes.

Country-specific development plans and training materials were developed on the basis of national consultations and gap analyses. A total of 242 professionals were trained through national courses, establishing a pool of experts who could pass on knowledge and skills. Training courses also improved coordination between departments at the subnational and national levels.

Building on project outcomes, the COBSEA strategic directions for 2018–2022 incorporate marine and coastal planning and management as one of two substantive themes. Activities initiated in 2020 in partnership with the Blue Solutions initiative and UNEP will focus on a review of national and regional legal and policy frameworks, as well as capacity-building and policy dialogue aimed at creating conditions for ecosystem-based approaches.

Enabling factors

Following the 2004 Indian Ocean tsunami, the importance of coastal spatial planning to prevent future disasters became evident. That created a strong political will to take action and resulted in the development of the project.

The strong relationship and close collaboration of COBSEA with national authorities to develop the

project resulted in the smooth implementation of national training, including the regional training-the-trainers course and accompanying course material.

The project was made possible through funding from the Government of Sweden and project sustainability was ensured through the integration of results into existing processes and mechanisms for spatial planning in COBSEA countries. That was strengthened through the translation of the regional resource and guidance document and its adaptation to reflect COBSEA member country-specific conditions.

The COBSEA strategic directions for 2018–2022 identify marine and coastal spatial planning as a key tool for strengthening ecosystem-based marine and coastal management. The directions have been agreed by COBSEA member countries and they demonstrate the ambition to continue pursuing marine and coastal spatial planning activities. The directions and outputs from the project provide a foundation for future efforts, such as the follow-up project based on a partnership with the Blue Solutions initiative that aims to strengthen capacity to implement an environmental policy framework for marine and coastal planning in the region.¹³

Cartagena Convention: improving marine protected area (MPA) management

Problem



There is a need for improved MPA management to enhance conservation efforts in the wider Caribbean region.

¹³ The Blue Solutions initiative is a partnership between UNEP, GIZ, GRID-Arendal and the International Union for Conservation of Nature (IUCN).

Action

Several actions have been taken to improve MPA management in the wider Caribbean region. Protected areas in the Caribbean continue to be listed under the Specially Protected Areas and Wildlife (SPA) Protocol to the Cartagena Convention, which is dedicated to biodiversity protection, with the support of the protocol's regional activity centre, based in Guadeloupe.

In accordance with the objectives of the SPAW Protocol and the 2030 Agenda for Sustainable Development, the Government of Italy and the Cartagena Convention secretariat partnered to support governments of the Caribbean to implement the Sustainable Development Goals. That was achieved through the Biodiversity for Sustainable Development in the Caribbean through Ecosystem-Based Management project, with financial support from the Italian Ministry of Foreign Affairs and its Agency for Cooperation and Development.

The Italian project was also designed to assist in the implementation of the SPAW Protocol subprogramme, which includes a component targeting the development of institutional capacity to effectively apply an ecosystem-based management approach by promoting the principles and values of good governance for the conservation and management of marine ecosystems in the region. That partnership increased technical skills in MPA management and enhanced the use of the methodological and operational tool for an ecosystem-based management decision support system, providing decision makers with planning and management capacities for sustainable development. The tool was successfully applied at two pilot sites in the Dominican Republic – Puerto Plata and Montecristi – with resulting priority actions for implementation and monitoring. Training and capacity-building were carried out in both English-speaking and Spanish-speaking countries through the subprogramme's Caribbean Marine Protected Areas Management Network and Forum flagship training the trainers programme in 22 countries in the wider Caribbean, as well as through two

regional workshops in Panama carried out in synergy with institutional partners in the region.

With support from the project, the Caribbean Marine Protected Areas Management Network and Forum database was also independently evaluated, and information on more than 80 MPAs was revised and adjusted. The database contains information on 1,069 Caribbean MPAs, with 77 fields on density, legal, biophysical and management parameters. It displays as an interactive map generated by the QGIS Cloud platform, facilitating specific searches for any of the fields, and allows for the downloading of information in multiple formats. As a result, the database can now easily compare information with the World Database on Protected Areas, which is managed by the UNEP World Conservation Monitoring Centre with support from the International Union for Conservation of Nature (IUCN) and its World Commission on Protected Areas.

Through the SPAW Protocol's regional activity centre, the Blue Finance initiative was created to develop solutions for the management of MPAs. By working in several MPAs in the wider Caribbean region, the initiative seeks to establish blended finance solutions for the management and sustainable financing of those MPAs.

Reports such as *The State of Nearshore Marine Habitats in the Wider Caribbean*¹⁴ and the *Regional Strategy and Action Plan for the Valuation, Protection and/or Restoration of Key Marine Habitats in the Wider Caribbean 2021–2030*¹⁵ are tools for protecting the large marine ecosystems that comprise this region, including MPAs. They were developed through funding and support from the UNDP/GEF Caribbean and North Brazil Shelf Large Marine Ecosystem Project. Both

14 United Nations Environment Programme - Caribbean Environment Programme (2020). *The State of Nearshore Marine Habitats in the Wider Caribbean*. CLME+ Project Information Product Series - Technical Report 1. Port-of-Spain: CANARI. Available at <https://wedocs.unep.org/20.500.11822/36352>.

15 United Nations Environment Programme - Caribbean Environment Programme (2020). *Regional Strategy and Action Plan for the Valuation, Protection and/or Restoration of Key Marine Habitats in the Wider Caribbean 2021 – 2030*. CLME+ Project Information Product Series - Technical Report 2. Port-of-Spain: CANARI. Available at <https://wedocs.unep.org/20.500.11822/36347>.



documents embody the institutionalization of collaborative regional projects that have been supporting improved transboundary governance of the region's shared marine living resources.

Result

The above initiatives have resulted in several positive outcomes for the region, including a summary fact sheet to guide MPA listing processes and general strengthening of the areas. A final report was also developed to provide an objective assessment of the state of, trends concerning and threats to coral reefs, mangroves and seagrass beds, using the best available scientific data. That is complemented by a financing mechanism to improve emergency response actions and restoration of key sites in the region.

Training sessions enhanced the capacity of MPA managers across the region. The two pilot sites in the Dominican Republic were created to establish ecosystem-based management regional nodes and systemic management plans. By extension, two regional nodes have been established in the English-speaking and Dutch-speaking Caribbean.

Overall, the ecosystem-based management project facilitated stronger collaboration among Caribbean MPA managers and increased technical and financial support from both public and private organizations. It also facilitated the increased application of marine spatial planning in monitoring and management plans.

Enabling factors

The involvement of contracting parties to the Cartagena Convention, along with obligations and commitments of the secretariat, played a strong role in creating an enabling environment for the above outcomes. The secretariat made a commitment to support the management of marine and coastal ecosystems through an integrated approach covering multiple regional and global frameworks linked to the Sustainable Development Goals. The contracting parties requested that new protected areas

be established and developed an improved mechanism for submitting those areas, in accordance with the mandates of the SPAW Protocol. The parties also requested that the secretariat undertake a comprehensive review to assess the impact and effectiveness of the activities carried out by the Caribbean Marine Protected Areas Management Network and Forum. Partnerships with contracting parties, donors, academia, research institutions, MPA practitioners, civil society and a wide network of intergovernmental and non-governmental organizations were enhanced to improve the establishment and management of MPAs. A more critical review of MPA and database management in the region was undertaken, which has enabled further national and regional discussion on funding gaps for capacity-building in MPA management and evaluations of incomplete and outdated data, data collection and database management.

PAME: developing guidelines for applying the ecosystem-based management approach in the Arctic

Problem



There is a need to better understand and translate the ecosystem-based management approach into practical terms to enable sustainable management of Arctic marine and coastal ecosystems. To achieve that, PAME is identifying critical influences on the health of ecosystems and encouraging action to ensure the sustainable use of ecosystem goods and services and the maintenance of ecosystem integrity.

Action

The ecosystem-based approach has been used as an overarching principle by Arctic Council

ministers since 2004. In 2007, at the request of the ministers, PAME established an Ecosystem Approach Expert Group, which in 2011 was integrated into three other Arctic Council working groups: the CAFF Working Group, the Arctic Monitoring and Assessment Programme Working Group and the Sustainable Development Working Group. The aim of the Expert Group was to review six concepts within the framework of ecosystem-based management and agree upon a definition, principles and recommendations for its use.¹⁶ The concepts are:

- ▶ Identify the geographic extent of the ecosystem
- ▶ Describe the biological and physical components and processes of the ecosystem, including humans
- ▶ Set ecological objectives that define the sustainability of the ecosystem (the report is currently being developed)
- ▶ Assess the current state of the ecosystem (integrated ecosystem assessment) (work by the International Council for the Exploration of the Sea and the North Pacific Marine Science Organization is ongoing)
- ▶ Value the cultural, social and economic goods produced by the ecosystem (the seventh workshop will be held in 2022)
- ▶ Manage human activities to sustain the ecosystem

To date, the expert group has convened six workshops, held between 2011 and 2018, as well as international ecosystem-based approach conferences in 2016 and 2019. The next workshop will be held in 2022 and will focus on the value of cultural, social and economic goods provided by the ecosystem.

In 2013, a set of recommendations made by the Expert Group was adopted by Arctic Council ministers as part of the Kiruna Declaration.¹⁷

¹⁶ PAME and Arctic Council, "Large marine ecosystems (LMEs) of the Arctic area: revision of the Arctic LME map, 15th May 2013", 2nd ed. (2013). Available at www.pame.is/document-library/ecosystem-approach-to-management-documents/large-marine-ecosystems/385-lme-report/file.

¹⁷ The recommendations are available at <https://oaarchive.arctic-council.org/handle/11374/93>.

Recognizing the need to translate the theory behind ecosystem-based management into practice, the ministers agreed at the ninth and tenth ministerial meetings (held in Iqaluit, Canada, in 2015 and in Fairbanks, Canada, in 2017) to develop practical guidelines for implementation.¹⁸ The purpose of the sixth Expert Group workshop was to agree on the scope of those guidelines and to begin work thereon.

Result

Guidelines for the practical implementation of an ecosystem-based management approach in the Arctic were developed on the basis of the discussions and insights gained from the Expert Group workshops and were published in 2019.¹⁹ Their purpose is to assist scientists, policymakers, managers and communities in implementing ecosystem-based management to support sustainable development in Arctic marine ecosystems. This is the first time that guidelines of this type have been adopted in the Arctic, and they will enable a unified approach to ecosystem-based management. The Ecosystem Approach Expert Group has also been involved in the work of two International Council for the Exploration of the Sea working groups: the central Arctic Ocean Working Group and the Barents Sea Working Group.

Enabling factors

The ecosystem-based approach has been a part of the PAME workplan and used by the Arctic Council for several years and has elevated the region by advancing its understanding and application of the approach, which continues to be developed. The work on an ecosystem-based approach to management in the Arctic is based

¹⁸ Further information and the Arctic Council meeting documents are available at www.pame.is/document-library/pame-reports-new/pame-ministerial-deliverables?own=0.

¹⁹ Guidelines available at www.pame.is/index.php/document-library/pame-reports-new/pame-ministerial-deliverables/2019-11th-arctic-council-ministerial-meeting-rovaniemi-finland/424-guidelines-for-implementing-an-ecosystem-approach-to-management-of-arctic-marine-ecosystems/file.



on guidance and direction from the Arctic States, as well as from the permanent participants, senior officials and ministers of the Arctic Council, with support from the Ecosystem Approach Expert Group. Further details are provided in the Arctic Councils' ministerial-approved biennial PAME workplans and records of decisions based on consensus at PAME Working Group meetings, which are held twice a year.

PERSGA: enabling local communities to incorporate the ecosystem approach

Problem



The Red Sea and Gulf of Aden region has experienced rapid coastal development and urbanization in recent years as a result of fast-growing industries such as tourism, fisheries, oil and gas, desalination and shipping. Those industries, in turn, are driven by the unique marine biodiversity of the region (including distinctive coral reefs), its strategic location as a maritime route for international shipping, its rich oil and gas reserves, and the increasing need for water desalination owing to a lack of freshwater resources. Rapid growth presents a growing threat to the natural resources on which the region depends.

The PERSGA Strategic Implementation Programme, implemented from 1999 to 2005, helped to develop a platform for regional coordination between PERSGA member countries. However, conserving key habitats, such as mangroves, coral reefs and seagrasses, and the unique marine biodiversity of the region remains a challenge, owing to weak community and stakeholder engagement and inter-agency coordination, as well as ongoing capacity gaps. All those issues could be best addressed through ecosystem-based management and the

development of incentives.

Action

Recognizing those problems, PERSGA has focused its activities on supporting ecosystem-based approach principles, community-based and on-the-ground activities, and developing practical strategies to address marine environmental decline. It has also focused its training on making those principles operational in the local context.

In 2011 and 2012, PERSGA undertook a series of training and consultation workshops, in collaboration with UNEP, on the ecosystem-based approach and how it could be put into practice in the region. That paved the way for developing and implementing the GEF-funded Strategic Ecosystem Management project from 2014 to 2018, in collaboration with the World Bank. The project focused on applying ecosystem-based approach principles in selected MPAs in the regional MPA network by revising legislation, policies, management practices and zoning plans. The selected MPAs were also supported by the project in promoting management effectiveness and developing monitoring approaches and indicators to inform ecosystem-based management. One of the main successes of the project was the establishment of community-based alternative livelihoods in those MPAs. Environmental and social framework assessments were created for local communities to use. The assessments included a simple interpretation of the 12 ecosystem-based approach principles of the Convention on Biological Diversity (CBD), and users applied them to various livelihoods. Similar interpretations were also applied to revising policies and management practices and ecosystem-based management indicators.

Result

The GEF Strategic Ecosystem Management project was the first of its kind in the region to highlight the ecosystem approach. It triggered the process of revising national and regional legislation and policies for living marine

resources by, for example, developing a regional protocol, including how to manage fisheries and aquaculture in the Red Sea and Gulf of Aden. The project also successfully demonstrated the application of ecosystem-based management through the regional MPA network. In addition, the project showed a simple way of assessing the compliance of alternative livelihoods with ecosystem-approach principles.

The project produced several tangible outputs. At the Wadi el Gemal National Park in Egypt, activities transformed small community settlements into pioneer ecovillages, and they became part of the regional MPA network. The process involved the MPA authority and local and grass-roots organizations and was the first community-based ecotourism venture in Egypt. Activities included the installation of solar panels so that villages could run entirely on solar energy, community desalination plants, tourist facilities such as tents and cafes, and cold storage facilities for fish. Ecotourism incentivized greater environmental stewardship, and the community developed a better understanding of its rights. Feelings of positivity towards the MPA and its objectives increased, and sustainable livelihoods became more widespread. As a result, the management effectiveness of the MPA was found to have increased, according to a management effectiveness tracking tool evaluation.²⁰

In the Dugonab Bay and Senaneeb National Parks in Sudan, the project was used by national agencies to support the development of integrated management plans and establish several sustainable livelihood community-based ventures. That resulted in an increase in MPA management effectiveness, as identified in a management effectiveness tracking tool evaluation, which contributed to the designation of the two parks as UNESCO World Heritage Sites in 2016.

In the Moucha-Maskali Islands Marine National Park in Djibouti, the project was used by

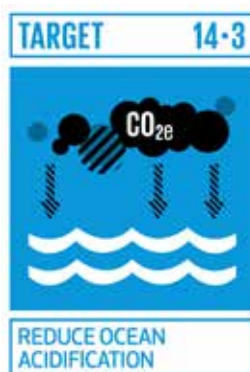
government agencies to engage fishers in environmental and fisheries monitoring and MPA activities. That was facilitated through the establishment of a fishers' centre, equipped with solar power, which provided training facilities for local fishers. The islands are a popular tourist attraction, so the training enabled fishers to offer visiting tourists tours of the islands, which not only provided them with an alternative livelihood, but also enhanced their involvement in MPA monitoring and surveillance activities and gave them a stake in conserving and protecting marine biodiversity around the islands.

Enabling factors

Community-based alternative livelihood interventions as part of the Strategic Ecosystem Management project created incentives for local communities to conserve and protect their marine environments. Local government endorsed and supported the creation of jobs and sustainable livelihoods, which helped to build strong partnerships between them and community grass-roots movements and non-governmental organizations. Local government supported not only strengthened ownership of the activities as part of the project, but also resulted in the mobilization of technical skills and capacity-building by relevant government programmes. The project design, based on ecosystem-approach principles, was able to demonstrate other co-benefits from alternative livelihoods offered by marine resources and MPAs. That in turn enabled increased responsiveness from decision makers and local community leaders, especially those supporting strategic objectives such as demonstrating how those alternative livelihoods for coastal communities could contribute towards national objectives (such as addressing poverty, food security and job creation).

²⁰ The Management Effectiveness Tracking Tool (METT), as described at www.protectedplanet.net/en/thematic-areas/protected-areas-management-effectiveness-pame?tab=METT.





Target 14.3

SPREP: monitoring ocean acidification

Problem



Globally, the oceans absorb approximately 30 per cent of the carbon dioxide released into the atmosphere. That carbon dioxide combines with seawater to produce carbonic acid, decreasing the pH of the seawater and depleting it of carbonate that many forms of sea life need to build their shells. Many organisms can

be affected by acidification, including plankton, algae, shellfish, sea urchins and corals that need calcium carbonate to build their shells and skeletons.

Action

SPREP coordinates the Pacific Partnership on Ocean Acidification (PPOA), in collaboration with the University of the South Pacific and the Pacific Community. The partnership works to build resilience to ocean acidification in communities and ecosystems of the Pacific island countries and territories, with financial support from Monaco and the New Zealand Ministry of Foreign Affairs and Trade.

As part of the partnership, SPREP is supporting ocean acidification monitoring in the Pacific islands and has published ocean acidification

assessments for the region and pelagic fisheries. Those assessments have informed the prioritization of pilot sites for adaptation actions implemented by PPOA. SPREP has also provided ocean acidification monitoring equipment and training to 14 scientists from eight nations in the region. To raise awareness of ocean acidification more broadly, SPREP has produced and distributed information about ocean acidification in various Pacific island languages.

Result

The partnership tackles ocean acidification in the Pacific by supporting research and monitoring, building scientific capacity, raising awareness and implementing practical adaptation actions at pilot sites in Fiji, Kiribati and Tokelau. As a result of the work of PPOA, 14 Pacific island scientists now monitor coastal ocean chemistry and report in relation to Sustainable Development Goal indicator 14.3.1.

PPOA works with communities to identify and implement stakeholder priorities for practical adaptation actions to enhance community and ecosystem resilience to ocean acidification. Work is under way to increase resilience to ocean acidification through practical nature-based adaptation activities, such as planting mangroves to buffer pH at the local level, restoring coral to enhance reef resilience and establishing locally managed marine areas to reduce secondary reef stresses. PPOA is also working with international partners such as The Ocean Foundation and the Global Ocean Acidification Observation Network to build local capacity to monitor and report ocean acidification data.

Enabling factors

Three key factors enable successful work by PPOA: the funding received from the Governments of Monaco and New Zealand, leadership from SPREP and dedication from Pacific country counterparts and communities.

Nairobi Convention: developing an ocean acidification action plan

Problem



There is a lack of awareness of ocean acidification and a lack of understanding of its impact across the Western Indian Ocean region.

Action

Two Western Indian Ocean regional ocean acidification workshops were conducted in 2017 and 2019, in collaboration with the IUCN-chaired Ocean Acidification International Reference User Group, and the Western Indian Ocean Marine Science Association (WIOMSA). The main objectives of the most recent workshop were to take stock of current regional knowledge and actions on ocean acidification and develop a regional action plan.

During the 2017 workshop, a white paper on ocean acidification was developed that included the following action points for the Nairobi Convention:

- ▶ To understand the relationship between changes in the marine environment and ecosystems and the socioeconomic impact of ocean acidification
- ▶ To assess the vulnerability of ecosystems, species, processes and coastal societies to ocean acidification
- ▶ To understand the impact of ocean acidification on food web dynamics, plankton composition (including harmful algal blooms) and transfer of energy to higher trophic levels
- ▶ To build capacity and carry out long-term investigations at the regional and global levels on the impact of ocean acidification
- ▶ To model the impact of ocean acidification and the response of communities and ecosystems
- ▶ To formulate strategies that boost communities and ecosystem health so that

they can better cope with the impact of ocean acidification (such as strategies to reduce local acidifying factors and address overfishing, pollution and habitat alterations)

- ▶ To establish a framework for a coordinated regional and global integrated coastal ocean acidification and carbon chemistry observation network
- ▶ To develop strategies to sensitize and build the capacity of marine resource-dependent communities that are exposed to the impact of ocean acidification in order to improve their resilience and increase their adaptation potential
- ▶ To promote management strategies for the restoration of degraded marine ecosystems and develop last-resort technologies to cope with worst-case scenarios (such as alternative livelihood options and the cultivation of organisms resistant to ocean acidification)
- ▶ To initiate policies and strategies that promote collaboration between institutions and countries in the region to develop infrastructure and standardized methods for generating scientific information and data to critically address the impact of ocean acidification
- ▶ To encourage the inclusion of ocean acidification mitigation strategies in national and regional ocean governance and other policy platforms on oceans, marine resources and ecosystems
- ▶ To promote scientific knowledge that can lead to the adoption of adaptation measures, conservation efforts and the identification of areas that are less affected or more resilient

Result

The two workshops were held, predominantly for stocktaking and planning purposes, and some of the action points have already been acted upon. WIOMSA has funded capacity-building activities in institutions in the countries of the region so that they can monitor ocean acidification and assess its impact. So far, the status of ocean acidification research and capacity in the region has been identified, meaning that an appropriate



set of future actions can be planned. A network of practitioners across the region is currently being established.

The Nairobi Convention secretariat has been working with partners to develop a regional action plan on ocean acidification for the Western Indian Ocean region, which was presented at the tenth meeting of the Conference of Parties to the Convention in November 2021. The action plan is expected to provide momentum for implementing many of the action points outlined above and for tackling ocean acidification. In view of the relative lack of information on such acidification in the region, it is expected that examples, research, and lessons learned in other regions that have made greater progress in addressing the issue will be harnessed.

Ocean acidification is a relatively new area of study in the Western Indian Ocean region; as a result, knowledge and awareness of the issue are predominantly held by research and academic institutions. However, it is expected that a regional action plan will increase awareness among other coastal and marine stakeholders. In addition, direct engagement with policymakers as part of the science-policy process took place in the lead-up to and during the tenth meeting of the Conference of Parties to the Convention on Biological Diversity in 2021. Policymakers from nine contracting parties to the Nairobi Convention participated in the most recent workshop, raising awareness among member countries and other policymakers.

Another result has been an improvement in monitoring and research capacities through greater access to information from other regions. So far, links with the Caribbean and Mediterranean have helped to inform the ocean acidification action plan process and increased collaboration between organizations in the Regional Seas Programme.

Enabling factors

The partnerships with WIOMSA, IUCN and the International Atomic Energy Agency greatly

benefited the workshops. Collaboration with secretariats from other regional seas has also enabled progress, as this action plan will benefit from the recent regional action plan developed for Latin America and the Caribbean.

HELCOM: developing ocean acidification indicators

Problem



Marine acidification is influenced by several environmental factors and may play a role in modifying the environment in which marine organisms live. It affects oceans in various ways and can be linked to other issues, such as:

- ▶ Changes in the level of primary production and respiration in the ocean, which in turn is influenced by eutrophication or oligotrophication. Ocean acidity can thus be an indirect driver of eutrophication.
- ▶ Changes in the composition of organisms in both pelagic and benthic environments. Ocean acidity could thus be seen as an indicator of biodiversity.
- ▶ Changes in hydrography and climate which have potential consequences for eutrophication and biodiversity. Partitioning of the isolated effect of climate change could be applied as an indicator of climate change impacts.

Action

In 2018, it was agreed at the HELCOM ministerial meeting to increase HELCOM preparedness to respond to climate change impacts by accounting for them when updating the Baltic Sea Action Plan. It was also agreed to explore the need and possibilities for further adapting HELCOM policies and recommendations in line with existing

objectives of marine environmental protection and sustainable use of marine resources, in the context of a changing climate, and to maximize the capacity of the Baltic Sea ecosystem to mitigate climate change through blue carbon storage. It was further agreed that there was a need to increase the scientific understanding of the impact of climate change together with multiple other stressors on the Baltic Sea marine environment, and that HELCOM should act to connect that knowledge to policy and practice.

In 2019, the Operational Marine Acidification Indicator (OMAI) project was launched. HELCOM has, in principle, endorsed the further development of an indicator, with the aim of including it in the list of HELCOM candidate indicators on its completion. If approved, it will become a core indicator for HELCOM to evaluate progress towards its goals.

The candidate marine acidification indicator is being developed through a consortium of representatives from four of the nine countries bordering the Baltic Sea. There were high levels of interaction and consultation between HELCOM and the national entities involved in the OMAI project from its outset. In addition, guidance and input was provided by HELCOM experts and working groups (through the Intersessional Network on Eutrophication, for example). The final phase of the development of the indicator must be done in close cooperation with the HELCOM community to ensure its acceptance and usability. The scientific basis developed under the OMAI project will be harmonized with the management and policy needs of HELCOM and individual countries. In addition, HELCOM has identified indicator leads from Sweden and Germany, who will take on the further development and long-term running of the candidate indicator after the OMAI project has ended.

Result

The one-year OMAI project (2019/2020) laid the groundwork for developing a candidate indicator for marine acidification in the Baltic Sea region. Additional resources will be required to progress

the candidate indicator to an operational HELCOM core indicator. That will include securing a regional agreement on threshold values and establishing a regional monitoring programme to supply underlying data to support regular evaluation. HELCOM currently works within two main time frames for indicator development: (a) near future (for indicators that need to be ready by the end of 2021 and are intended to be included in the third holistic assessment of the Baltic Sea environment), and (b) mid/long term, which are intended to be operational by 2027 or beyond. It is difficult to predict when the acidification indicator will be operational, but it is expected to be included in the HELCOM fourth holistic assessment of the Baltic Sea environment for 2021–2026.

When operational and approved as a HELCOM core indicator, the acidification indicator will be incorporated into the HELCOM indicator and assessment framework. It could be used to complement existing indicators for eutrophication and biodiversity, and function as an indicator for climate change.

All HELCOM core indicators are developed to assess the status of selected elements of biodiversity and human-induced pressures on the Baltic Sea and thus support efforts to measure progress towards regionally agreed targets and objectives. The results of the HELCOM assessments, including the indicator evaluation, underpin HELCOM policy and provide a basis for identifying new national and regional actions. The results of the HELCOM indicator evaluations may also contribute to global assessments, such as the second World Ocean Assessment, and support national and regional commitments towards the Sustainable Development Goals. The development of the acidification indicator is expected to help with those activities, including through the planning of actions and assessment of progress towards established targets.

Enabling factors

Climate change is at the top of the political-environmental agenda and has also been included in HELCOM work. Member countries have



expressed interest in obtaining more information about the carbon cycle, and recent knowledge and technological advances related to acidification in the Baltic Sea have enabled work to begin on the development of the indicator. The OMAI project is funded by the Nordic Council of Ministers.

Cartagena Convention: partnering to monitor ocean acidification

Problem

There is a lack of regional collaboration and support to address and monitor issues such as ocean acidification.

Action

In recognition of that problem, contracting parties to the Cartagena Convention requested that the secretariat work with The Ocean Foundation and build on their International Ocean Acidification initiative to address ocean acidification as a regional topic of common concern.²¹ The parties have also provided the secretariat and its regional activity centres with a mandate to update the Regional Strategy for the Protection and Development of the Marine Environment of the Wider Caribbean Region to include emerging issues, such as sustainable blue economies and ocean acidification.

Further joint work is continuing under the UNDP/GEF Caribbean and North Brazil Shelf Large Marine Ecosystem Project to conduct a feasibility assessment into the needs and opportunities for investment to reduce the impact of pollution and ocean acidification, with the aim of safeguarding marine ecosystem services and preparing an investment plan for large-scale action on habitat protection and restoration to help to sustain a healthy blue economy and mitigate the impact of climate change.

21 UNEP, "Eighth meeting of the scientific and technical advisory committee (STAC) to the protocol concerning specially protected areas and wildlife (SPAW) in the wider Caribbean region (Panama City, Panama, 5–7 December 2018): recommendations of the meeting" (2018). Available at https://wedocs.unep.org/bitstream/handle/20.500.11822/27903/STAC8_Rec-en.pdf?sequence=1&isAllowed=y.

Result

In 2019, a formal MoU between the Caribbean Environment Programme (CEP) secretariat and The Ocean Foundation was signed to provide a framework for collaborative efforts to develop and implement strategies and pilot projects relating to the 2030 Agenda for Sustainable Development, in particular target 14.3.²² Since its establishment, the MoU has enabled the development of joint monitoring and mitigation projects in key marine and coastal ecosystems. It has also supported data-sharing, awareness-raising and capacity-building initiatives to improve regional knowledge of, and ability to mitigate, the impact of ocean acidification.

Information and experiences from the MoU, and work done under the UNDP/GEF Caribbean and North Brazil Shelf Large Marine Ecosystem Project, have also been used to inform a regional strategy and action plan, which identifies ocean acidification as a key area for further research and sets dedicated targets.²³

Enabling factors

A key factor in this work was the mandate given by the contracting parties to the Cartagena Convention to the secretariat to take action on the key issues lacking attention or support in the wider Caribbean region, in particular ocean acidification (emanating from decision X of the fifteenth meeting of the Conference of the Parties to the Convention and recommendations of the eighth SPAW Scientific, Technical and Advisory Committee). This included a mandate for the secretariat to update the Regional Strategy for the Protection and Development of the Marine Environment of the Wider Caribbean Region to ensure that programme activities were aligned with the strategic goals. The final element was increased discussions at the government and regional levels on the lack of funding for capacity-building to adequately support regional efforts.

22 UNEP and Ocean Foundation, "Memorandum of understanding between the United Nations Environment Programme and Ocean Foundation (formerly Coral Reef Foundation)" (2019). Available at <https://wedocs.unep.org/handle/20.500.11822/30774>.

23 Caribbean Environment Programme, Regional Strategy and Action Plan for the Valuation, Protection and/or Restoration of Key Marine Habitats in the Wider Caribbean 2021–2030 (Port-of-Spain, CANARI, 2020). Available at <https://wedocs.unep.org/handle/20.500.11822/36347>.



Target 14.4

Permanent Commission for the South Pacific (CPPS): supporting multilateral agreements to combat illegal, unreported and unregulated fishing

Problem



Globally, it is estimated that illegal, unreported and unregulated fishing represents 28.6 million tons of fish products every year, with an approximate value of up to

US\$23 billion, equivalent to 20 per cent of the total global fish trade.

In the Southeast Pacific region, illegal fishing is threatening the social, economic and ecological sustainability of small-scale fisheries, both in national waters and in the high seas. In Chile, for example, according to the latest estimate by the National Fisheries and Aquaculture Service (Sernapesca), 324,000 tons of seafood are estimated to be extracted illegally, equivalent to approximately US\$397 million per year.

Illegal, unreported and unregulated fishing activities negatively affect fishers and coastal communities, which depend on their local fisheries as their primary source of income and nutrition. Such activities also undermine efforts to responsibly manage fishery resources and marine biodiversity at the national, regional and global levels. Besides illegal, unreported and unregulated fishing, countries in the region have also recognized the need to better manage fishing

pressure, direct or through by-catch, on vulnerable species such as sharks, rays and chimaeras.

Action

In response to this issue, CPPS has taken action to prevent, deter and eliminate illegal, unreported and unregulated fishing and support the conservation and management of sharks, rays and chimaeras across the region.

In 2009, CPPS initiated the regional Pesca INDNR project on illegal, unreported and unregulated fishing to address the issue among its four member countries (Chile, Colombia, Ecuador and Peru). The focus of the project, which began in 2011, is to promote and facilitate the adoption of the international Agreement on Port State Measures and strengthen regional cooperation and coordination in the fight against illegal, unreported and unregulated fishing. The starting point for the project was a series of national and regional studies on fisheries legislation. Those studies identified good practices, incompatibilities, gaps and inconsistencies in national legislation with the agreement, which was adopted at the thirty-sixth session of the Conference of FAO, held in 2009. CPPS then convened the following series of regional meetings and workshops to build capacity and cooperation:

- ▶ In 2011, national workshops were held to promote the adoption of the Agreement on Port State Measures
- ▶ In 2013, a regional workshop was held with the aim of building the capacity of national fishing inspectors to control illegal, unreported and unregulated fishing as part of the South-South Cooperation Framework and included Chile, Colombia, Costa Rica, Ecuador, Panama and Peru
- ▶ In 2013, a workshop provided training for vessel inspectors on how to follow the guidelines outlined in annex E to the Agreement on Port State Measures
- ▶ In 2014, the first regional cooperation meeting was held on implementing the Agreement on Port State Measures



- ▶ In 2016, the first international meeting of judges and maritime authorities on illegal fishing, procedures and legislation in the Southeast Pacific was held and included participants from Chile, Colombia, Costa Rica, Ecuador, Panama, Peru and FAO
- ▶ In 2016, a regional workshop outlined illegal fishing and sanctioning processes in the Southeast Pacific and included participants from Chile, Colombia, Costa Rica, Ecuador, Panama, Peru and Spain
- ▶ In 2017, a workshop focused on strengthening regional coordination to address illegal, unreported and unregulated fishing in waters under the national jurisdiction of CPPS member countries

CPPS was concerned about the uncertainty and lack of knowledge regarding the impact of the exploitation of highly migratory species on ecosystems. Therefore, in 2010 it established a technical committee for a regional action plan on sharks, which resulted in the implementation of the Regional Action Plan for the Conservation and Management of Sharks, Rays and Chimaeras in the Southeast Pacific (PAR Tiburón). The committee provides scientific, technical and technological support, as well as planning for priority setting, the implementation of management measures, and monitoring. It also proposes economic and financial mechanisms that support and sustain PAR Tiburón.

Result

The main outcome of the Pesca INDNR project has been to encourage CPPS member countries to become parties to the FAO international Agreement on Port State Measures. CPPS played a key role in enabling its member countries to adopt and implement the Agreement, and three of the four countries (Chile, Ecuador and Peru) have ratified it. Through its Pesca INDNR project, CPPS also supported capacity-building and stronger collaboration on illegal, unreported and unregulated fishing in the wider region, including with neighbouring countries and the South Pacific Regional Fisheries Management Organization. Currently, country representatives are discussing

an initiative that could equip the Southeast Pacific region with an illegal fishing monitoring centre similar to that operated by the South Pacific Forum Fisheries Agency in the Southwest Pacific, located at the **Pacific Island Forum Fisheries Agency** secretariat in Honiara, Solomon Islands.

PAR Tiburón was adopted by CPPS member countries in October 2015. Following this, Chile, Colombia, Ecuador and Peru established national action plans. Several technical documents were also developed by the technical committee, including a protocol for tagging sharks. The implementation of PAR Tiburón is assessed regularly in annual regional meetings, where regional targets for the conservation and management of sharks, rays and chimaeras are established.

Enabling factors

Official declarations and resolutions that confirmed the political commitment of CPPS member countries to addressing illegal, unregulated and unreported fishing and unsustainable fishing practices have been key to the success of the Pesca INDNR project and the work of the PAR Tiburón technical committee. The decision to establish the technical committee was officially adopted and ratified by CPPS assembly resolutions. The Galápagos Declaration (2012)²⁴ reiterated the clear commitment of CPPS member countries to sustainably use fish resources and undertake action to end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices. The multi-year CPPS Pesca INDNR project has spearheaded a series of actions at the regional level in support of that policy.

²⁴ Commitment to Galapagos for the XXI Century. Permanent Commission for the South Pacific. VIII Meeting of Ministers of Foreign Affairs of the Permanent Commission for the South Pacific – CPPS. Puerto Ayora, Galápagos, Ecuador, 17 August 2012. Available at http://cpps.dyndns.info/asambleas/x_asamblea/Commitment%20of%20Galapagos%20for%20the%20XXI%20Century.pdf.

CCAMLR: tackling illegal, unreported and unregulated fishing

Problem



In the mid-1990s, the quantity of illegal, unreported and unregulated fishing for toothfish in the CAMLR Convention area was estimated to be more than twice the catch reported by authorized fishing vessels. At that time, the Commission for the Conservation of Antarctic Marine Living Resources (hereafter “the Commission”) was aware that other Antarctic marine stocks had not recovered from overfishing in the 1970s and identified efforts to address illegal, unreported and unregulated fishing as a critical need.

Action

The Commission adopted a series of conservation measures to specifically address the threat of illegal fishing, including the establishment of illegal, unreported and unregulated fishing vessel lists (conservation measures 10-06 and 10-07) and the control of nationals (conservation measure 10-08). The Commission also introduced requirements for port inspection (conservation measure 10-03) and a catch document scheme for toothfish (conservation measure 10-05) to ensure that toothfish from illegal, unreported and unregulated fishing cannot easily enter trade. It has an active engagement programme for non-member countries that encourages them to cooperate with CCAMLR and not trade in toothfish that do not have legitimate catch documents.

CAMLR Convention contracting parties that detect possible or known illegal, unreported and unregulated fishing vessels in the convention area, through direct observation by their own vessels or during surveillance activities, are

required to provide the details of those sightings to the Commission. The flag States of the sighted vessels are notified and encouraged to investigate their activities and to advise the Commission of steps taken to investigate and eliminate such activity.

The Commission has formal arrangements in place with three adjacent regional fisheries management organizations.

Result

There has been a considerable decrease in illegal, unreported and unregulated fishing activities detected in the Convention area, although it remains an area of concern. The decline in illegal, unreported and unregulated catch quantities decreased from around 33,000 tons in 1996 and 1997 to less than 1000 tons by 2008 and 2009.²⁵ As estimated illegal, unreported and unregulated fishing catch dropped below those levels, uncertainty increased, and the Commission stopped estimating the actual catch. However, sightings of illegal, unreported and unregulated fishing vessels continued to decline after 2008, with none seen in 2017 or 2018.²⁶

Enabling factors

The Commission is a consensus-driven organization that adopts and implements measures by agreement. The main factors that led to the decrease in illegal, unreported and unregulated fishing were the catch document scheme and the illegal, unreported and unregulated fishing vessel listings. The reporting of those vessels means that they can be denied licences and other operational requirements (for instance, CCAMLR conservation measure 10-03 and the Port State Measures Agreement require contracting parties to the Convention to deny access to ports for vessels on the illegal, unreported and unregulated fishing vessel list).²⁷

²⁵ H. Österblom and Ö. Bodin, “Global cooperation among diverse organizations to reduce illegal fishing in the Southern Ocean”, *Conservation Biology*, vol. 26, No. 4 (August 2012). Available at <https://doi.org/10.1111/j.1523-1739.2012.01850.x>.

²⁶ See SC-CAMLR-XXXVII, annex 9, figure 1, which is available at www.ccamlr.org/en/system/files/e-sc-xxxvii_1.pdf.

²⁷ See article 9(4) of the Port State Measures Agreement (which currently has 66 members), available at <http://www.fao.org/3/i5469t/i5469T.pdf>.



Contracting parties implement the conservation measures and conduct enforcement as required by their national laws and conservation measures under the provisions laid down in the Convention. The secretariat reports to the Commission on the implementation of all the conservation measures, thus providing a feedback loop on actions taken.

BSC: cooperating on fishery issues

Problem



There is limited cooperation between organizations operating in the Black Sea on fishery issues. Consequently, fishing in the region (especially of sprats and turbot) is often

unsustainable and without clear ecological management.

Action

The BSC permanent secretariat has established MoUs with relevant organizations in the region. In 2012, a bilateral MoU between BSC and the FAO General Fisheries Commission for the Mediterranean (GFCM) was established. In the same year, an existing MoU established 2002 between BSC and the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area (ACCOBAMS) in 2002 was revised in order to update the timelines and activities.

The purpose of those MoUs is to facilitate coordinated efforts across the region by granting observer status (i.e., BSC can attend GFCM and ACCOBAMS meetings) and providing a mechanism to undertake joint activities to achieve common goals and harness mutual benefits.

In 2016, the Declaration of the high-level conference towards enhanced cooperation on Black Sea fisheries and aquaculture (“Bucharest Declaration”) reiterated the need to address environmental challenges in the region through joint activities. It encouraged further coordination to enhance and improve information exchange

and the sharing of expertise and best practices and increase opportunities for relevant organizations and member countries to work together on initiatives and projects.

Joint activities between BSC and GFCM focus on promoting an ecosystem-based approach to fisheries management and aquaculture; combating illegal, unreported and unregulated fishing; mitigating the impacts of fisheries and aquaculture on marine habitats and species; improving data quality, collection, analysis and stock assessment; and undertaking research and training. BSC also hosts an ACCOBAMS subregional coordination unit, supports cetacean survey and by-catch projects and implements the Marine Strategy Framework Directive with regard to cetaceans.

Result

BSC and GFCM have distinct mandates, and the focuses of those mandates do not overlap. While BSC does not have a mandate to address fishery issues (i.e., permits and restrictions), the MoU with GFCM has enabled improved fisheries management through greater coordination and complementary actions, such as aligning indicators, sharing expertise and contributing to organizational meetings and working groups. This has facilitated greater exchange of information and mutual understanding of priorities and issues across the two sectors, ultimately supporting an integrated ecosystem approach in the Black Sea basin.

Through coordinated activities, a road map on illegal, unreported and unregulated fishing in the Black Sea has been adopted, two high-level conferences on Black Sea fisheries and aquaculture have been organized and two declarations on sustainable fisheries and aquaculture have been signed. In addition, the BSC annual reporting format for fisheries has been harmonized across the region, with the reports including the indicators proposed by GFCM (also annexed to the Black Sea IMAP 2017–2022). Each of these activities and declarations represent ambitions to continue

coordinated action across sectors to ensure the sustainable use of the Black Sea marine ecosystem and its resources.

To complement the above results, the BSC MoU with ACCOBAMS has enabled greater coordination between Black Sea countries to conduct more comprehensive cetacean and by-catch surveys in the Black Sea basin. This has enabled transboundary research across the range of agreements and their member countries that can be used by BSC and other organizations to implement an ecosystem-based approach to fisheries management and aquaculture.

Enabling factors

The European Commission promotes multilateral and international cooperation on fisheries management and provides funding for dedicated projects such as the GFCM BlackSea4Fish project. The project provides a strong incentive for Black Sea riparian countries to undertake joint research and data-collection to support GFCM.

In 2017, the forty-first GFCM session began a new era of cooperative fisheries management in the Black Sea, building on the Bucharest Declaration and the Malta MedFish4ever Declaration.

Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region Convention: partnering for aquatic wildlife

Problem



Throughout West Africa, declining fishery resources and rising human populations have accelerated the displacement of many communities from their traditional food sources. This, in turn, is driving new forms of consumption, including the overharvesting of aquatic mammals, reptiles and birds as well as the rise in illegal local and international trade aimed at revenue

generation. These activities are having a serious impact on coastal biodiversity in the region and are “falling through the cracks” between environment and fisheries ministries, agencies and international processes.

Action

At the twelfth meeting of the Conference of the Parties to the Abidjan Convention, held in March 2017, contracting parties considered the direct consumption and other uses of endangered, threatened and protected species as well as the African Common Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa. Decision CP 12/14, adopted at that meeting, invited the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Convention on Migratory Species of Wild Animals, CBD, FAO, OceanCare and Born Free, among other potential partners, to form the Abidjan Aquatic Wildlife Partnership led by the Abidjan secretariat.

The multi-stakeholder partnership focuses on increasing the awareness and action of governments, relevant industries and local communities in West, Central and Southern Africa. In so doing, it aims to slow and reverse the overharvesting of coastal and marine species (including aquatic threatened and protected mammals and reptiles) for human consumption, wildlife trade, fishing bait or other uses. Most of these activities involving “aquatic wild meat” are illegal. The Abidjan Convention secretariat and the West Africa Biodiversity and Climate Change programme have undertaken a threat assessment and mapping exercises to locate capture and trade hotspots.

The partnership has developed an action plan to combat trade in and direct consumption and other uses of endangered, threatened or protected coastal and marine species. The final document was presented at the thirteenth meeting of the Conference of the Parties to the Abidjan Convention in 2021.



Result

The partnership directly supports the implementation of the African Common Strategy on Combating Illegal Exploitation and Illegal Trade in Wild Fauna and Flora in Africa. It addresses the issue of trade, capture, consumption and other uses of aquatic species, including threatened and protected aquatic species across West, Central and Southern Africa, through coordinated, collaborative and effective action at the local, regional and international levels.

The partnership enables members to exchange information on threatened aquatic species, avoid duplication and optimize the use of resources. Members also capitalize on one another's work when reporting to their respective parties and when announcing new decisions.

Enabling factors

The Abidjan Aquatic Wildlife Partnership was launched at the twelfth meeting of the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals. The development of the partnership was catalysed by a recommendation made at the eleventh meeting of the Conference of the Parties to the Abidjan Convention in March 2013 that organizations with a shared interest in aquatic wildlife come together to achieve stronger results and a more effective use of limited resources along Africa's Atlantic coast. The Abidjan Convention secretariat thus led the development of the alliance, with a political mandate provided by the Conference of the Parties.



Target 14.5

Nairobi Convention: delivering a regional outlook on MPAs

Problem



A baseline of existing coastal and marine conservation efforts in the Western Indian Ocean region is needed to understand the degree to which critical habitats are currently protected and inform recommendations

for future areas to be brought under protection. This requires a quantitative assessment of the areas and habitats currently under protection as well as a qualitative assessment of the effectiveness of the protection measures in place across the region.

Action

The Nairobi Convention supports contracting parties in delivering the 2030 Agenda through the Implementation of the Strategic Action Programme for the Protection of the Western Indian Ocean from Land-Based Sources and Activities. This GEF-funded project addresses priority conservation issues in the Western Indian Ocean region, including the sustainable management of critical habitats.

The report on the regional outlook on MPAs in the Western Indian Ocean region is one of the

main outputs of the project.²⁸ Together with the report on the regional outlook on critical habitats (not yet published), it is intended to inform policymaking regarding improved coastal and marine conservation. Those two publications will feed into a third one on recommendations for strengthening marine conservation in the region, aimed at supporting contracting parties to meet their Aichi Targets and Sustainable Development Goal obligations.

The outlook development process was initiated through a scoping workshop held in Victoria, Mahé, Seychelles, in June 2017. Participants agreed on a process to conduct an overview of existing regional MPAs as part of the implementation of Sustainable Development Goal target 14.5. They also agreed on a process to undertake a regional critical habitats inventory in the context of biodiversity and existing and emerging economic activities.

Result

The report on the regional outlook on MPAs will contribute to a larger process involving an outlook on critical habitats in the region and a final outlook on recommendations regarding future strategic options, including other effective area-based conservation measures for countries to achieve the 10 per cent target on the basis of identification of critical habitats that require protection. The outlook captures the spatial extent and management effectiveness of current MPAs, makes recommendations for enhanced management and documents proposed MPAs as countries make progress towards the 10/20 target.

Intended outcomes of the report include:

- ▶ The establishment of authoritative databases on the most critical habitats and the biodiversity most at risk
- ▶ The identification of MPA coverage (size, maps and the conservation value of MPAs

from biodiversity and socioecological perspectives)

- The determination of the management effectiveness of MPAs, including adaptive management processes and requirements
- The determination of participating countries' future options for achieving 10 per cent MPA coverage and communication to countries on what they need to do to achieve the 10 per cent target and the consequences of failing to meet it
- The creation of a consistent monitoring and reporting framework at the national and regional levels

Enabling factors

The report was developed in partnership with WIOMSA, which has strong connections with the scientific and MPA communities in the region and played a vital coordination and commissioning role. The project was funded through GEF.

CCAMLR: designating MPAs

Problem



The Ross Sea Shelf is one of the most productive areas of the Southern Ocean and is crucial for a wide variety of fish, marine mammals, birds and invertebrates. It is of notable importance to a range of top-level predators. Key threats to sustaining biodiversity in the Ross Sea include future global warming, reduced summer sea ice concentrations and shallower mixed layers,²⁹ and commercial fishing activities.³⁰ There was no MPA covering the Ross Sea Shelf.

²⁸ UNEP-Nairobi Convention and WIOMSA. 2021. Western Indian Ocean Marine Protected Areas Outlook: Towards achievement of the Global Biodiversity Framework Targets. UNEP and WIOMSA, Nairobi, Kenya, 298 pp. Available at www.nairobiconvention.org/clearinghouse/sites/default/files/_MPA%20Outlook_July%202021.pdf.

²⁹ T.J. Bracegirdle and D.B. Stephenson, "Higher precision estimates of regional polar warming by ensemble regression of climate model projections", *Climate Dynamics*, vol. 39, No. 12 (March 2012). Available at <https://doi.org/10.1007/s00382-012-1330-3>.

³⁰ D.G. Ainley, "A history of the exploitation of the Ross Sea, Antarctica", *Polar Record*, vol. 46, No. 3 (September 2009). Available at <https://doi.org/10.1017/S003224740999009X>.

Action

On the basis of a joint proposal by New Zealand and the United States of America, all 26 CAMLR Convention member countries agreed unanimously in 2016 to establish an MPA in the Ross Sea. It is the largest high seas MPA in the world and is split into three separate areas: a general protection zone, which does not allow any fishing; a special research zone, which allows only fishing for krill and toothfish for research purposes; and a krill research zone, which allows controlled krill fishing for research purposes. The designation of an MPA in the Ross Sea provides an opportunity to understand the impact of krill and toothfish fishing and research activities on the ecosystem independent of one another and to implement conservation policies in an ecologically important area of the Southern Ocean.

Furthermore, an agreed format for the future development of MPAs in the CAMLR Convention area was established to ensure that all new MPAs were part of a network. That includes agreed management plans for each MPA and regular reporting intervals for each member country conducting activities in the area.

Result

The Ross Sea MPA has three broad objectives that will have a direct impact on the surrounding area and globally: (a) to protect the ecosystem within it from any threats and negative human impact, (b) to represent the various marine environments in the region that require protection, and (c) to be used as a scientific resource to improve understanding of how an intact marine ecosystem works and draw conclusions for the ecosystem-based management of other areas globally. Progress towards those objectives are reviewed every five years, with the next progress report due in 2022.

Enabling factors

CCAMLR is a consensus-driven organization, which allowed a general framework for the development of MPAs to be established in 2011.

Collaboration, facilitated through the organization, has benefited the decision-making process and allowed all parties to decide how to ensure effective implementation.

Article II of the CAMLR Convention provides a mandate for conserving the entire ecosystem of the Convention area, in line with the objectives of internationally established MPAs. Without the Convention, and the Antarctic Treaty system of which it is a part, an agreement on the Ross Sea MPA designation would have been unlikely.

The CAMLR Convention secretariat plays a supporting role, facilitating international data exchange and analysis to support scientific discussion of MPAs. The scientific information and the frameworks and processes enabled by the existence of the secretariat and the CAMLR Convention are essential elements to support an MPA designation.

ROPME: developing an MPA network**Problem**

The ROPME Sea Area has seen remarkable economic and social development in recent years and is home to some of the richest and fastest growing economies in the world. Rapid coastal development poses a major threat to the marine ecosystems of the region, as urban populations along the shores of the Arabian Gulf continue to grow.³¹ Some countries in the region, such as the Islamic Republic of Iran, have established Ramsar sites, while others are in the process of designating protected areas. Many sites, particularly in Iraq, are severely threatened by

³¹ H. Van Lavieren, J. Burt, D.A. Feary, G. Cavalcante, E. Marquis, L. Benedetti, C. Trick, B. Kjerfve, and P.F. Sale. Managing the Growing Impacts of Development on Fragile Coastal and Marine Ecosystems: Lessons from the Gulf, Policy Report (Hamilton, Canada, UNU-INWEH, 2011).

infrastructure development and pollution, and the responsibility for addressing those issues has, until recently, rested solely on individual countries. A regional approach is needed to increase protected area coverage in order to achieve the 10 per cent target and support the development of a collaborative network of MPAs.

Action

ROPME supports the effective management of MPAs in the ROPME Sea Area and the development of an MPA network.

In 2012, the **first** regional assessment of MPA management effectiveness in the ROPME Sea Area was conducted and a scientific paper was published.³² The assessment resulted in a comprehensive list of all MPAs in the region, which has served as a valuable baseline for further MPA development.

Government representatives, managers, scientists and professionals familiar with MPAs in the region participated in compiling a consolidated list of MPAs and the assessment of MPA management effectiveness. The ROPME secretariat supported the process by providing scientific expertise and guidance.

Result

A comprehensive list of MPAs in the ROPME Sea Area has been developed, and preliminary management effectiveness assessments have been conducted; currently, 173 MPAs cover 7.8 per cent of the region (36,182.03 km²). Increased regional collaboration, supported by ROPME, has helped stakeholders to leverage funding, pool knowledge and expertise, share best practices and address common challenges related to MPAs.

ROPME is improving understanding of MPA management effectiveness by conducting

research projects using funds provided by the United Nations. The ROPME secretariat is also encouraging governments in the region to carry out more actions to safeguard the marine environment, building on recent examples such as the development of national regulations and policies towards marine coastal areas in the Islamic Republic of Iran and the establishment of underwater reserves in the United Arab Emirates in 2019.

A ROPME protocol concerning the conservation of biological diversity and the establishment of protected areas was signed by member countries in 2005. It provides for regional measures to regulate, for example, coastal land use and fishing practices, sewage disposal and coral harvesting, and establish general principles and common criteria for designating ROPME specially protected areas.

Enabling factors

The ROPME secretariat has played a crucial role in supporting regional cooperation. ROPME facilitates the collaboration of non-governmental organizations, MPA managers and other marine stakeholders at the regional level. It also supports collaboration with bodies such as regional fisheries management organizations in pursuit of common objectives across conservation and fisheries management.

Abidjan Convention: establishing MPA partnerships

Problem



Parties to the Abidjan Convention need support in developing their MPAs. Collaboration with the Regional Network of Marine Protected Areas in West Africa provides an opportunity for countries inside and outside the network to exchange best

³² H. Van Lavieren and R. Klaus, "An effective regional marine protected areas network for the ROPME Sea Area: unrealistic vision or realistic possibility?", *Marine Pollution Bulletin*, vol. 72, No. 2 (January 2013). Available at <https://doi.org/10.1016/j.marpolbul.2012.09.004>.

practices, build on lessons learned and develop capacity.

Action

The Abidjan Convention and the Regional Network are collaborating to support common member countries (Cape Verde, Gambia, Guinea, Guinea Bissau, Mauritania, Senegal and Sierra Leone) in the establishment of MPAs. The two organizations are combining their respective resources to provide technical assistance towards achieving Sustainable Development Goal targets 14.2 and 14.5. An MoU has been signed to conduct joint activities such as training and awareness-raising and develop guidelines.

The Abidjan Convention secretariat is also working closely with Côte d'Ivoire to establish the country's first MPA and with Ghana and Liberia to establish two transboundary MPAs between Côte d'Ivoire and Ghana and between Côte d'Ivoire and Liberia. Those efforts are aimed at expanding the number of protected areas in West Africa.

A capacity-building workshop took place in Benin in 2019, where interested countries were introduced to the Regional Network and discussed MPA matters. Pilot countries have been identified where MPAs will be designated.

Result

The areas identified for potential MPA designation have been delimited and mapped, and some management plans have been created (for example for Donaten and La Bouche du Roi in Benin). Several income-generating activities have been identified for the future MPA of Grand-Béréby in Côte d'Ivoire, and awareness-raising and stakeholder involvement activities have increased. Awareness-raising sessions included in the MPA creation process have already resulted in the protection of certain ecosystems.

Enabling factors

The Abidjan Convention secretariat and its partners have been involved in different phases

of the creation of MPAs at both the national and regional levels. Common enabling factors include:

- ▶ Environmental criteria, meaning that areas are often selected to become MPAs on the basis of pre-existing environmental challenges, such as illegal fishing, mining, or overexploitation of ecosystems, biodiversity and natural resources; where local communities have voiced a need for such a designation; or where they have been identified as ecologically or biologically significant areas or Ramsar sites. Those pre-existing conditions tend to make the MPA designation process more efficient because stakeholders are already aware of the importance of the area.
- ▶ Existing ecosystem and biodiversity assessments, meaning that sites have already been identified and had biodiversity assessments carried out to enable quicker analyses. An information repository on the site is already likely to exist.
- ▶ Capacity-building and awareness-raising, meaning that when all stakeholders, including those in charge of implementing and managing the site and the local communities around the site, carry out those actions, successful designation is almost guaranteed. Local buy-in and commitment to the MPA from stakeholders is key to its success.
- ▶ Income-generating activities, meaning that once capacity to manage an MPA has been strengthened and local community buy-in is secured, such activities around the MPA tend to lead to its success. Supporting the livelihoods of local people through the MPA helps to build positive perceptions.

Barcelona Convention: building a road map for a comprehensive MPA network

Problem



To date, more than 1,200 MPAs and other effective area-based conservation measures cover more than 8.9 per cent of the Mediterranean Sea. However, only 10 per cent of marine areas covered by conservation measures duly implement management plans, owing to a lack of financial resources and technical capacity, and gaps in existing legal and policy frameworks.

Action

Beginning in 2012, the Barcelona Convention secretariat, technically and operationally supported by its Regional Activity Centre on Specially Protected Areas (SPA/RAC), led a participatory process to develop and adopt a road map for a comprehensive and coherent network of well-managed MPAs.³³ The road map was adopted in 2016 (decision IG.22/13).

The road map is implemented by contracting parties to the Barcelona Convention and relevant regional and international organizations (such as MAP SPA/RAC and other partner organizations). It provides guidance on local, national and regional actions to harmonize MPA implementation and management in the region to contribute towards the globally agreed Aichi Target 11. The road map sets out the following objectives:

- ▶ To strengthen networks of protected areas at the national and Mediterranean levels, including on the high seas and in areas beyond national jurisdiction, as a

contribution to the relevant globally agreed goals and targets

- ▶ To improve the network of Mediterranean MPAs through effective and equitable management
- ▶ To promote the sharing of the environmental and socioeconomic benefits of Mediterranean MPAs and integrate them into the broader context of sustainable use of the marine environment and implementation of the ecosystem and marine spatial planning approaches
- ▶ To ensure the stability of the network of Mediterranean MPAs by enhancing their financial sustainability

Result

The road map has supported coordinated actions towards Aichi Target 11 across member countries. Nineteen Mediterranean countries have prepared a national biodiversity strategy and action plan, including a dedicated section on MPAs.

Southern and eastern Mediterranean countries are supported by MAP and SPA/RAC in declaring new MPAs through, for example, ecological and socioeconomic baseline surveys, as well as management, zoning and business plans. Efforts to draft and update contracting parties' national strategies on MPAs are also being supported.

An environmental trust fund for MPAs in the Mediterranean (the MedFund) was jointly launched in 2013 by France, Monaco and Tunisia and is now operational. The fund is a sustainable financing mechanism that aims to develop and strengthen Mediterranean MPAs and their management, contributing to their financial autonomy and territorial integration. On the basis of the road map's fourth objective, mechanisms such as the MedFund are encouraged and used to implement actions in member countries. In addition, in 2016, the decision to adopt the road map welcomed the MedFund as an example of an innovative financial mechanism for biodiversity, welcomed the progress made in that regard, in particular the financial contribution by Monaco,

³³ MAP (2017). Roadmap for a comprehensive coherent network of well-managed Marine Protected Areas (MPAs) to achieve Aichi Target 11 in the Mediterranean. UNEP/MAP Athens, Greece 2017. Available at www.rac-spa.org/sites/default/files/action_plans/fdr_en.pdf.

and looked forward to the support to be provided to the initiative by stakeholders.

In 2011, SPA/RAC and the Mediterranean Areas Protected Network developed a regional database on MPAs in the Mediterranean.³⁴ When the road map was adopted in 2016, it aimed to ensure the continued functioning, updating and improvement of a regional database of protected areas, including regional inventories of sites of conservation interest. The database has indeed become a key resource for tracking MPA designation and management under the road map and is regularly updated to provide insight into the regional MPA network. Using information from the database, a report on the status of MPAs in the Mediterranean region is released every four years and regional MPA forums are organized, the latest occurring in December 2021.

Training sessions, on-the-job training, exchange visits and institutional cooperation (twinning programmes) are important parts of the process. In 2017, using the road map as a basis for action, SPA/RAC established twinning programmes that aimed to support the development and effective management of Specially Protected Areas of Mediterranean Importance and MPAs, with a view to supporting progress towards Aichi Target 11 and Sustainable Development Goal target 14.5. The twinning programme was implemented under the framework of the bilateral agreement between MAP and the Italian Ministry of the Environment, Land and Sea Protection, and as such, focuses on twinning specially protected areas and MPAs in Italian waters and Mediterranean subregions of which Italy is part. To date, the following twinning programmes have been established:

- ▶ Tavolara-Punta Coda Cavallo MPA (Italy) and Habibas Islands Marine Reserve (Algeria)
- ▶ Egadi Islands MPA (Italy) and Kneiss Islands Natural Reserve (Tunisia)
- ▶ Torre Guaceto MPA (Italy) and Karaburun-Sazan National Marine Park (Albania)
- ▶ Torre del Cerrano MPA (Italy) and Strunjun Landscape Park (Slovenia)

³⁴ The MAPAMED database, available at www.mapamed.org/.

The activities implemented under the programme are aimed at promoting networking, standardized management of MPAs and the sharing of best practices and experiences to build capacity. SPA/RAC has been responsible for identifying twinning partners; defining the components of twinning programmes; securing agreements; establishing monitoring programmes in line with IMAP; sharing best practices, management strategies and innovative approaches through a collaborative platform; arranging exchange visits between, and providing training for, managers of specially protected areas and MPAs; supporting the implementation of management actions; and hosting participatory processes to involve non-governmental organizations and other stakeholders in management and implementation.

The road map and Aichi Target 11 were due to expire in 2020 and a final evaluation was presented at the twenty-first meeting of the contracting parties to the Barcelona Convention in December 2019. The contracting parties subsequently requested MAP (through SPA/RAC) to work with relevant regional and global organizations to draft an ambitious and transformational post-2020 strategic document on MPAs and other effective area-based conservation measures in the Mediterranean, in line with the CBD post-2020 global biodiversity framework and other regional and global processes. The document will be considered by the contracting parties at the twenty-second meeting of the contracting parties to the Convention (December 2021).

Enabling factors

A key enabling factor in the development of the road map was a political commitment by contracting parties to the Barcelona Convention under CBD to achieve the Aichi Targets, in particular Aichi Target 11. Several decisions made at meetings of the contracting parties to the Barcelona Convention in 2013 (decision IG.21/5), 2016 (decision IG.22/13) and 2019 (decision IG.24/6) provided a mandate for preparing and adopting the road map and for encouraging

contracting parties to take significant action towards achieving its objectives.

Collaboration among national, regional and international organizations has fostered progress towards Aichi Target 11 in the region. SPA/RAC plays an important role in catalysing technical cooperation in support of regional and global objectives for marine conservation, including through the establishment and management of MPAs.

OSPAR: networking MPAs in the Northeast Atlantic

Problem



Marine ecosystems and species do not recognize human-made national borders. Ocean currents transport nutrients and small marine organisms between jurisdictions, and migratory species move across large areas, crossing administrative and ecosystem boundaries. As such, a regional approach is needed to effectively and sustainably manage and conserve ecosystems and species.

Action

With that in mind, a network of MPAs that are ecologically coherent and representative of all biogeographic regions could prove more effective in achieving the protection and sustainable use of biodiversity and marine ecosystems than isolated MPAs. That includes the designation of MPAs in areas beyond national jurisdiction.

To develop a regionally coherent response to creating an MPA network, OSPAR adopted recommendation 2003/3, as amended by recommendation 2010/2.³⁵ Both

³⁵ Recommendation 2003/3 is available at www.ospar.org/documents?d=32865.

recommendations set out to establish the OSPAR Network of Marine Protected Areas, which was designed to be ecologically coherent and well managed. To achieve that goal, guidance documents were produced to support member countries in establishing and managing MPAs in the network and outlining steps for identifying potential sites, and ecological and practical considerations that sites should meet.³⁶ Both existing and new MPAs can be nominated to become part of the MPA network.

To address the need to protect biodiversity in areas beyond national jurisdiction, the OSPAR group of jurists and linguists developed the OSPAR regulatory regime for establishing MPAs in areas beyond national jurisdiction within the OSPAR maritime area.³⁷ The collective designation is made through an OSPAR decision, and for each designated MPA, an OSPAR recommendation for its management is also established.

Result

As at April 2020, the OSPAR network of MPAs included 550 designations. Of those, seven were located in areas beyond national jurisdiction and were designated by OSPAR. In 2010, 1.1 per cent of the OSPAR maritime area was covered by an MPA; by April 2020, that figure had increased to 6.4 per cent.

MPA information is managed and shared through the OSPAR MPA database, which contains spatial and non-spatial data, key statistics for the MPA network as a whole and fact sheets for each MPA in the network. It also hosts data on the network's ecological coherence and management, as well as threatened or declining species and habitats.³⁸

To support the aims of the MPA network, OSPAR has developed a set of guidelines for the management of MPAs in the OSPAR maritime area.³⁹ Supporting guidance on developing an

³⁶ For example, agreement 2003-17, which is available at www.ospar.org/documents?d=32398.

³⁷ More information is available at www.ospar.org/site/assets/files/33747/annex06_jl_advice_on_abnj.doc.

³⁸ The database is available at www.ospar.org/work-areas/bdc/marine-protected-areas/mpa-webtool.

³⁹ The guidelines are noted in agreement 2003-18, which is available at www.ospar.org/documents?d=32690.



ecologically coherent MPA network has also been produced.⁴⁰ Further guidance includes a self-assessment scorecard⁴¹ and a background document on ecological coherence.⁴² The development of an assessment methodology is ongoing; however, the latest method descriptions and assessments are included in biennial status reports.⁴³ Every year, OSPAR member countries are requested to provide implementation information to support assessments of ecological coherence and management effectiveness of the network, and that information feeds into the OSPAR MPA database.

Enabling factors

As long ago as the 1990s, OSPAR recognized MPAs as an effective measure and made a political commitment to developing a regional network. The Sintra ministerial statement, adopted in 1998 at the OSPAR meeting held in Sintra, Portugal, included a commitment by OSPAR to promote the establishment of an MPA network to ensure the sustainable use, protection and conservation of marine biological diversity and its ecosystems. Annex V (on the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area) was adopted at the ministerial meeting in Sintra in 1998 and came into force in 2000.

In 2003, the ministerial commitment made in Sintra in 1998 was enhanced through the Bremen ministerial statement, adopted at the first joint ministerial meeting of HELCOM and OSPAR in Bremen, Germany. The statement established the commitment to complete a joint network of well managed and ecologically coherent MPAs by 2010. The Bergen ministerial statement, adopted in 2010 at the ministerial meeting held in Bergen, Norway, reaffirmed that commitment and emphasized the essential contribution of MPAs to the protection of species, habitats and ecological processes.

⁴⁰ The supporting guidance is noted in agreement 2006-03, which is available at www.ospar.org/documents?d=32377.

⁴¹ Agreement 2007-05 is available at www.ospar.org/documents?d=32781.

⁴² The background document to support the assessment of whether the OSPAR network of MPAs is ecologically coherent is available at www.ospar.org/documents?d=7077.

⁴³ OSPAR network reports are available at www.ospar.org/documents?v=40944.

The clear commitment to developing the OSPAR network of MPAs through consecutive ministerial meeting statements has allowed OSPAR to focus a collective effort on that work.

Under the auspices of annex V, OSPAR established an expert group to work on MPAs with a view to improving information exchange, cooperation and coordination among its member countries. The group has been active for many years and has been able to undertake long-term work to develop products and support member countries in their work to identify and designate suitable areas.

The 2003 Bremen ministerial statement also recognized the ongoing work of the European Union's Natura 2000 programme, which has established a comprehensive network of protected areas for the benefit of Europe's most threatened and valuable species and habitats. The network covers terrestrial, freshwater and marine ecosystems. Marine areas that have been designated under the Natura 2000 programme can also be included in the OSPAR MPA network if the sites meet the OSPAR criteria (agreement 2003-17). Regional networks of protected areas can be established and maintained through different programmes and organizations. In the case of the OSPAR network, the parallel process with member countries that are also European Union member States has enabled resources to be brought together and areas of importance to both the OSPAR network and the European Union Natura 2000 programme to be identified.

PAME: establishing an MPA network in the pan-Arctic region

Problem



Individual MPAs benefit marine biodiversity. However, MPA networks provide spatial links that are necessary to maintain ecosystem processes and connectivity between MPAs.

They thus provide a more comprehensively managed system. Most Arctic States have established individual MPAs, yet

many are still in the early stages of connecting and managing those MPAs as ecologically functional networks.

Action

In its 2004 Arctic Marine Strategic Plan, the Arctic Council called for the establishment and support of MPAs in the region, including representative networks. PAME developed a framework for a pan-Arctic network of MPAs during the Canadian chairmanship of the Council during the period 2013–2015.⁴⁴ The framework builds on work by the Ecosystem Approach Expert Group (led by the PAME Working Group), the former Arctic Council Expert Group on Ecosystem-based Management and the CAFF Working Group on an Arctic Biodiversity Assessment and a Circumpolar Protected Area Network.

The framework, published in 2015, sets out a common vision for international cooperation in MPA network development and management and is based on best practices and previous Arctic Council initiatives. It aims to support the efforts of Arctic States in developing their MPA networks and chart a course for future collaborative planning, management and actions for the conservation and protection of the Arctic marine environment. While the principal aspects of the framework are relevant to the entire Arctic Ocean, the framework does not pursue MPA approaches specific to areas beyond national jurisdiction.

The goals of the pan-Arctic network of MPAs include:

- ▶ To strengthen ecological resilience to direct human pressures and the impact of climate change and to promote the long-term protection of marine biodiversity, ecosystem function and special natural and cultural features in the Arctic
- ▶ To support integrated stewardship, conservation and management of living Arctic marine resources, species and their habitats and the cultural and socioeconomic values and ecosystem services they provide

- ▶ To enhance public awareness and appreciation of the Arctic marine environment and its rich maritime history and culture
- ▶ To foster coordination and collaboration among Arctic States to achieve more effective MPA planning and management in the region

Result

The framework is not binding and each Arctic State abides by its own national priorities and timelines to develop an MPA network. However, a common vision confers several advantages, which include:

- ▶ Advancing cohesion and conservation effectiveness by strengthening ecological linkages among MPAs and MPA networks across the Arctic
- ▶ Applying best practices for establishing and managing MPAs and MPA networks in the Arctic environment
- ▶ Supporting domestic conservation objectives and international commitments and targets
- ▶ Strengthening intergovernmental cooperation on MPA management and scientific issues among Arctic MPA authorities
- ▶ Addressing issues of concern for shared species and ecosystems

The framework also contributes to several Arctic Council objectives, including executing elements of the Kiruna ministerial declaration of 2013 to protect the Arctic marine environment, implementing ecosystem-based management, responding to the recommendations of Arctic biodiversity and Arctic oil and gas assessments, furthering the management of areas of heightened ecological and cultural significance identified under a marine shipping assessment, advancing the goals of the Arctic Marine Strategic Plan and operating in a cooperative, coordinated and integrated manner.

Following ministerial approval of the framework, the Arctic Council continued to develop a network based on the best available science and knowledge

⁴⁴ The framework is available at www.pame.is/images/03_Projects/MPA/MPA_Report.pdf.



in order to strengthen marine ecosystem resilience, taking into account the cultural and sustainable use of marine resources. PAME has worked on short- and long-term actions as a part of the framework's implementation, including:

- ▶ The development of an inventory mapping existing Arctic MPAs, work with CAFF on the finalization of the Arctic protected areas indicator report and the release of the harmonized data set based on data from the Arctic States. PAME and CAFF are currently in the process of updating the 2017 report to incorporate protected areas established since that year.
- ▶ The creation of the MPA network toolbox (area-based conservation measures and ecological connectivity) to assist Arctic States in advancing their MPA networks and assessing and protecting the diversity of genera, species, populations, habitats, features and ecosystems as well as their interactions and processes and their ability to adapt to change.⁴⁵ That guidance is intended to inform decision makers, practitioners, indigenous peoples and stakeholders involved in developing MPA networks and ecosystem-based management in the marine Arctic.
- ▶ The holding of workshops and the conduct of desk studies that build on previous work by the PAME MPA Expert Group to improve on the contributions by PAME to some of the near-term actions listed in the framework (near-term strategic actions 3, 4, 6, 7 and 9) and in the Arctic Marine Strategic Plan (strategic action 7.2.10).
- ▶ The organization of four MPA workshops to support a PAME project studying best practices for linking area-based conservation measures to categories of Arctic marine biodiversity in support of the long-term conservation of the Arctic marine environment and associated services and cultural values.⁴⁶

PAME is also modelling Arctic oceanographic

⁴⁵ The toolbox is available at www.pame.is/projects/marine-protected-areas/pame-mpa-network-toolbox-area-based-conservation-measures-and-ecological-connectivity.

⁴⁶ Workshop reports from September 2016, February 2017, September 2017 and March 2019 are available at www.pame.is/projects/marine-protected-areas.

connectivity to further improve its toolbox, including through the development of models as a tool to help decision makers design MPA networks and identify possible optimal networks of (multiple) MPAs, calculating optimal network and barriers, coordinating meetings and collaborating with other Arctic Council working groups as relevant, in particular CAFF and its Circumpolar Biodiversity Monitoring Program. In addition, it is developing fact sheets on MPAs undergoing change, with the aim of leveraging and synthesizing factual information from the Arctic Council's work on the topic, communicating with decision makers and the public and contributing to cross-working group cooperation on common topics.

Enabling factors

The framework was drafted by an MPA expert group reporting to PAME and was based on guidance and direction from the Arctic States and the Arctic Council's permanent participants, senior officials and ministers. Further details are provided in the Arctic Council's ministerial-approved biennial PAME workplans and records of consensus-based decisions made at PAME Working Group meetings, which are held twice a year.

PERSGA: supporting a regional MPA network

Problem



There is a need to conserve areas in the Red Sea and Gulf of Aden that contain biodiversity unique to the region. MPAs can be used to protect habitats, promote restoration and improve fisheries.

Action

In 2005, PERSGA member countries signed the Protocol concerning the Conservation of Biological Diversity and the Establishment of the Network of Protected Areas in the Red Sea and Gulf of Aden Region, with the aim of providing a

regionally coordinated approach to establishing the PERSGA MPA network. Twelve MPAs were selected to form the network, including MPAs from all PERSGA member countries.

Result

As a result of the establishment of the MPA network, relationships between countries were strengthened, as MPA counterparts worked and communicated with one another on a regular basis. The shared regional capacity also meant that MPAs in the network were provided with equipment and management tools, and management and zoning plans were updated where necessary. The management effectiveness of MPAs is assessed annually to identify gaps and constraints, and guidelines on MPA management and planning have been published for other MPA managers to use. Notably, three MPAs in the network have been designated as UNESCO World Heritage Sites.

Enabling factors

The willingness of MPA counterparts from PERSGA member countries to communicate and cooperate at the regional level was important in supporting efforts to establish the network.

Target 14.7



SPREP: assessing sustainable tourism

Problem

Tourism is a highly important economic sector in the Pacific island countries and territories and is expected to grow in the future. In 2016, the World Travel and Tourism Council found that tourism directly contributed more than 12 per cent of total GDP to



Pacific island economies. However, the economic benefits have had a negative impact, including the direct destruction of coral reefs, mangroves, seagrass beds and coastal wetlands; an impact on threatened species; beach erosion; degraded coastal waters; increased pressure on local energy and water supplies; increased competition for land use; displaced communities; increased waste, including plastic; and greenhouse gas emissions.

Action

Recognizing the importance of both the coastal environment and the tourism industry, SPREP partnered with the South Pacific Tourism Organization to produce environmental impact assessment guidelines for coastal tourism development. The aims were to increase awareness and understanding of the environmental impact assessment process in the tourism sector in Pacific countries and promote best practices for coastal tourism. The guidelines support sustainable coastal tourism that protects the environment and social and cultural assets



that provide the foundation for tourism in the region.

SPREP has been promoting environmental impact assessments and their part in capacity-building for more than 25 years and has brought this expertise to their partnership with the South Pacific Tourism Organization. The regional coastal tourism environmental impact assessment guidelines are a sector-specific version of the SPREP regional guidelines, first published in 1993 and most recently updated in 2016. Those guidelines are intended to assist with the implementation of national environmental impact assessment legal requirements.

The regional coastal tourism guidelines complement other forms of environmental impact assessment assistance that SPREP provides to its member countries (such as in-country capacity-building and training workshops and the coordination of South-South sharing by facilitating the participation of member countries in international meetings and conferences on environmental impact assessments and strategic environmental assessments). SPREP is also mandated to assist member countries in reviewing such assessments and providing technical support for the review of national policies and legislation on the environment on request from national focal points.

Result

The creation of sector-specific guidelines for the region has highlighted to countries and stakeholders alike that different sectors have different requirements for assessing potential environmental impact, and that assessments must be tailored to each development project. That has resulted in increased discussions on sector-based planning and the need for a more strategic approach to improving sustainable development.

The Federated States of Micronesia have begun a strategic environmental assessment to evaluate the potential impact of climate change and changes in the economic growth of the country. It will inform the implementation of

an integrated “Ridge-to-Reef” approach aimed at enhancing ecosystem services, conserving globally important biodiversity and sustaining local livelihoods. Preliminary outcomes of the assessment include:

- ▶ Integrated ecosystems management and rehabilitation on the high islands of the Federated States of Micronesia to enhance Ridge-to-Reef connectivity
- ▶ Improved management effectiveness in new protected areas on the high islands of the Federated States of Micronesia as part of the Ridge-to-Reef approach

The Cook Islands are currently reviewing their environmental protection legislation with a focus on sustainable (tourism) developments with assistance from SPREP. SPREP is also assisting Nauru and Tokelau in developing environmental impact assessment legislation. An environmental has been adopted in Nauru (2020), and Tokelau is aiming to create and endorse its first policy on the issue.

Both Tuvalu and Vanuatu updated environmental legislation in 2018, in line with the regional guidelines, and invited SPREP to assist with in-country capacity-building and awareness-raising of regulators for the revised legislation.

Enabling factors

The success of the partnership between SPREP and the South Pacific Tourism Organization in developing, promoting and helping to implement regional coastal tourism environmental impact assessment guidelines was made possible through strong political will and the commitment to make tourism in the Pacific islands more sustainable. Moreover, the partnership was supported financially by the UNEP/European Union/African Caribbean and Pacific Multilateral Environmental Agreement Fund, the Governments of Australia and New Zealand, the Asian Development Bank, the World Bank, the New Zealand Association for Impact Assessment and the Melanesian Spearhead Group.

The uptake of the guidelines was also supported by the recently formed Pacific Learning Partnership, which is based on an MoU between SPREP, the World Bank, the Asian Development Bank and the University of the South Pacific, which aims to promote good environmental practice through the SPREP regional guidelines. The coastal tourism guidelines were launched during a conference on sustainable tourism held in Samoa in 2018.

Both the regional guidelines and the coastal tourism guidelines on environmental impact assessments are also promoted to stakeholders by environmental regulators in member countries that have received SPREP-facilitated capacity training in the last four years.

Abidjan Convention: restoring mangrove ecosystems

Problem



West Africa's mangroves are being lost as a result of coastal development, with 31 per cent of West Africans now living on the coast. The loss of mangroves has reduced coastal protection,

with 500,000 West Africans affected by coastal flooding each year. Coastal degradation is a threat to the region because 50 per cent of its GDP comes from coastal areas, and it is estimated that by 2050, 50 per cent of regional fisheries-related jobs will be lost if coastal ecosystem health continues to decline. It is essential to address the problem in order to prevent development issues from becoming more acute in the region.

Action

The USAID-funded West Africa Biodiversity Conservation programme works with partners in the region on issues related to climate change, biodiversity conservation and sustainable forest and coastal resource management. One of its core regional partners is the Abidjan Convention. A key success of the partnership has been the development and implementation of the Sustainable Mangrove Management Protocol.

The Abidjan Convention supports contracting parties in developing their action plans to implement the protocols under the Convention, including the Additional Protocol to the Abidjan Convention Concerning Cooperation in the Protection and Development of Marine and Coastal Environment from Land-based Sources and Activities in the Western, Central and Southern African Region (2012), at the national level. If those plans are approved (for instance during the thirteenth meeting of the Conference of the Parties to the Convention in Dec 2021), the secretariat will coordinate and monitor their implementation while providing technical assistance to the parties.

The West Africa Biodiversity Conservation programme, in partnership with the Abidjan Convention, is implementing two pilot projects in Côte d'Ivoire and Sierra Leone on coastal resilience and mangrove regeneration to implement and test the main principles of the Sustainable Mangrove Management Protocol. Both landscapes require ecosystem-based climate change adaptation and mitigation while preserving biodiversity, enhancing livelihoods and protecting natural resources, including fisheries, water resources and forest farmlands. The management and restoration of forests, watersheds and mangroves in those two landscapes are critical for increasing the resilience of coastal communities to climate change and for contributing to the countries' commitments under the United Nations Framework Convention on Climate Change.

A careful analysis of the sociopolitical and cultural contexts of the Sierra Leone coastal landscape complex revealed that a key driver triggering excessive exploitation of natural resources is the uncoordinated way in which councils, chiefdoms and community-level institutions operate. To address the issue, the West Africa Biodiversity Conservation programme worked with development organizations and government ministries, departments and agencies to establish 24 natural resource management committees and a coastal chiefdom natural resources management network. Over the coming years, the programme will train these newly established



institutions in various aspects of natural resource and climate change adaptation management.

Result

Interventions included activities for delivering science-based mangrove ecosystem restoration and adaptation planning. Over the course of one year, almost 80,000 mangrove seedlings and wildlings were planted, with the rehabilitation of 120 ha of degraded and depleted mangrove forest well under way in the Scarcies estuary, Sierra Leone River estuary, Yawri Bay and the Bonthe Sherbro River estuary.

The West Africa Biodiversity Conservation programme is striving for at least a 40 per cent management effectiveness rate in MPAs and Ramsar sites of Sierra Leone, as those MPAs and sites are currently subject to unrestricted access. The programme will work closely with fisheries, the National Protected Areas Authority and Conservation Fund and the Coastal Chiefdom Natural Resources Management Network to develop community co-management plans in order to improve management effectiveness in MPAs, empower and build community capacities and sustain and diversify livelihoods.

Enabling factors

The interventions in Côte d'Ivoire and Sierra Leone were informed by comprehensive, multisectoral climate change vulnerability assessments, with teams consisting of climate change experts, national and local government agencies, and non-governmental organizations and universities. To ensure ownership by local communities, the findings and recommendations of the assessments were presented to the communities and government agencies to allow them to determine the most appropriate priorities.

A climate change adaptation plan has been developed to contribute towards increasing resilience and protecting coastal ecosystems across the Sierra Leone coastal landscape complex (the Scarcies region, the Bonthe-Sherbro and Sierra Leone River estuaries and

Yawri Bay) and beyond. The plan proposes a fundamental shift in the way practitioners and climate change risk managers work together to protect and restore critical coastal ecosystems and bolster sustainable livelihoods. In addition, the plan advocates for the use of proven best practices, building on previous and ongoing efforts to create fair, equitable and lasting adaptation solutions in coastal West Africa. It is anticipated that it will also foster a new culture that prompts practitioners and policymakers to incorporate consideration of climate change risks, vulnerabilities and adaptation into decision-making.

OSPAR: cooperating with CEP

Problem



Some regional seas include maritime areas and activities of other regional seas; as a result of ocean currents, for example. Collaboration and coordination are critical if regional seas are to meet their objectives. Furthermore, the secretariats of regional seas have expertise and experience in different areas, meaning that it may be necessary to call on one another to share knowledge, provide guidance and build capacity and skills.

Action

OSPAR is experienced in interregional cooperation and has established partnerships with secretariats of regional seas to share knowledge and expertise (for example, its twinning programme with the Abidjan Convention).⁴⁷ To expand its international cooperation activities, in 2017, OSPAR registered a voluntary commitment with CEP to explore opportunities for interregional cooperation to support progress towards Sustainable Development Goal targets.⁴⁸ The collaboration presented an opportunity to

⁴⁷ Further information is available at www.ospar.org/about/international-cooperation/abidjan-convention.

⁴⁸ The commitment is available at <https://oceanconference.un.org/commitments/?id=17198>.

share knowledge and expertise, and to influence and support activities in two regions that are connected by ocean currents and that have several common member countries, including France, the Netherlands and the United Kingdom of Great Britain and Northern Ireland.

Several initial areas in which OSPAR and CEP could partner to provide technical and programmatic support to member countries in the wider Caribbean and Northeast Atlantic regions include the following:

- ▶ Sharing of knowledge and experience to build MPA capacity, which could be mutually rewarding for both OSPAR and CEP (such as management methods, assessments of management effectiveness, status of MPAs, and regional database development and management)
- ▶ Reduction of the spread of litter in the connected regions, which was identified as a priority and could be assessed and better managed
- ▶ Reduction of nutrient pollution, which could involve information exchange on nutrient sources, impact and potential solutions, including how to influence policy development and decision-making through data and information

As a first step towards collaborating on MPAs, the OSPAR secretariat participated in the special session on MPAs of the seventy-first annual meeting of the Gulf and Caribbean Fisheries Institute in November 2018. The session allowed for the sharing of experiences between the Caribbean and Northeast Atlantic regions on MPA management and status assessments, as well as the scoping-out of potential avenues for information exchange that would benefit the marine environments of the two regions. In addition, the CEP secretariat attended the OSPAR Marine Protected Area Expert Group meeting.

As a first step towards collaborating on marine litter, a workshop was held in Miami, United States, in October 2018, which included experts on marine litter from OSPAR and CEP. The aims

of the workshop were to discuss best practices for harmonizing marine litter monitoring, assess the effectiveness of monitoring and managing marine litter data and to develop recommendations for a uniform litter monitoring and management programme supported by countries and stakeholders in the Caribbean. Two experts from OSPAR presented the OSPAR marine litter monitoring methodology and discussions took place to assess its applicability to the wider Caribbean region.

Result

The collaboration has strengthened the relationship between the two regions and the capacity of the respective regional seas. Marine litter experts and MPA managers and practitioners across both regions have benefited from the exchange of information and experiences, particularly in relation to the development of marine litter monitoring approaches and regional MPA network management approaches.

The collaboration has resulted in several outputs, including:

- ▶ A manual for harmonizing marine litter monitoring in the wider Caribbean region, which aims to assess leading initiatives and provide recommendations for policymakers and experts
- ▶ A project proposal on MPA management capacity-building
- ▶ An evaluation and recommendations for the Caribbean Marine Protected Areas Management Network and Forum
- ▶ A website and fact sheets to share information and support outreach

Although this collaboration addresses Sustainable Development Goal target 14.7 by supporting small island developing States and least developed countries in the wider Caribbean region to manage their marine resources sustainably, it also supports progress towards numerous other targets, including 14.1, 14.2, 14.3, 14.5, 14.7, 14.A and 14.C. The collaboration also contributes towards Goal 17: Partnerships for the goals.



The OSPAR-CEP voluntary commitment made at the United Nations Ocean Conference in 2017 was due for review in June 2020.

Enabling factors

OSPAR is experienced in collaborating with secretariats of regional seas and institutions such as regional fisheries management organizations and IMO. Previous successful partnerships have demonstrated the potential benefits of a new collaboration between OSPAR and CEP.

In addition, the two regions are connected by ocean currents in the Atlantic Ocean, meaning that marine issues in one region may affect the other. There is, therefore, an incentive to work closely together to reduce adverse transboundary and transoceanic impact. The two conventions also have common member countries, namely France, the Netherlands and the United Kingdom of Great Britain and Northern Ireland. That enables alignment of the resources deployed by member countries in each region, ensures communication through the secretariats, making maximum use of the available resources, and the mutual member countries are able to act as a bridge for the transfer of information and knowledge.



Target 14.A

Nairobi Convention: establishing a science-policy platform

Problem



There is a lack of cooperation and collaboration on research and capacity development and limited exchange of scientific information at the regional level. This is linked to difficulties in translating science into policy.

Action

In 2017, the Nairobi Convention, with funding from GEF through the Strategic Action Programme Policy Harmonisation and Institutional Reforms (SAPPHIRE) project and the Implementation of the Strategic Action Programme for the Protection of the Western Indian Ocean from Land-based Sources and Activities project, began supporting several regional research organizations to undertake research on topics related to sustainable ocean management.

A science-policy platform was established and met in South Africa in July 2018 and in Mauritius in May 2019. During those meetings, areas of cooperation were identified, projects were discussed and follow-up actions and meetings were agreed upon. The platform provides a link between regional scientific institutions and the parties to the Nairobi Convention and is a formal mechanism for information-sharing on key

regional issues to be considered at the ministerial level for potential strategy and policy intervention. That usually happens in advance of and during biennial meetings of the Conference of the Parties.

The Consortium for the Conservation of the Coastal and Marine Ecosystems in the Western Indian Ocean region was established in 2007 as a network of local scientific organizations, non-governmental organizations and universities to encourage collaboration between science and policy structures. The Consortium plays a critical role in the science-policy platform.

Result

The result is a formally established platform that is embedded in the structures of the Nairobi Convention and that can provide a scientific basis for governance decisions. It is a mechanism that allows the Conference of the Parties to make decisions that have been informed by robust science and that have undergone a regional review process. For instance, WIOMSA and other members of the Consortium played a crucial role in the science-policy platform prior to the ninth meeting of the Conference of the Parties in 2018. The scientific evidence provided by these partners informed 60 per cent of the decisions made at meeting, including:

- ▶ Decision CP.9/3 (management of marine litter and municipal wastewater in the Western Indian Ocean)
- ▶ Decision CP.9/9: (climate change adaptation and mitigation)
- ▶ Decision CP.9/10 (marine spatial planning for the blue and ocean economy (article 3))
- ▶ Decision CP.9/11 (development of MPAs and critical habitats outlooks)
- ▶ Decision CP.9/12 (science-policy dialogue)
- ▶ Decision CP.9/13 (enhancing cooperation, collaboration and support with partners (articles 8 and 10))

The Consortium has also promoted partnerships in the implementation of programmes such as Resilient Coasts in the Western Indian Ocean,

established in 2012 by the Nairobi Convention secretariat, Coastal Oceans Research and Development – Indian Ocean, IUCN and WIOMSA; the publication in 2015 of the *Regional State of Coast Report: Western Indian Ocean*⁴⁹ by the Nairobi Convention secretariat in collaboration with WIOMSA; and the design of a regional network for the Western Indian Ocean Local Fisheries Management, funded by the MacArthur Foundation and implemented by WIOMSA, World Conservation Society, Conservation International, World Wildlife Fund and Blue Ventures.

Most recently, the Consortium catalysed the development of the Integrated Management of Marine and Coastal Resources of the Northern Mozambique Channel project, funded by Fonds Français pour l'Environnement Mondial. The project aims to ensure that, by 2025, the high-biodiversity-value coral reef, seagrass and mangrove ecosystems in northern Mozambique are maintained to secure sustainable futures and livelihoods for coastal communities and economies. The project will be implemented between 2019 and 2022 by the Nairobi Convention secretariat, the Coastal Oceans Research and Development – Indian Ocean, World Conservation Society, Conservation International, The Nature Conservancy, Fauna and Flora International, World Wildlife Fund and Blue Ventures.

Other ongoing priority research programmes are supported, and capacity-building on marine spatial planning, restoration, artificial wetlands, e-flows and other topics continues to be strengthened. A follow-up meeting is planned to assist the Nairobi Convention secretariat in developing a common set of objectives that brings together all marine- and coastal-related initiatives in the region.

Enabling factors

Collaboration with regional scientific bodies and formal agreements with regional research

⁴⁹ UNEP-Nairobi Convention and WIOMSA (2015). The Regional State of the Coast Report: Western Indian Ocean. UNEP and WIOMSA, Nairobi, Kenya, 546 pp. Available at <https://wedocs.unep.org/handle/20.500.11822/9668>.



institutions and universities were crucial for the above actions. The willingness of the countries in the region to work together on marine and coastal issues, culminating in the Nairobi Convention, was also key, as were strong partnerships with national and regional experts and institutions willing to participate in the science-policy process.

CPPS: monitoring oceanographic phenomena

Problem



Extreme weather events such as El Niño and tsunamis have a major impact on the economic and social stability of countries in the CPPS region.

El Niño conditions in the region are characterized by a warming of the ocean along the west coast of South America and by a shift in temperature patterns and rainfall. The phenomenon has been linked to flooding and droughts, which affect agricultural production and associated exports, water-dependent industries (such as hydropower) and local livelihoods. The phenomenon causes particular disruption to the fishing industry by diminishing fish landings and the fat content of small pelagic fish, and by reducing the production and quality of fish oil and fishmeal. That has negative repercussions for associated labour and production chains. The Southeast Pacific region is also an active tectonic subduction zone, which generates large tsunamis that result in many casualties and the destruction of infrastructure.

Understanding the oceanographic, meteorological and biological conditions of the ocean, and being able to predict El Niño events and tsunamis, is increasingly important for the region, particularly as the frequency and intensity of extreme weather events is expected to increase as a result of climate change. Knowledge is key to managing the negative impacts of such events, taking advantage of potential opportunities they might offer. Addressing the threats posed by El Niño and tsunamis also requires regional cooperation and coordination.

Action

In 1974, the four CPPS member countries established a programme to study the El Niño phenomenon in the Southeast Pacific region (*Programa para el Estudio Regional del Fenómeno El Niño en el Pacífico Sudeste* (ERFEN)). Since 1998, it has brought together the CPPS countries to conduct annual coordinated research cruises to assess oceanographic conditions in the region. The aim of those cruises is to improve climate forecasting and assess the risk of an El Niño phenomenon occurring during the year. The information collected is collated in an integrated regional database, which was set up in 2006 and is managed by a technical group.

To address the threat posed by tsunamis, CPPS established a Southeast Pacific tsunami warning working group to increase the coordination and preparedness of technical focal points in the region. The working group holds annual meetings and regular training sessions for specialized personnel and is responsible for issuing tsunami alerts to the general population.

Result

Under the ERFEN programme, an annual risk forecast based on detailed analyses of climatic, oceanographic and ecological conditions is issued to prepare residents and local governments for forthcoming weather events. Multiple handbooks and regional plans have also been published to raise awareness and inform the public.

The programme also produces guidance documents to support technical collaboration and coordination and the exchange of data between CPPS member countries. Those documents include annual regional plans for the cruises, a Conductivity, Temperature, Depth (CTD) Sensor operating handbook, a protocol for access to and the exchange of data, metadata and information in the context of the cruises and a methodological handbook for the exchange of data from the cruises.

By providing such information, the ERFEN programme helps governments adopt measures to improve natural disaster preparedness among the general public and public services (such as public health, disaster reduction services and social services). In certain cases, governments have adopted mitigating actions based on those forecasts. Governments usually activate social safety networks to supplement income and sustain livelihoods affected during El Niño. In some instances, agriculture ministries have promoted the use of drought- and water-resistant seeds for critical crops.

Following the 2010 tsunami, the Southeast Pacific Tsunami Warning Working Group established a communication system for issuing tsunami alerts in the CPPS region. The system is embedded in the work led by the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC-UNESCO) under the Pacific Tsunami Warning and Mitigation System, in which all the member countries of CPPS and Panama are active. Under the system, designated operational warning centres in each country are connected to a central hub operated by the Pacific Tsunami Warning Centre in Hawaii. On the basis of the information received, each country is responsible for issuing alerts, warnings and evacuation orders to its population. CPPS has materially and technically reinforced communication among the warning centres in its member countries.

Since 2006, CPPS member countries have regularly participated in international Pacific wave exercises, which were established by the Pacific Tsunami Warning and Mitigation System and the United Nations Educational, Scientific and Cultural Organization to test the receipt, assessment, monitoring and cancellation of simulated alerts in countries across the Pacific. Those Pacific-wide exercises are an effective tool for evaluating tsunami readiness and identifying possible improvements that can be made to the warning systems. The last exercise was conducted simultaneously in Chile, Colombia, Ecuador and Peru in October 2018.

Enabling factors

A regional protocol for communicating tsunami alerts and relevant information has been in place since 1965. The protocol is an agreement between the national tsunami warning centres in the Southeast Pacific region.

CPPS member countries have signed the Protocol on the Programme for the Regional Study of El Niño in the Pacific Southeast (ERFEN Protocol), which commits them to financing oceanographic research vessels and providing monitoring stations in their national waters.

NOWPAP: using satellite imagery to monitor eutrophication

Problem



The Northwest Pacific is one of the most densely populated areas in the world, which has resulted in high levels of nutrient input into the marine environment. Numerous red tides and hypoxic conditions have been reported in coastal waters, which are thought to be a result of anthropogenic activities, such as the use of chemical fertilizers and sewage discharge.

Action

The NOWPAP Special Monitoring and Coastal Environment Assessment Regional Activity Centre developed the NOWPAP Common Procedure for Eutrophication Assessment, a methodology for assessing the eutrophication status in the region, including a screening procedure to detect symptoms of eutrophication with selected parameters. One of the parameters is chlorophyll a, which is being monitored using a satellite imagery technique named "NEAT" (Northwest Pacific Action Plan Eutrophication Assessment Tool).

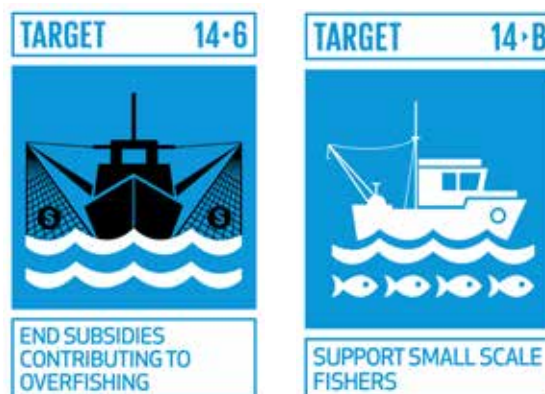


Result

The assessment tool has been used to detect potential dead zones in the Northwest Pacific and identify areas where chlorophyll a is increasing and may require preventative management. Chlorophyll a concentration can also be used as a proxy indicator for Sustainable Development Goal target 14.1.1, helping to monitor progress towards target 14.1.

Enabling factors

NOWPAP provided technical expertise and knowledge from the region to develop region-specific assessment procedures. The Special Monitoring and Coastal Environment Assessment Regional Activity Centre has a clear role and resources to support the monitoring of eutrophication and other environmental issues.



Targets 14.6 and 14.B

Fisheries do not fall within the mandate of many regional seas. However, regional seas can support countries in developing sustainable blue economies and generating alternative livelihoods to secure sustainable resource use. As such, Sustainable Development Goal targets 14.6 and 14.B are addressed together in this section.

Nairobi Convention: enhancing ecosystem-based management in small-scale fisheries

Problem



Small-scale fisheries are declining, and their access to markets is limited.

Action

The SAPPHIRE project is currently planning five pilot projects on artisanal fisheries, in collaboration with the Southwest Indian Ocean Fisheries Commission and FAO. The purpose of those pilots is to support an integrated approach to economic development at the local level. Countries have submitted various proposals, and five have been selected from Comoros, Kenya, Madagascar, South Africa and Tanzania.⁵⁰ The Nairobi Convention secretariat will conduct

⁵⁰ Nairobi Convention. (2021). Updates on demonstration projects for the SAPPHIRE Project (Implementation of the Western Indian Ocean Large Marine Ecosystems Strategic Action Programme Policy Harmonisation and Institutional Reforms). Available at www.nairobiconvention.org/clearing-house/node/766.

several site visits prior to and during the project for quality control and to provide technical support where needed. The Nairobi Convention, FAO and the Fisheries Commission are funding the project.

The pilot projects will raise awareness among fishing communities of the value of large marine ecosystem goods and services. In addition, integrated artisanal fisheries management plans will be prepared for selected sites to strengthen the incorporation of sustainable management of artisanal and subsistence fisheries into local and national plans. The projects will support local communities, mainly fishing communities, to integrate ecosystem-based management in their economic activities in order to reduce excessive exploitation of fish biodiversity and strengthen alternative livelihoods.

Marine spatial planning will be used as a tool to facilitate planning, while an economic evaluation and value chain analysis will be incorporated.

Result

Integrated local economic development plans that consider small-scale fishery issues related to access to resources, markets and improved value chains is the goal of the project. This project is a unique collaboration between regional seas, a regional fisheries organization and FAO on fishery issues.

Enabling factors

Key enabling factors were funding from GEF through the SAPPHIRE project and partnerships with the UNDP, the Southwest Indian Ocean Fisheries Commission, the Swedish International Development Cooperation Agency and FAO.

Target 14.C

Tehran Convention: increasing regional cooperation and stability

Problem



Prior to the establishment of the Tehran Convention in 2003, there was no legally binding multilateral agreement between the five littoral countries of the Caspian Sea (Azerbaijan, the Islamic Republic of Iran, Kazakhstan, the Russian Federation and Turkmenistan). There was also little to no cooperation between the States, owing to tensions between them. The region was considered unstable and the countries tackled environmental and other issues independently.

Action

Signing and ratifying an agreement between the five countries was not an easy process. It was the first time that they had come together to discuss collaborative management of their shared marine environment. Those intergovernmental negotiations were politically sensitive and lasted for eight years, with all parties involved spending significant resources.

Result

The agreement to take common action on environmental management was a step towards stability and cooperation in the region, and would benefit the health and livelihoods of hundreds of millions of people, according to former United Nations Secretary-General Kofi Annan. Dialogue between the countries allowed for environmental cooperation and paved the way for the implementation of international law to sustainably use and conserve the world's seas. The establishment of the Tehran Convention was, therefore, a powerful example of successful multilateral dialogues facilitated through environmental concerns and it is recognized as a historic breakthrough that shows that cooperation in difficult situations is possible and can produce fruitful results.



Enabling factors

The Caspian Environment Programme, established in 1998 and financed by the five countries, was the first step towards the Convention. The negotiations that led to the Convention were supported by UNEP, the European Union and other intergovernmental organizations.

The five countries are directly dependent on the Caspian Sea for fisheries, agriculture, water resources and energy security. Those common concerns were enabling factors and confirmed the urgency of the issue. The common problem of environmental protection acted as a factor that enabled the first multilateral agreement between the five countries to become a reality.

Nairobi Convention: developing a regional strategy for ocean governance

Problem



Prior to 2019, there was no regional ocean governance strategy in place for the Western Indian Ocean, which led to uncoordinated and sectoral governance approaches.

Action

In 2019, the Nairobi Convention secretariat prepared a background paper on regional governance, entitled "The State of Ocean Governance in the Western Indian Ocean",⁵¹ and facilitated regional discussions on the paper using a multisectoral and multi-institution approach. Different regional and continental bodies were included, and they agreed on a framework for improving regional governance using information from the background paper. The regional economic communities (the Intergovernmental Authority on Development, the Common Market

⁵¹ UNEP/Nairobi Convention. (2020). The State of Ocean Governance in the Western Indian Ocean. (eds) Nairobi Convention. The Sapphire Project. 76 pp. Available at www.unep.org/resources/report/state-ocean-governance-western-indian-ocean-region.

for Eastern and Southern Africa, the Southern African Development Community and the East African Community) are considered the "arms of the African Union" and were the driving force behind the framework, which was linked to the blue economy and aligned with African Union policies and strategies. The Nairobi Convention secretariat has hosted two meetings of the regional economic communities to establish areas of closer collaboration, the most recent of which was in April 2021, to work on developing the draft strategy that had been prepared.⁵² The regional economic communities were also involved in the regional ocean governance workshop and have expressed their support in implementing the strategy.

Result

The background paper has paved the way for contracting parties to the Nairobi Convention to agree on a process for developing a regional strategy for ocean governance. The paper proposes mechanisms for collaboration that can be expanded upon in the future. Such mechanisms include regional political will, international legal obligations and the strengthening of existing regional cooperation. It is hoped that those mechanisms will increase the integration of different sectors and stakeholders and result in the implementation of a strategy aligned to the mandate, strategies and policies of the African Union and regional economic communities. It should also encourage a large marine ecosystem approach to governance of the Western Indian Ocean and foster discussions on the connectivity of exclusive economic zones with areas beyond national jurisdiction. The strategy will allow countries in the region to address issues of common concern through an accepted regional mechanism.

⁵² UNEP/Nairobi Convention. (2021). Report of the Meeting of Regional Economic Communities and Commissions on Development of an Ocean Governance Strategy for the Western Indian Ocean Region. 26 April 2021. Virtual meeting. Available at www.nairobiconvention.org/clearinghouse/sites/default/files/Meeting_Report_RECs%20and%20Commissions_26_April_2021_09052021.pdf.

Enabling factors

The region received funding from the GEF SAPPHIRE project. Through supportive decisions by the contracting parties, the blue economy discussion is currently high on the agenda of many contracting parties to the Nairobi Convention.

SACEP: implementing the CBD Strategic Plan for Biodiversity policy framework

Problem



Prior to 2019, in the South Asian Seas region, no regional approach was in place to address issues relating to marine biodiversity.

Action

In 2010, CBD adopted the Strategic Plan for Biodiversity, including the Aichi Biodiversity Targets for the period 2011–2020. Although mainly implemented through national biodiversity strategies and action plans, regional organizations were encouraged to consider implementing the targets on a regional scale. To that end, SACEP signed a small-scale funding agreement with UNEP in December 2012 to develop a regional marine and coastal biodiversity strategy for the South Asian Seas region. The strategy was to act as a framework for coordination and collaboration between the countries to achieve the Aichi Targets. The regional strategy also supports progress towards the Sustainable Development Goals, particularly those relating to coastal and marine issues.

To develop the regional strategy, a number of desk reviews were undertaken by SACEP to establish a knowledge base, identify gaps and needs and document relevant national and regional processes. The review also explored the ways in which the proposed strategy could complement the National Biodiversity Strategies and Action Plans process.

Outcomes envisaged for the regional strategy include the following:

- ▶ Improvements in baseline information relating to priority areas for marine and coastal biodiversity conservation, identified on the basis of the best available scientific information
- ▶ The identification of major threats to marine and coastal biodiversity and solutions to those threats
- ▶ An increase in the number and categories of MPAs and their management capacities, and the promotion of networking
- ▶ The facilitation of community and private sector involvement in the sustainable use of coastal and marine biodiversity

The role of SACEP is to lead and coordinate the implementation and promotion of the strategy, including through cross-cutting activities, collaborating with regional partners (such as government ministries and departments, research institutions, donors). SACEP also plays a key role in leading monitoring, reporting, resource mobilization and capacity-building activities.

Result

A first draft of the regional strategy was prepared and discussed at a regional workshop held in Colombo in July 2014. The workshop included national experts from countries in the region (India, Maldives, Pakistan and Sri Lanka), regional partner organizations, academia and other stakeholders. It facilitated the sharing of experiences from ongoing regional processes and activities between marine and coastal stakeholders. A revision of the first draft was completed in 2015, and in 2018, a regional meeting was held to validate the strategy.

The final regional strategy was adopted for implementation at the sixth SASP/ intergovernmental meeting of ministers in November 2019. The meeting also recommended that SACEP and SASP should develop project proposals in coordination with international funding agencies to support the implementation



of the strategy. South Asian Seas countries were requested to begin immediate implementation at the national level.

Enabling factors

The signed small-scale funding agreement with UNEP allowed for a formal process for developing the regional strategy and for UNEP to provide support and guidance. That collaborative activity strengthened the relationship between the two organizations.

OSPAR: partnering with the North-East Atlantic Fisheries Commission (NEAFC)

Problem



Marine biodiversity is under pressure from human activities, both in national waters and in areas beyond national jurisdiction. OSPAR applies the ecosystem-based approach to managing human activities and has a mandate to establish MPAs in areas beyond national jurisdiction in the OSPAR maritime area.⁵³ Its activities focus on pollution control and the protection of biodiversity and the marine environment. However, it does not have a mandate to manage all relevant human activities (including sectors such as fisheries and shipping), as some fall under the competency of other authorities. Cross-sectoral coordination in areas beyond national jurisdiction is thus needed to ensure that the management actions taken by the many competent authorities achieve the best results. For OSPAR, cross-sectoral cooperation is important for MPAs in areas beyond national jurisdiction to achieve their conservation objectives.

⁵³ This is detailed in the OSPAR regulatory regime for establishing MPAs in areas beyond national jurisdiction, which is available at www.ospar.org/site/assets/files/33747/annex06_jl_advice_on_abnj.doc.

Action

Regional fisheries management organizations, OSPAR and NEAFC operate in the same marine area. They both have an interest in conserving the living resources of the seas, including those located in areas beyond national jurisdiction, and in 2008 they therefore signed an MoU to cooperate on the matter.⁵⁴

Recognizing the need for greater coordination between all competent authorities, OSPAR and NEAFC developed a multilateral agreement known as the “collective arrangement”, which was adopted in 2014 and is open to other competent authorities with interests in the region.⁵⁵ The collective arrangement aims to enhance cross-sectoral cooperation and coordination, for example, through complementary area-based measures.

OSPAR and NEAFC made a dedicated voluntary commitment at the United Nations Ocean Conference held in New York in 2017 to promote the collective arrangement as a regional example of cross-sectoral cooperation and an innovative governance framework.⁵⁶

Result

The collective arrangement has promoted increased cooperation and coordination between the two organizations. For instance, OSPAR has presented ongoing work under its programme for a network on MPAs to consider new proposals at an early stage; the thorough discussion of proposals at an early stage, through the forum or annual collective arrangement meetings, has generated greater awareness of the work of OSPAR and improved the quality of technical reports and communications materials through the receipt of valuable comments and information. NEAFC, for example, has used information from OSPAR to identify vulnerable

⁵⁴ The MoU is available at www.ospar.org/site/assets/files/1357/mou_neafc_ospar.pdf.

⁵⁵ OSPAR agreement 2014–2019 is available at www.ospar.org/documents?v=33030.

⁵⁶ The commitment is available at <https://oceanconference.un.org/commitments/?id=21204>.

marine ecosystems. The aim of the arrangement is to ensure that information is used in the best way possible, and that protective area-based measures are not undermined by one another's activities; it also ensures that a higher degree of protection is provided to relevant areas.

The coordination of activities across the two organizations has reduced duplication of effort (for example, through participation in joint working groups and meetings). Management measures for overlapping MPAs and vulnerable marine ecosystems are now also aligned (for example, fishing closures and the conservation objectives of MPAs).

The collective arrangement is intended to serve as a basis for a multilateral forum and is open to other competent authorities. Meetings have facilitated communication and information exchange, not only between organizations that have joined the arrangement, but also with organizations that have not formally joined but are encouraged to participate. Notably, United Nations organizations, the International Seabed Authority and IMO have engaged in recent meetings, as have the International Commission for the Conservation of Atlantic Tunas and the North Atlantic Marine Mammal Commission.

Enabling factors

The success of the collective arrangement has been attributed to the following factors:

- ▶ OSPAR and NEAFC had expanded their horizons to look beyond what had previously been their main focus. NEAFC was increasingly considering the impacts of fisheries on other parts of the ecosystem and OSPAR was researching issues affecting biodiversity in the region more broadly.
- ▶ The OSPAR and NEAFC secretariats had an existing informal relationship, which enabled an understanding of how the two organizations operated and established a solid level of trust. That was critical in supporting member countries to consider and understand the explicit roles and operations of each organization, thus helping them to more effectively negotiate the terms of the initiative.
- ▶ From the time of the initial meetings, it took nearly a decade for the collective arrangement to be adopted. It was essential that the two organizations continued to persevere and facilitate an ongoing dialogue in order to learn about one another and build trust.
- ▶ The formalization and institutionalization of cooperation and coordination requirements between the two organizations has been critical.



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