

# REGIONAL SEAS FOLLOW UP AND REVIEW OF THE OCEAN RELATED SUSTAINABLE DEVELOPMENT GOALS (SDGS)

## CONCEPTUAL GUIDELINES

UN ENVIRONMENT REGIONAL SEAS REPORTS AND STUDIES NO 208



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## List of Acronyms

ABNJ	Areas Beyond National Jurisdiction
CBD	Convention on Biological Diversity
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CCLME	GEF Canary Current Large Marine Ecosystem project
COBSEA	East Asian Seas Action Plan is steered by the Coordinating Body on the Seas of East Asia
DPSIR	Drivers, Pressures, State, Impacts, Assessment Framework
EEA	European Environment Agency
ECESA Plus	Executive Committee of Economic and Social Affairs Plus
ECOSOC	Economic and Social Council
EU	European Union
FAO	Food and Agricultural Organization of the United Nations
GEF	Global Environment Facility
GEO	Global Environment Outlook
GES	Good Environmental Status
GFCM	General Fisheries Commission for the Mediterranean
GOOS	Global Ocean Observing System
GIS	Geographic Information System
HELCOM	Baltic Marine Environment Protection Commission - Helsinki Commission
HLPF	High-Level Political Forum
IAEG-SDG	Inter-Agency and Expert Group on Sustainable Development Goals Indicators
ICES	International Council for the Exploration of the Sea
ICZM	Integrated Coastal Zone Management
IISD	International Institute for Sustainable Development
IMAP	Integrated Monitoring and Assessment Programme for the Mediterranean
IMO	International Maritime Organization
IOC-UNESCO	Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization
LME	Large Marine Ecosystem
MEA	Multilateral Environment Agreement
MOU	Memorandum of Understanding
MPA	Marine Protected Areas
MSFD	EU Marine Strategy Framework Directive
MSSD	Mediterranean Sustainable Development Strategy
NAP	National Action Programme
NAFO	Northwest Atlantic Fisheries Organization
NASA	U.S. National Aeronautics and Space Administration
NEAFC	North East Atlantic Fisheries Commission
NOAA	U.S. National Oceanic and Atmospheric Administration
NOWPAP	The Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region
NPFC	North Pacific Fisheries Commission
OECD	Organization for Economic Co-operation and Development
OSPAR	The Convention for the Protection of the Marine Environment of the North-East Atlantic
PEMSEA	Partnerships in Environmental Management for the Seas of East Asia
ROPME	Regional Organization for the Protection of the Marine Environment

RFB	Regional Fishery Bodies
RFMO	Regional Fisheries Management Organization
RSCAPs	Regional Seas Conventions and Action Plans
RSP	Regional Seas Programme of UN Environment
RSSD	Regional Seas Strategic Directions
SAP	Strategic Action Programme
SDI	Spatial Data Infrastructure
SDG	Sustainable Development Goal
SEAFO	South East Atlantic Fisheries Organization
SEIS	Shared Environmental Information System
SIOFA	Southern Indian Ocean Fisheries Agreement
SPRFMO	South Pacific Regional Fisheries Management Organization
TDA	Transboundary Diagnostic Analysis
ToR	Terms of Reference
TWAP	UNEP GEF project: Development of the methodology and arrangements for the GEF Transboundary Waters Assessment Programme
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Seas
UNDP	United Nations Development Programme
UNEA	United Nations Environment Assembly (of UN Environment)
UNECE	United Nations Economic Commission for Europe
UNFCCC	United Nations Framework Convention on Climate Change
VNRS	Voluntary National Reviews
WCMC	UN Environment World Conservation Monitoring Centre (UNEP-WCMC)
WOA	UN World Ocean Assessment

# Summary

## Key Messages

- Whilst the Agenda 2030 for Sustainable Development clearly defines the follow-up and review of the Sustainable Development Goals (SDGs) as under the responsibility of governments, it also stresses the important role in of the regional and sub-regional commissions and organizations. In this regard the United Nations Environment Assembly in 2016 recognized the unique role of the regional sea's conventions and action plans in the implementation and reporting of the SDG 14 and other SDG targets relevant for the marine and coastal environment, in cooperation, with other relevant organizations and forums, such as regional fisheries management organizations.
- The UN Environment Regional Seas Programme was established in 1974 and covers 18 marine and coastal regions worldwide, with four decades of work and cooperation towards the protection of the marine and coastal environment. This includes a substantial archive of reports over the years related to monitoring, state of environment and thematic environmental and socioeconomic assessments, management guidelines and best-practices, as well as direct financial and technical support to countries and national institutions, the implementation of projects and the mobilization of additional funding. The adopted regional seas conventions and/or action plans, along with other strategic documents, objectives and targets are overall in line with the SDGs, and can therefore provide an important resource of information on the follow-up and review process of the SDGs targets.
- Currently, the contribution from the regional seas to the SDG follow-up and review process including the National Voluntary Reports (VNRs) is not undertaken in a systematic manner. In 2017, SDG 14 is one of the least reported of the goals in the VNRs, and close of 50% of VNR reports do not refer to the regional seas.
- As a result, the global meetings of the regional seas since 2016 have discussed how they can support their countries with the implementation, and monitoring of the ocean-related SDGs and associated targets, including the need to align their regional objectives and targets with the SDGs, integrate common indicators for reporting, and strengthen partnerships and cooperation towards SDG reporting.
- During the preparation of this report, several regional seas have undertaken further steps to streamline their current reporting mechanisms towards contributing to SDG follow-up and review, including aligning work programmes and monitoring and assessment programmes with the SDGs, and strengthening coordination mechanisms including with fisheries bodies.

## Aim of the report

The aim of this report is to provide an overview, with good examples and practical guidance to enhance the role and contribution of regional seas to the SDG follow-up and review process, in line with UN General Assembly and UNEA resolutions and Global Meetings for the Regional Seas Conventions and Action Plans. The focus of these guidelines will be on SDG 14 indicators but in line with the mandate of the regional seas, several other SDG indicators should be considered such as secondary priority goals and targets as presented in [Annex 1](#). Additional relevant Goals includes (but are not limited to):

- **Goal 1 (End Poverty)**, especially 1.5 regarding resilience and vulnerability to climate related extreme events and other disasters

- **Goal 2 (End Hunger)**, especially 2.4 regarding sustainable food production and maintaining ecosystems;
- **Goal 5 (Gender Equality)**, especially 5.a to give women equal rights to economic resources;
- **Goal 6 (Clean Water and Sanitation)** including 6.3 and 6.5 regarding water pollution dumping and hazardous wastes and integrated water resource management as well as 6.6, 6.7 and 6.8;
- **Goal 7 (Affordable and Clean Energy)**, especially 7.2 regarding renewable energy;
- **Goal 8 (Decent Work and Economic Growth)** especially 8.3, 8.4 and 8.9 related to innovative small and medium enterprises, consumption and production and sustainable tourism;
- **Goal 11 (Sustainable Cities and Communities)**, especially 11.6 to reduce environmental impacts on cities;
- **Goal 12 (Responsible Consumption and Production)**, especially 12.2, 12.4 and 12.5;
- **Goal 13 (Climate Action)**, especially 13.1 and 13.2 regarding resilience and integration into national policies and
- **Goal 15 (terrestrial ecosystems, forests, desertification, biodiversity)**, especially 15.1, 15.5, 15.8 and 15.9
- **Goal 17 (Partnerships for the Goals)**, especially 17.16 and 17.18.

The Regional Seas Programme is in a unique position to assist countries in the monitoring and reporting of SG14, which is one of the least reported of the SDG's in national voluntary reviews. Also, through a combined ecosystem-approach with alignment with the SDG's, regional seas can build upon decades of data, reports and assessments to contribute to SDG and other key global reporting. In addition, regional seas have long established coordination mechanisms and agreements with other organizations (IGO's and NGO's at the global to national level) that can provide a basis for strengthened cooperation in SDG reporting. Especially relevant is the cooperation with Regional Fisheries bodies.

These guidelines are funded under the project implemented by the United Nations Environment and the European Commission, "Integrated Management and Governance Strategies for Delivery of Ocean-related Sustainable Development Goals".

The structure of the report is as follows:

- **Chapter 1** presents a general introduction to SDG follow up and review, including UN resolutions defining the national, regional and global level reporting, as well as the current status of agreed global SDG indicators, data portals and initiatives to support countries in reporting. It also introduces UN Environment and the Regional Seas agreed role in SDG follow up and review and presents the aim of the report.
- **Chapter 2** presents an overview of the existing regional seas reporting and assessment methodologies, including strategic documents (with their agreed objectives, targets and indicators), as well as current monitoring and assessments, all in relation to the SDG 14 and other SDG targets.
- **Chapter 3** provides suggestions on how regional seas reporting mechanisms can be strengthened, aligned with SDG's and coordinated between regions in order to systematically contribute to national and global SDG reporting as well as other global assessments
- **Chapter 4** provides a summary of suggested recommendations and next steps.

Several complimentary regional seas case studies have been developed in support of this report and are published as a supplementary annex.



# Chapter 1. Introduction to the SDG follow-up and review process

On 1 January 2016, the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development (UNEP, 2015)— adopted by world leaders in September 2015 at an historic UN Summit — officially came into force. While the SDGs are not legally binding, governments are expected to take ownership and establish national frameworks for the achievement of the 17 Goals and 169 targets. Countries have the primary responsibility for follow-up and review of the progress made in implementing the Goals, which will require quality, accessible and timely data collection.

Figure 1.1 The 17 Sustainable Development Goals



The Agenda 2030 clearly defines the follow-up and review of the SDGs and states that “Governments have the primary responsibility for follow-up and review, at the national, regional and global levels, in relation to the progress made in implementing the Goals and targets over the coming fifteen years.” (paragraph 47, Resolution 70/1). Furthermore, some of the principles for SDGs included and relevant to the Regional Seas Programme are (paragraph 74):

- “(a) **They will be voluntary and country-led**, will take into account different national realities, capacities and levels of development and will respect policy space and priorities. As national ownership is key to achieving sustainable development, the outcome from national-level processes will be the foundation for reviews at the regional and global levels, given that the global review will be primarily based on national official data sources.”
- “(b) **They will track progress in implementing the universal Goals and targets**, including the means of implementation, in all countries in a manner which respects their universal, integrated and interrelated nature and the three dimensions of sustainable development.”
- “(f) **They will build on existing platforms and processes**, where these exist, avoid duplication and respond to national circumstances, capacities, needs and priorities. They will evolve over time, taking into account emerging issues and the development of new methodologies, and will minimize the reporting burden on national administrations.”

“(h) *They will require enhanced capacity-building support for developing countries, including the strengthening of national data systems and evaluation programmes, particularly in African countries, least developed countries, small island developing States, landlocked developing countries and middle-income countries.*”

## 1.1 SDG National level reporting

As part of its follow-up and review mechanisms, the 2030 Agenda for Sustainable Development encourages member states to “conduct regular and inclusive reviews of progress at the national and sub-national levels, which are country-led and country-driven” (paragraph 79). These national reviews are expected to serve as a basis for the regular reviews by the high-level political forum (HLPF), meeting under the auspices of ECOSOC. As stipulated in paragraph 84 of the 2030 Agenda, regular reviews by the HLPF are to be voluntary, state-led, undertaken by both developed and developing countries, and involve multiple stakeholders.

Voluntary National Reports for 2016 onwards presented at the HLPF are available at <https://sustainabledevelopment.un.org/vnrs/>. In the 2017 Synthesis of Voluntary National Reviews (UN ECOSOC, 2017d), noted that “among the lessons learned are: (a) the pivotal role of strong partnerships for SDGs; (b) means for stakeholder engagement, including the private sector; and (c) the importance of policy coherence and multi-sectoral coordination.” With regards to Goal 14, countries listed major threats affecting the oceans, including marine pollution, such as in the form of plastics, ocean acidification, overfishing, and illegal, unreported and unregulated fishing. In addition, many countries cited climate change as an important threat and underscored the importance of the Paris Agreement in this regard. Other issues, such as coastal erosion, maritime safety and piracy were also reported. Among the main challenges mentioned with regard to implementing SDG14 were the lack of human and financial resources, the lack of, or limited, data availability, gaps in data management, the lack of clear institutional arrangements and regulations, limited resources for monitoring, control and surveillance, and the lack of interagency coordination. The International Institute for Sustainable Development (IISD) prepared a briefing note on national reporting of the SDG’s in June 2017 (IISD, 2017), and Figure 1.2 presents those Goals that are the most and least reported, indicating that the environmental related Goals are overall the most poorly reported including Goal 14.

Figure 1.2. The SDGs with the most- and least-reported indicators by the studied countries



Countries typically adopt one of three models to reporting on the SDGs:

- Incorporating SDG reporting within an existing national website or platform;
- Developing an entirely new platform dedicated to providing data on the SDGs; and
- Providing their data to a regionally-maintained platform.

Many countries are in the process of developing national SDG data platforms, supported by a number of initiatives. For this purpose, the United Nations Development Programme (UNDP) has developed *Guidelines to Support Country Reporting on The Sustainable Development Goals* (UNDP, 2017). The report also notes the value added of thematic reviews at the national global or regional level to support national SDG review. Countries are also developing their own specific SDG related indicators, which whilst considering the global indicators, are not always exactly the same.

## 1.2 SDG Regional level reporting

The “Transforming Our World” draft recommends the regional level follow-up as review as follows: *“Follow-up and review at the regional and sub-regional levels can, as appropriate, provide useful opportunities for peer learning, including through voluntary reviews, sharing of best practices and discussion on shared targets. We welcome in this respect the cooperation of regional and sub-regional commissions and organizations. Inclusive regional processes will draw on national-level reviews and contribute to follow-up and review at the global level, including at the High-Level Political Forum on sustainable development (HLPF).”* (Paragraph 80). Further paragraph 81 stipulates, *“Recognizing the importance of building on existing follow-up and review mechanisms at the regional level and allowing adequate policy space, we encourage all member states to identify the most suitable regional forum in which to engage. UN regional commissions are encouraged to continue supporting member states in this regard.”*

The 2030 Agenda recognizes the significance of the regional dimension of development and the important role of regional organizations and platform in the implementation, follow up and review. The UN Regional Commissions include the Economic Commission for Africa (UNECA); Economic Commission for Europe (UNECE); Economic Commission for Latin America and the Caribbean (UNECLAC); Economic and Social Commission for Asia and the Pacific (UNESCAP); where economic member states are to translate global commitments into regional transformative strategies and agendas by driving the integration and inclusivity considerations in national policies, programmes and budgets, and by piloting the 2030 Agenda implementation. In addition to the UN Regional Commission there are many other global, regional and sub-regional organizations that engage in thematic reviews in relation to the SDGs.

The regional seas have a unique role in the follow-up and review of the SDG 14 and other SDG targets relevant for the marine and coastal environment. The Second Session of UNEA convened on 23-27 May 2016 and adopted 24 resolutions on key environmental issues, including resolution 2/5 on the “Delivering on the 2030 Agenda for Sustainable Development” (United Nations, 2016). The Assembly through its resolution 2/10 further invited *“Member States and regional seas conventions and action plans, in cooperation, as appropriate, with other relevant organizations and forums, such as regional fisheries management organizations, to work towards the implementation of, and reporting on, the different ocean-related Sustainable Development Goals and associated targets, the Strategic Plan for Biodiversity 2011–2020 and its Aichi Biodiversity Targets”*. Responding to these resolutions, UN Environment proposes to use the existing Regional seas mechanisms for the follow-up and review process of the ocean-related SDG indicators.

### 1.3 SDG Global level Reporting

The High-Level Political Forum on Sustainable Development (HLPF) has a central role in the SDG follow-up and review process, and particularly in overseeing a network of follow-up and review processes at the global level, working closely with the UN General Assembly, the Economic and Social Council and other relevant organs and forums. Follow-up and review at the HLPF are informed by an annual progress report on Sustainable Development Goals to be prepared by the Secretary-General in cooperation with the United Nations System, based on the global indicator framework and data produced by national statistical systems and information collected at the regional level, and by the Global Sustainable Development Report, overviewed by the ECOSOC and aimed at strengthening the science-policy interface.

The HLPF meets annually under the auspices of the Economic and Social Council<sup>1</sup>, with the first meeting was held in 2013. It replaced the Commission on Sustainable Development, which had met annually since 1993. Since 2016 following adoption of 2030 Agenda for Sustainable development, each meeting of the HLPF has focused on particular themes, such as “*Ensuring that no one is left behind*” (in 2016), “*Eradicating poverty and promoting prosperity in a changing world*”, including Goals 1, 2, 3, 5, 9, 14 and 17 (in 2017); and “*Transformation towards sustainable and resilient societies*”, including Goals 6, 7, 11, 12, 15 and 17 (in 2018). General Assembly resolution 70/299 provides further guidance on the follow-up and review of the 2030 Agenda and the SDGs at the global level which “*Encourages Member States to identify the most suitable regional or sub regional forums and formats, where appropriate, as a further means of contributing to the follow-up and review at the high-level political forum, recognizing the need to avoid duplication, and welcomes the steps taken in this regard;*”

### 1.4 SDG Indicators, assessments and data portals

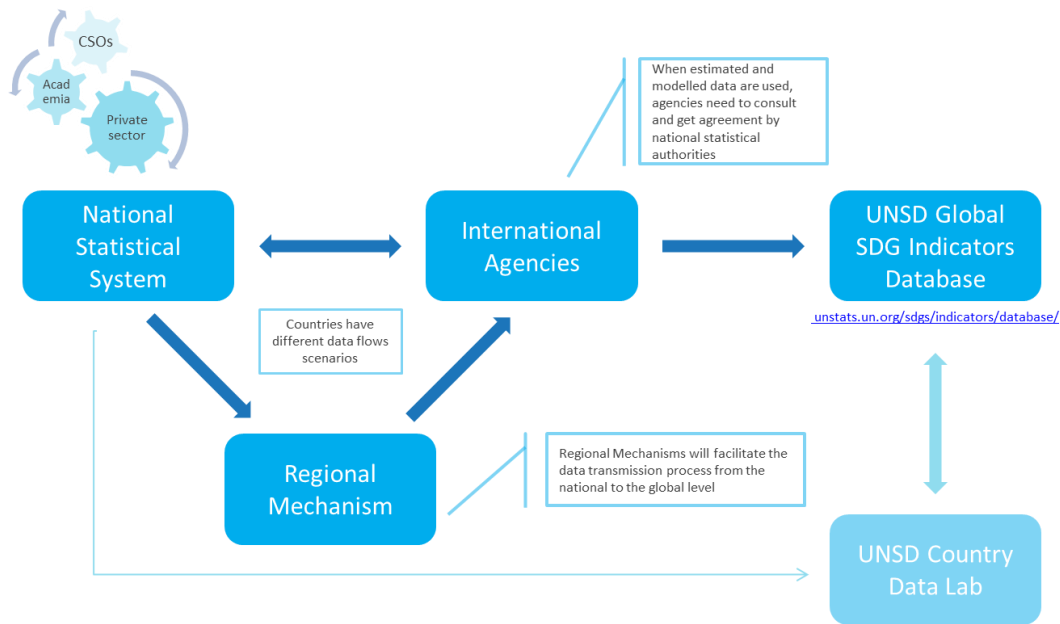
The Sustainable Development Goals Indicators Framework was developed by the Inter-Agency and Expert Group on Sustainable Development Goals Indicators (IAEG-SDGs)<sup>2</sup>, and adopted by the Economic and Social Council (ECOSOC) in June 2017 and by the UN General Assembly in July 2017. It includes 232 individual indicators, of which nine are repeated for different targets, for a total number of 244 indicators. In the context of the SDGs follow-up and review process, international agencies (also referred to as “custodian agencies”) are requested by the IAEG-SDGs to compile global and regional aggregates of data on the SDG indicators based on their respective existing mandates and/or expertise, following quality standards and best practices, and depending on the status of development (data availability) of those indicators. International organizations must support the efforts to standardize indicators in accordance with international guidelines and assure compliance. The Agenda 2030 also defines the three levels of follow-up and review at the national, regional and global levels, summarized below. **Figure 1.3** provides a schematic view of the proposed interaction between countries and regional mechanisms, and between these latter and UN Environment for the transmission of country-level information for the SDG 14 follow-up and review process.

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<sup>1</sup> <https://sustainabledevelopment.un.org/hlpf>

<sup>2</sup> <https://unstats.un.org/sdgs/>

**Figure 1.3. Guidelines on data flows and global data reporting, 5th Meeting of the IAEG-SDGs, 30-31 March 2017, Ottawa.**



To facilitate the implementation of the global indicator framework, all indicators are classified by the IAEG-SDGs into three tiers on the basis of their level of methodological development and the availability of data at the global level, as follows:

- Tier I: Indicator is conceptually clear, has an internationally established methodology and standards are available, and data are regularly produced by countries for at least 50 per cent of countries and of the population in every region where the indicator is relevant;
- Tier II: Indicator is conceptually clear, has an internationally established methodology and standards are available, but data are not regularly produced by countries; and
- Tier III: No internationally established methodology or standards are yet available for the indicator, but methodology/standards are being (or will be) developed or tested.

Tier I and II indicators' metadata (as of July 2017) are available in the metadata repository<sup>3</sup>. Tier III indicators require work plans to be developed outlining the methodological development of the indicators for approval by the IAEG-SDGs and are available as of March 2017. The 2017 Sustainable Development Goals Report (**United Nations, 2017**) was launched at the same time as the Global SDG Indicator Database<sup>4</sup>, including the main findings with regards to SDG 14.

In addition, there are numerous other relevant global assessment reports which include:

- **The Global Environment Outlook (GEO)** global assessments,<sup>5</sup> which provide an integrated analysis (e.g. social, economic, environmental) of major trends that have shaped the environment. Using the integrated environmental assessment (IEA) methodology, UN Environment has produced five GEO reports (as well as of regional GEOs) and GEO 6 is under finalization for 2017, with the regional seas as part of the review process. The regional reports are separated according to the 6 UN Environment regions (Africa, Asia and the Pacific, Latin America and the Caribbean, North America, West Asia and Pan European) and some of the

<sup>3</sup> <https://unstats.un.org/sdgs/iaeg-sdgs/tier-classification/>

<sup>4</sup> <https://unstats.un.org/sdgs/indicators/database/>

<sup>5</sup> <http://www.unep.org/geo/>



regional seas fall within more than one region (i.e. the Mediterranean Sea, it is covered within three regional reports: Africa, West-Asia and Pan-European).

- **The Regular Process for Global Reporting and Assessment of the State of the Marine Environment**, including Socioeconomic Aspects (Regular Process) is a global mechanism established after the 2002 World Summit on Sustainable Development. The first cycle of the Regular Process was completed in 2015 with the publication of the first global integrated marine assessment, the World Ocean Assessment (WOA)<sup>6</sup>. UN Environment, IOC-UNESCO and all relevant regional organizations were engaged in the process, although recommendations were made to strengthen engagement in the second cycle (2017-2020).
- Other assessment reports relevant to SDG 14 include the UNESCO Global Ocean Science Report (**IOC-UNESCO, 2017**) and the FAO 2-18 State of the World Fisheries and aquaculture<sup>7</sup>

There are many SDG data portals and data initiatives that have been developed since 2015, and many more are under development, at the regional level and thematic portals at the global level which include:

- **The SDG National Reporting Initiative**<sup>8</sup>. Launched in October 2017 to support government reporting on the SDGs for data-driven policymaking. This initiative, led by the Centre for Open Data Enterprise (CODE) and funded by the William and Flora Hewlett Foundation, is a two-year effort to facilitate greater information-sharing around SDG reporting by leveraging international, regional, and local learned lessons.
- **The global Partnership for Sustainable development data**<sup>9</sup> - which supports action at the local, national, and global level to ensure the new opportunities of the data revolution are used to achieve the Sustainable Development Goals
- **The Sustainable Development Goals indicators database**.<sup>10</sup> The database contains data on the global Sustainable Development Goal indicators used in the Sustainable Development Goals Report 2017 and includes country-level data as well as regional and global aggregates.
- **IISD data portal on indicators for the Sustainable Development Goals (SDGs)**.<sup>11</sup> which provides visualizations of the indicators that countries are choosing to report on for the SDGs: a bottom-up view of national indicator reporting, based on the top-down indicators selected by the United Nations (UN). The indicator data is compiled, as it becomes available, based on reviews of countries' voluntary reports to the UN High-Level Political Forum

## 1.5 UN Environment and Regional Seas role in SDG follow-up and review.

During the 17<sup>th</sup> Global Meeting for the Regional Seas Conventions and Action Plans (2015), the Regional Seas Conventions and Action plans were encouraged to work in two areas: (i) internalising the SDGs in their strategic documents (Action Plans, thematic action plans, SAPs and national programmes of action) and further implementing these documents through regionally coordinated national action; and (ii) coordinate the national monitoring of the SDGs through the regional monitoring and reporting mechanisms (**UNEP, 2015**).

The regional seas community already began compiling their existing regional seas-based indicators, as summarized in “*Measuring Success: Indicators for Regional Seas Conventions and Action Plans*” in

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<sup>6</sup> <http://www.worldoceanassessment.org/>

<sup>7</sup> <http://www.fao.org/state-of-fisheries-aquaculture>

<sup>8</sup> <http://SDGreporting.org>

<sup>9</sup> <http://www.data4sdgs.org/>

<sup>10</sup> <https://unstats-undesa.opendata.arcgis.com/>

<sup>11</sup> <https://sustainable-development-goals.iisd.org/country-data>



2014 (UNEP, 2014). Further UN Environment organised the Technical Workshop on Selecting Indicators for the State of Regional Seas (30 June – 2 July 2014), which discussed the possibility and feasibility of setting a coordinated and common set of indicators among the regional seas programmes and recommended to establish a Regional Seas Indicator Working Group (UNEP, 2014b). The first meeting of the Regional Seas Working Group met in October 2015 and adopted a core set of 22 indicators related to SDG 14 (UNEP, 2015b), as presented in Annex 3. An initial exercise in gathering information on targets and indicators was undertaken and existing methodologies for the 22 indicators. The Working Group agreed that they would start using the Regional Seas Core Indicators set while incorporating the SDG indicators as the methodologies are further developed.

Regarding the role of regional seas in SDG reporting and implementation, the 18th Global Meeting of the Regional Seas Conventions and Action Plans in 2016 (UNEP, 2016c), agreed to “*prepare outlook documents, proposing how they can support their countries with the implementation, and monitoring of the ocean-related Sustainable Development Goals and associated targets..*” and “*to provide their countries with regional contributions to their national reporting of ocean-related Sustainable Development Goals*”. The discussion regarding assessments and indicators also agreed on a number of relevant conclusions relevant to the SDG’s (Box 1.1):

**Box 1.1 Conclusions of the 18th Global Meeting of the Regional Seas Conventions and Action Plans (Assessments and Indicators)**

- Regional Seas Conventions and Action Plans will work inter alia with the Division for Ocean Affairs and the Law of the Sea, Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, United Nations Environment Programme, and Food and Agricultural Organisation of the United Nations through the Regional Seas coordination office in Nairobi towards utilizing the regional assessments in the Second Cycle of the Regular Process;
- Regional assessments, describing the environmental status, relevant policies, and ongoing activities, prepared by the Regional Seas Conventions and Action Plans should contribute to monitoring the progress towards the Sustainable Development Goals;
- The Regional Seas Indicator Working Group will continue to evaluate and describe the 22 Regional Seas Core Indicators, including aligning them with the Sustainable Development Goal Indicators and Aichi Targets, using the existing resources of the Regional Seas Conventions and Action Plans and United Nations Environment Programme;
- Regional Seas Conventions and Action Plans invited relevant bodies such as Food and Agriculture Organisation of the United Nations and the Secretariat of the Convention on Biological Diversity to continue supporting the development of the Regional Seas Core Indicators set;
- The Regional Seas Conventions and Action Plans will consider applying the three indicators<sup>1</sup> on a pilot basis, as appropriate;
- Regional Seas Conventions and Action Plans invited the United Nations Environment Programme and relevant partners to facilitate capacity building on regional assessments on the state of the marine environment, including socio-economic aspects;
- Regional Seas Conventions and Action Plans invited Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization, and relevant organisations scientific and technical support and related science-based capacity development in translating global SDG indicators into national and regional implementation; and
- Regional Seas Conventions and Action Plans invited the United Nations Environment Programme to disseminate the guideline on Integrated Environmental Assessments

As a result, in 2017, UN Environment published the “Moving to Strategy and Action: Regional Seas Outlook for the implementation of the Sustainable Development Goals” (UNEP, 2017) which suggests that the regional seas programme follow the following steps:

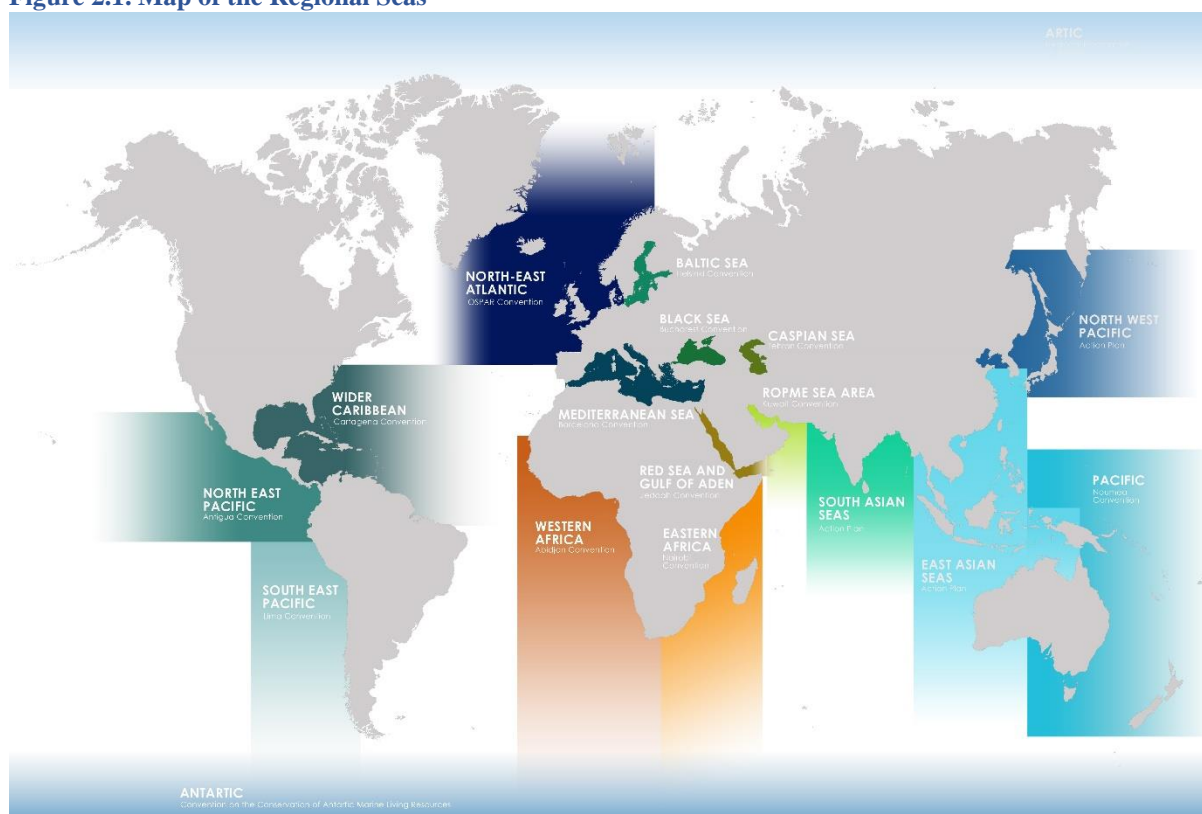
- i. Review and alignment of the regional objectives and targets with SDGs;
- ii. Establishment of current baseline situation;
- iii. Identification of existing and planned programmes and partnerships that contribute to achieving the regional objectives and SDGs; and
- iv. Possible new institutional and financial arrangements for additional effort.

## Chapter 2. Overview of SDG relevant reporting processes and Regional Seas reporting

### 2.1 Introduction to the Regional Seas

In the early 1970s the UNEP Governing Council endorsed a regional cooperation approach to address marine pollution, and in 1974 the UNEP Regional Seas Programme (RSP) was established (UNEP, 2016i). The Regional Seas Programme (RSP) covers 18 regions of the world, making it one of the most globally comprehensive initiatives for the protection of marine and coastal environments (see Figure 2.1). Of these, 7 are administered by UN Environment (Wider Caribbean, Mediterranean, Eastern Africa, East Asian Seas, Northwest Pacific, Western Africa and Caspian Sea) and an additional 7 are administered by other organizations (Black Sea, North-East Pacific, Red Sea and Gulf of Aden, ROPME Sea Area, South Asian Seas, South-East Pacific and Pacific) and 4 are independent regional seas (Antarctic, Arctic, Baltic and North-East Atlantic).<sup>12</sup> Certain Regional Seas have adopted Convention and associated thematic protocols (Annex 2), in addition to overall and thematic strategic documents such as strategies, action plans, monitoring and assessment programmes, and in some regions Strategic Action Programmes (SAPs) supported by GEF funded projects. These documents define the objectives and areas of action for each of the regional seas.

Figure 2.1. Map of the Regional Seas



Whilst the main focus of the regional seas is related to marine and coastal pollution and biodiversity, over the years the regional seas programmes have evolved and increasing address additional issues such

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<sup>12</sup> See <https://www.unenvironment.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/why-does-working-regional-seas-matter>

as the inclusion of socio-economic considerations and sustainable development, climate change, sustainable consumption and production and integrated approaches such as the ecosystem approach, integrated coastal zone management (ICZM), marine spatial planning (MSP), marine protected areas (MPA) and areas beyond national jurisdiction (ABNJ). By introducing the ecosystem approach, the member states and regional seas programmes recognised that the maintenance of the marine ecosystem functioning is related to economic and social benefits.

## 2.2 Overview of Regional Seas strategies, objectives and targets

Each regional sea has a number of key strategic documents and related targets that have been adopted over time by their Contracting Parties (see [Annex 2](#)), including overall Action Plans, SAPs, thematic strategies or plans for land based sources of pollution and marine and coastal biodiversity conservation, and in some cases on pollution from shipping and oil, gas exploration/exploitation marine litter, sustainable development, adaptation to climate change, coastal zone management, marine protected areas, invasive species and others. Specific examples of each are given in [Chapter 3](#).

<b>Regional Seas Conventions, Protocols and Action Plans</b>	The majority of regional seas (in the 1970's to 1990's) have adopted a Convention for the protection of the marine and coastal environment, or an Action Plan, or both (see <a href="#">Annex 2</a> ). The focus of all these conventions is on pollution and the marine environment, which is fully in line with SDG 14. " <i>Conserve and sustainably use the oceans, seas and marine resources for sustainable development</i> ". Certain Regional Seas have adopted thematic protocols according to its priorities (Mediterranean, Caribbean, East Africa, Caspian, ROPME, South-East Pacific). These most typically include protocols regarding pollution from land-based sources, specially protected areas and biodiversity, exploration, exploitation and emergencies (such as oil spills). The regional seas action plans, vary in approach but all outline the mandate, scope, objectives and major lines of action of the regional seas, along with institutional and coordination arrangements.
<b>Strategic Action Programmes (SAPs)</b>	Those regional seas with countries that are eligible for Global Environment Facility (GEF) funding, that is developing countries and countries with economies in transition, <sup>13</sup> have received funding to develop Transboundary Diagnostic Analysis reports (TDAs) to first identify the main causes of environmental degradation and transboundary issues, followed by Strategic Action Programmes (SAPs) to elaborate the objectives, targets and actions required to address this causes. These TDAs and SAPs have been developed at the Large Marine Ecosystem level (see <a href="#">Box 2.1</a> ), rather than for Regional seas, and therefore in some cases more than one SAP applies to a Regional Sea (see <a href="#">Table 2.1</a> ). Whilst a similar approach has been taken for the development of all SAPs that incorporate the ecosystem approach and based on the TDA/SAP Methodology, developed within the IW:Learn project <sup>14</sup> , there are differences in the type of objectives of targets defined, according to the understanding of each regional team responsible for the development of each SAP. Typically, the majority of SAPs include an overarching vision, a series of goals or objectives, followed by targets, indicators and in some cases activities. The GEF have continued their support in the funding of SAP implementation projects (see <a href="#">Table 2.1</a> ), with several of these projects beginning implementation from 2017 onwards. It is expected that during the process of SAP implementation, SAP targets and indicators will be revised and monitored.
<b>Regional Seas Strategies and Work-programmes</b>	In order to elaborate on the implementation of the Regional Seas Conventions and/or Action Plans, each region has developed strategies and/or work-programmes. Each presents the main objectives, actions, and in several cases targets and indicators for the period noted, although formats and presentations differ. The time frame is slightly different between regions countries, varying between 5-10 years, Two of the UNEP administered regions

<sup>13</sup> <https://www.thegef.org/about/funding>

<sup>14</sup> <https://iwlearn.net/manuals/tda-sap-methodology>

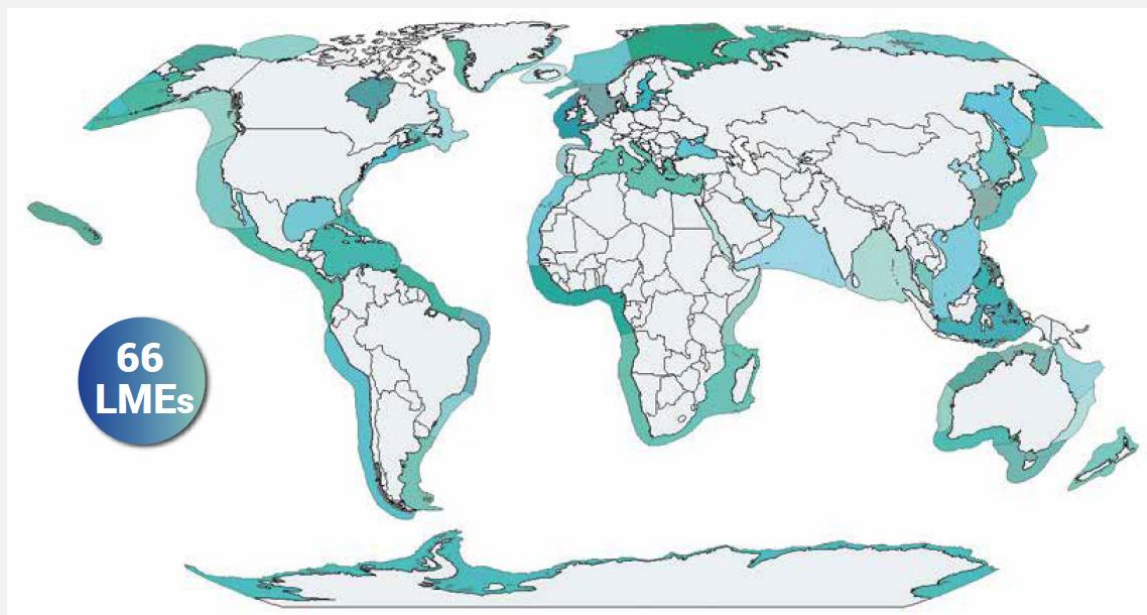
(Mediterranean, East Asian Seas) plus the Baltic region are aligned timewise with the UNEP Medium Term Strategy 2018-2021, to be completed in 2021. This includes:

- Mediterranean: UNEP/MAP Mid-Term Strategy (2016-2021);
- East Asian Seas: COBSEA Strategic Directions (2017 -2021);
- Northwest Pacific: NOWPAP Medium-term Strategy (2018-2023);
- East Africa Region: Nairobi Convention Work-Programme (2018-2022);
- North-East Atlantic: Environment Strategy and thematic strategies (2010-2020);
- Baltic Sea: Baltic Sea Action Plan (2007-2021); and
- Artic: Arctic Marine Strategic Plan (2015-2025).

<b>Ecosystem Approach</b>	Certain regional seas are in the process of integrating the ecosystem approach into their existing strategies, plans and monitoring, in addition to the TDAs and SAPs. The North-East Atlantic (OSPAR), Baltic (HELCOM) and Mediterranean (UNEP/MAP) have developed an approach that is comparable and in line with the requirements of the Marine Strategy Framework Directive (MSFD), further described below. This includes the definition of Ecological Objectives, targets and indicators for monitoring.
<b>Other strategies and action plans</b>	The regional seas have in addition developed several other strategies and/or action in particular thematic strategies on land-based sources of pollution, marine litter, and biodiversity, as well as integrated plans, for example related to Integrated Coastal Zone Management Plans (ICZM), Sustainable Development and sustainable consumption and production.

### Box 2.1 Large Marine Ecosystems and the GEF support

Large Marine Ecosystems (LMEs) are relatively large areas of ocean space of about 200,000 km<sup>2</sup> or more, adjacent to the continents in coastal waters and extending out seaward to the break or slope of the continental shelf or out to the seaward extent of a well-defined current system along coasts lacking continental shelves. The 66 LMEs were identified by the US National Oceanic and Atmospheric Administration (NOAA) to identify areas of the oceans for conservation purposes (<http://www.lme.noaa.gov/>), and the GEF has been the main donor supporting countries to improve the management of their LMEs. In the last 20-25 years, since its creation, GEF has provided direct funding in the order of US\$800 Million to support this ecosystem-based management process globally (including the Ecosystem Approach to Fisheries) through a total of 97 projects, many of them sequential to the TDA-SAP and SAP implementation process. Information on the GEF LME related projects, along with guidance, tools and best-practices can be accessed through the LME-Learn (<http://marine.iwlearn.net/>) and IW-Learn (<https://iwlearn.net/>) project web-sites.



Map of the 66 LMEs, from LME-Learn LMEs and the Sustainable Development Goals brochure



## Regional Seas Monitoring and Assessment Programmes

Several of the regional seas have support countries in the monitoring and reporting of agreed indicators and parameters in order to undertake regional assessments of the state of environment. This includes:

- East Asian Sea: The State of the Coasts (SOC) reporting system
- Northwest Pacific: NOWPAP Ecological Objectives, under development
- Wider Caribbean: Coastal water quality monitoring, linked to the 2018 State of the Convention Area Report
- Mediterranean: Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP); MSSD indicators from global databases analysed by Plan Bleu, Pollution load (NBB and PRTR) online reporting; MEDPOL Pollution database
- Black Sea: Black Sea Integrated Monitoring and Assessment Programme 2017- 2022 (BSIMAP) and the Black Sea Information System (BSIS)
- Antarctic/Southern Ocean: CCAMLR Ecosystem Monitoring Program (CEMP)
- South-East Pacific: Monitoring and impact indicators and data collection program of annual regional oceanographic cruises.
- Baltic Sea: HELCOM Monitoring and Assessment Strategy – 2013 (with updates in 2015, 2016, 2017)
- North-East Atlantic: OSPAR Joint Assessment & Monitoring Programme (JAMP)

Indicators constitute the link between policy and operational objectives and action in management. As such, they are fundamental tools to monitor and evaluate plans, programmes and policies and to inform their adaptations and revisions, and, thus, should be clearly related with the specific issues that triggered each particular planning/management process (UNEP, 2014). This link as part of a management strategy is illustrated below in **Table 2.2**. Whilst all regional seas have developed indicators for various purposes, from monitoring the implementation of their respective conventions and protocols, SAP implementation, state of environment reporting etc., the approach to monitoring and reporting differs in different regions, and therefore limits comparability between regions. In response to this, regional seas began the process to exchange and discuss their work on indicators for reporting in 2014 (UNEP, 2014b) which was complimented by the publication of “Measuring Success: Indicators for the Regional Seas” report (UNEP, 2014). This was followed by the establishment of the Regional Seas Indicator Working Group (UNEP, 2016b) and the development of a core set of 22 regional seas indicators. Work is ongoing to develop common methodologies for these indicators building upon the monitoring programmes in each of the regions (See **Annex 3**). In the meantime, the regional seas conventions and action plans will consider applying the three indicators (Chlorophyll-a, Marine Litter, ICZM) on a pilot basis, as appropriate.

**Table 2.2 Examples of goals, objectives, indicators and targets (UNEP, 2014)**

Strategic goals	To phase out pollution in the marine environment
Ecological objectives	Reduce impacts of contaminants
Operational objectives	Reduce contaminant levels in shellfish species x
Indicators	Concentration of contaminant in shellfish species x
Targets and limits	Concentration of contaminant = a (target) or < b (limit)

The major challenge in the development of indicators, is to ensure that quality controlled and regularly reported data can be provided. For Contracting Parties to report on agreed indicators, clear methodologies are required, and especially for quality status indicators, additional training, capacity building and regular quality assurance training and exercises are needed. Careful review on the capacity needs and costs of implementing indicators is needed so that a step-by step approach is taken. Streamlining national data reporting is a major challenge to ensure common formats and methods with



other national monitoring obligations. Global and regional databases are used by the majority of regional seas, especially when national datasets are limited.

The majority of Regional Seas also prepare regular or occasional State of Environment Reports (see [Annex 2](#)) and thematic assessments and reports. In recent years these are more driven by underlying indicators, and using standard approaches, such as the Driver-Pressure-State-Impact-Response (DPSIR) approach, as outlined in the 2017 Guidelines for conducting Integrated Environmental Assessments ([UNEP, 2017b](#)). In other cases, they are in line with other regional reporting obligations such as the EU Marine Strategy Framework Directive (MSFD), as well as global conventions (CBD, etc.). Some of these reports are predominantly focussed on the current quality status of the marine and coastal environment, in line with the ecosystem approach (Mediterranean, Baltic, North-East Atlantic).

Recently completed reports include:

- Caribbean State of Convention Area Report (SOCAR) Report (2018, *to be published*);
- Pacific State of Environment Report (2017);
- Baltic Sea Second Holistic Assessment of Ecosystem Health in the Baltic Sea (HOLAS II) (2017);
- Mediterranean Quality Status Report (2017);
- Northeast Atlantic Intermediate Assessment (2017);
- West-Indian Ocean State of the Coast Report (2015);
- Red Sea and Gulf of Aden State of Marine Environment Report (2015); and
- Northwest Pacific SOMER (2014).

Several Regional Seas have been supported by the GEF in the preparation of Transboundary Diagnostic Analysis's (TDA's) which identify the core issues, impacts and causes of environment issues of transboundary importance in the marine and coastal environment of their corresponding Large Marine Ecosystems (LME's)<sup>15</sup>. This includes the South China Sea (2000), Baltic Sea (revised 2003), Mediterranean (revised 2005), Black Sea (revised 2007), Yellow Sea (2007), Western Indian Ocean (2009), Gulf of Mexico (revised 2011), Caribbean (2011), Russian Arctic (2011.)<sup>16</sup>. In some cases, the LME's do not always correspond with the Regional Seas, and there has been close coordination with the LME Commissions with the corresponding Regional Seas. Many of these TDA's provided an essential baseline of information, and the identification of indicators, that were further developed in regular assessments. The targets and corresponding indicators agreed in the Strategic Action Programmes (SAPs) have been integrated into Regional Seas' work-plans and strategic documents, and there are strong interlinkages with the SDG 14 and other relevant SDGs.

In addition to these overall assessments, there are hundreds of thematic assessments conducted over the years since the establishment of each of the Regional Seas. This represents an immense source of valuable information to contribute to the SDG's as well as Global Reports, such as GEO, WOA and thematic reports. The main challenge however is the timeframe and structure of each report is generally decided at the Regional Seas level and not always comparable. Further work is needed to ensure a common structure whilst allowing for regional specificities (see [Chapter 3](#)).

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<sup>15</sup> See <http://www.lme.noaa.gov/> for the 64 identified LME's of the World.

<sup>16</sup> UNDP (2017). Large Marine Ecosystems and Sustainable Development: A review of Strategic Management Processes and Goals

## 2.3 Other regional governance and strategies

A review was conducted in 2016 on existing regional oceans governance mechanisms was conducted with specific focus on the regional seas, regional fisheries bodies and Large Marine Ecosystem (LME) mechanisms (UNEP, 2016i). Regional oceans governance mechanisms operate under the global framework for the law of the sea, the foundation of which is the United Nations Convention on the Law of the Sea (UNCLOS) and its two Implementing Agreements (on deep seabed mining and on straddling and highly migratory fish stocks). A new international legally-binding instrument on marine biodiversity in areas beyond national jurisdiction (ABNJ) is currently being discussed under the auspices of the United Nations General Assembly (UNGA) as presented in **Box 2.2**.

### **Box 2.2 Areas Beyond National Jurisdiction (ABNJ).**

In 2004, the United Nations General Assembly (UNGA) created an Ad-Hoc Open-ended Informal Working Group (“BBNJ Working Group”) to engage in discussions on the conservation and sustainable use of marine biodiversity in ABNJ. Since the commencement of discussions in 2006, the focus has mainly been on gaps in the current international framework and whether these necessitate the adoption of a new instrument. In particular, States have discussed the possible adoption of an Implementing Agreement to the United Nations Convention on the Law of the Sea (UNCLOS) on the conservation and sustainable use of marine biodiversity in ABNJ (UNCLOS IA).

The regionalisation of international environmental law has emerged as an important trend in recent decades. In the field of the marine environment, it has taken place through Regional Seas Conventions and Action Plans, with now more than 143 participating countries around the world, as well as RFMOs aimed at ensuring the sustainable management of fish stocks. In addition, other regional initiatives, such as Large Marine Ecosystems (LMEs) projects, have been developed to engage neighbouring countries in protecting and sustainably managing their shared marine environment. Recently, some regional seas frameworks have progressively extended their activities into ABNJ, particularly through the use of area-based management tools, reflecting the interconnection between waters under national jurisdiction and ABNJ. These emerging examples have demonstrated that the protection of ABNJ can be achieved to some extent regionally within the framework of existing agreements. Although there is no “one-size fits all” solution, these approaches could provide guidance and inspiration for other regions.

Five Regional Seas Conventions currently includes Areas Beyond National Jurisdiction (ABNJ) within their geographical coverages : the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention); the Convention on the Conservation of Antarctic Marine Living Resources (CAMLR Convention); the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention); the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (Noumea Convention); and the Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific (Lima Convention). Under two other Regional Seas programmes namely the Abidjan Convention for Cooperation in the Protection, Management and Development of Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region (Abidjan Convention) and the Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean (Nairobi Convention), member States started examining the issues related to marine biodiversity in Areas Beyond National Jurisdictions.

### *UN Environment (2017) Regional Seas programmes covering Areas Beyond National Jurisdictions*

Coordination between regional organizations is increasingly important, especially when taking an ecosystem approach to the marine and coastal environment and the SDGs. At the global level, regional seas need to ensure alignment with key global convention’s targets and indicators, such as the

Convention on Biological Diversity (CBD) with its 20 targets<sup>17</sup>, United Nations Framework Convention on Climate (UNFCCC), Stockholm Convention on Persistent Organic Pollutants (POPs), Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and the Minamata Convention on Mercury etc. At the regional level, close coordination is required with the strategies and work-plans of the Regional Fisheries bodies, as well as IGO's and NGO's working within each region such as UNDP and UNESCO-IOC, WWF, IUCN, Ocean Conservancy, and others. For the future coordination on SDGs cooperation with the UN Regional Commissions may also be increasingly needed. Examples of other regional strategies include Africa Integrated Maritime Strategy 2050 and Agenda 2063 on ecosystem-based management approaches for marine resources in the exclusive economic zones and adjacent waters, and the European Commission Directives, in particular the Marine Strategic Framework Directive (MSFD), adopted in 2008 with the aim to protect more effectively the marine environment across Europe (see [Box 2.5](#))

### **Box 2.3. Marine Strategic Framework Directive**

The Marine Strategic Framework Directive (MSFD) was adopted in 2008 with the aim to protect more effectively the marine environment across Europe. The Commission also produced a set of detailed criteria and methodological standards to help Member States implement the Marine Directive. These were revised in 2017 leading to the new Commission Decision on Good Environmental Status (GES). Annex III of the Directive was also amended in 2017 to better link ecosystem components, anthropogenic pressures and impacts on the marine environment with the MSFD's 11 descriptors and with the new Decision on Good Environmental Status.

The Directive lists four European marine regions – the Baltic Sea, the North-east Atlantic Ocean, the Mediterranean Sea and the Black Sea – located within the geographical boundaries of the existing Regional Sea Conventions. Cooperation between the Member States of one marine region and with neighbouring countries which share the same marine waters, is already taking place through these Regional Sea Conventions (see Figure 2.6). The second six-year cycle of the MSFD begins again in 2018, and countries will provide their indicator assessments online via Reportnet. Efforts have been made and are still ongoing to ensure a single line of reporting by countries to the MSFD and the associated four Regional Seas.

The main goal of the Marine Directive is to achieve Good Environmental Status of EU marine waters by 2020. The Directive defines Good Environmental Status (GES) as:

“The environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive” Article 3

Eleven qualitative descriptors which describe what the environment will look like when GES has been achieved.

1. Biodiversity is maintained
2. Non-indigenous species do not adversely alter the ecosystem
3. The population of commercial fish species is healthy
4. Elements of food webs ensure long-term abundance and reproduction
5. Eutrophication is minimised
6. The sea floor integrity ensures functioning of the ecosystem
7. Permanent alteration of hydrographical conditions does not adversely affect the ecosystem
8. Concentrations of contaminants give no effects
9. Contaminants in seafood are below safe levels
10. Marine litter does not cause harm
11. Introduction of energy (including underwater noise) does not adversely affect the ecosystem

See [http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index\\_en.htm](http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/marine-strategy-framework-directive/index_en.htm)

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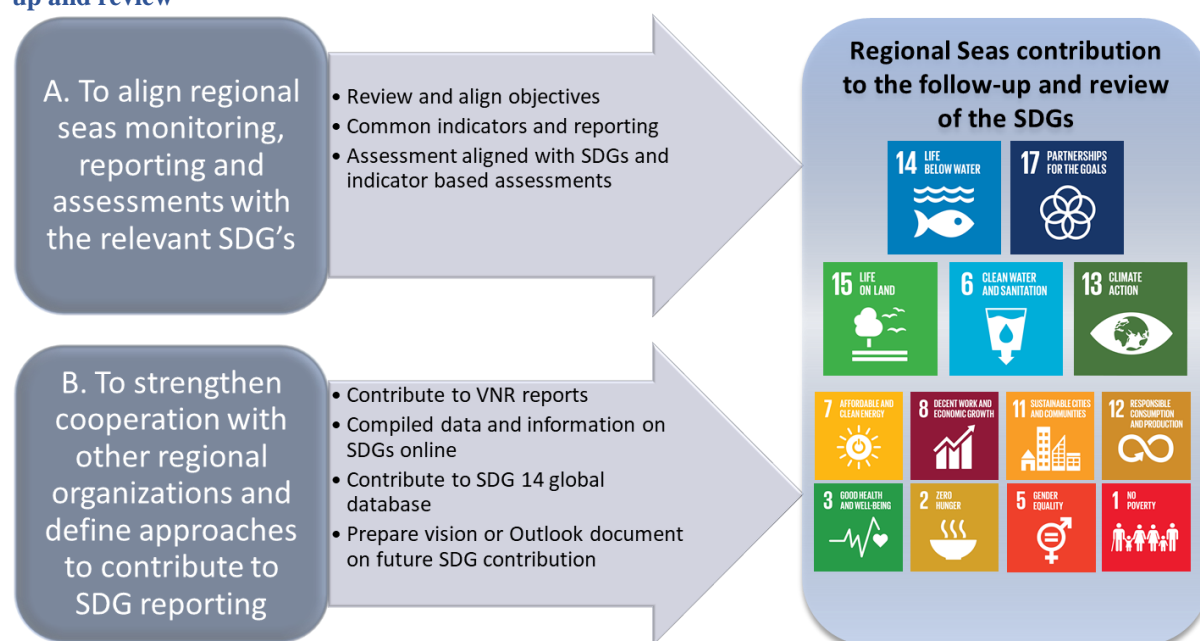
<sup>17</sup> <https://www.cbd.int/sp/targets/>

# Chapter 3. Regional Seas role towards a streamlined approach to SDG reporting, follow-up and review

## 3.1 Introduction

As outlined in **Chapter 1**, the 2030 Agenda stresses the important role of regional organizations and platform in the implementation, follow up and review of the SDG's, and the role of Regional Seas and Action Plans (in cooperation with other organizations such as fisheries management bodies) as detailed during the 2016 UNEA and the 18th Global Meeting of the Regional Seas Conventions and Action Plans. The following chapter will present suggested actions and recommendations how Regional Seas can coordinate and contribute to SDG reporting, follow-up and review. In order to strengthen the contribution of regional seas to SDG reporting, the following two overall objectives and related areas of action can be considered by the regional seas as presented in **Figure 3.1** below.

**Figure 3.1 The objectives and recommended areas of action to enhance regional seas role in SDG follow-up and review**



The regional seas have traditionally addressed the challenges of the marine and coastal environment using an integrated and ecosystem-based approach, and as such many of the SDG targets other than Goal 14 are relevant. The ecosystem related SDG's are at the foundation of the 2030 Agenda, that is Life below Water (Goal 14), Life on Land (Goal 15), Clean Water and Sanitation (Goal 6) and Climate Action (Goal 13). Additional Goals and targets that are relevant to many of the regional seas activities may include renewable energy (Goal 7), support to green jobs and entrepreneurs, and sustainable tourism (Goal 8), environmental sound technologies in industry (Goal 9), urban waste management and ICZM (Goal 11), and overarching the promotion of sustainable consumption and production (Goal 12), ensuring gender equality (Goal 5) and most importantly partnerships (Goal 17).

The following chapter will present each of the areas of action with suggested steps, challenges and possible actions, as well and examples. Further examples are provided in the **Case Studies Supplementary Annex** report.

### 3.2 Objective A. To align regional seas monitoring, reporting and assessments with the relevant SDG's

Whilst there are many common elements between the regional seas, in order to contribute more systematically to SDG reporting, there is a need to align regional seas monitoring, reporting and assessments with the relevant SDG's and also ensuring greater harmonization and comparability between regions through common target setting, indicator development and assessment methodologies. Below summarizes the areas of actions and steps suggested for regional seas to achieve this objective.

AREAS OF ACTIONS	SUGGESTED STEPS
1. Review and align objectives, outputs and targets with the SDGs, in coordination with regional partners and projects including fisheries management bodies;	<ul style="list-style-type: none"> <li>i. Identification and review of existing regional policies and reporting</li> <li>ii. Streamline objectives, outputs and targets in line with the SDG's and other relevant Global and Regional targets</li> </ul>
2. Harmonized indicator development and standardized reporting, including agreements on common indicators, common methodologies for indicator data collection and templates for reporting (in line with SDG's);	<ul style="list-style-type: none"> <li>i. Review, revision and alignment of indicators with relevant SDG targets</li> <li>ii. Ensure a clear, regular and realistic reporting mechanism in place for each indicator</li> <li>iii. Define a data management strategy</li> <li>iv. Step IV. Coordination with other organizations to identify additional sources of data</li> </ul>
3. Common methodologies for indicator-based assessments and use of the existing regional reporting mechanisms for SDG reporting purposes based on agreed targets and indicators that also assesses the progress in implementation of the relevant SDG targets, and can contribute to the Regular Process, WOA and GEO reporting;	<ul style="list-style-type: none"> <li>i. Align methodologies for state of environment and other assessments to report also on relevant SDG targets, including data assessments where appropriate</li> </ul>

#### Area of Action 1: Review and align objectives, outputs and targets with the SDGs

The UN Environment 2017 Regional Seas Outlook for the Implementation of the Sustainable Development Goals, states *“It is proposed that each regional sea programme list up all relevant regional objectives, goals and targets in relation to the relevant SDGs and their associated targets. It is further proposed that the regional seas programme review them from the perspective of how achieving these regional objectives, goals and targets would contribute to the SDGs and associated targets.”*. To achieve this, all relevant objectives and targets of the Regional Seas key strategies/plans should be reviewed in relation to the SDG targets. This would allow identification of the main SDG targets that the regional sea contributes to and represents an opportunity to review existing targets that may need revision and identify gaps where additional targets can be developed (in the future). This final compilation should then be considered by the Contracting Parties of Regional Seas for the possible updating of the corresponding strategies and plans in the future, if appropriate. Since the adoption of Agenda 2030 and the SDG's, several regional seas have already begun this process of review and alignment of SDGs with their strategic documents and work-programmes.

Each of the regional seas have several strategic documents (see [Annex 2](#)) with corresponding objectives and areas of action, and in some cases with corresponding targets and indicators including the following that will be addressed below: Action Plans and Strategies; Strategic Action Programmes (SAPs) supported by the GEF; and Environmental status quality objectives and targets.



## Step I: Identification and Review of Existing Regional Policies and Reporting

**Regional Seas Action Plans, Strategies and Work-programmes.** The majority of Regional Seas have adopted a strategy or work-programme, to elaborate on the priorities and actions to be implemented over a time period, generally between 5-10 years. **Table 3.1** provides examples of some of those strategies and work plans. Whilst there are differences in form, in terms of vision and key themes or objectives there are major similarities. Many include an overall objective or vision which refers to a healthy or resilient marine and coastal environment and sustainable development. In terms of themes or strategic objectives, all refer to pollution and biodiversity, ecosystems and habitats. Several refer to cross cutting issues, from governance, capacity building and information management, climate change and sustainable development. Efforts have been made to align action plans, strategies and associated work-plans with broader global level targets. The UN Environment administered regions refer to the 2018-2021 Medium Term Strategy (**UNEP, 2016g**) and the 2017-2020 Regional Seas Directions (**UNEP, 2016h**). All those developed post Agenda 2030 refer to the SDG targets, and NOWPAP in particular has recently imbedded the SDG targets and indicators within its Medium-term Strategy for 2018-2023 (see **NOWPAP Case Study - Supplementary Annex**).

These strategies are complimented by thematic strategies or action plans which have been adopted by many of the Regional Seas, most commonly related to land-based sources of pollution, marine litter, biodiversity and MPAs but also including climate change, integrated coastal zone management (ICZM) and others, which include specific objectives and actions to be undertaken. Coupled with the overall strategy and Action Plan, these can present a complex array of objectives and actions. A good example is the OSPAR North-East Atlantic Environment Strategy 2010-2020 (OSPAR, 2010) which has incorporated the five thematic strategies within its overall strategy (see **OSPAR Case Study - Supplementary Annex**). Reporting on the implementation of these strategies is typically through progress reports prepared by the Regional Seas Secretariat and through reports by on the countries through their Convention and Protocol reporting and this reporting is often descriptive, rather than based on measurable targets and indicators. Objectives and targets should be aligned as appropriate with SDG targets, and should include indicators to measure progress. These reports are not always easy to find as they part of meeting documents, and therefore they should also be made easily accessible online.

***Challenges and suggested actions.*** The main challenge for many regions is to ensure regular reporting in terms of implementation of their strategies and work-programmes. The following actions can be considered as appropriate:

- a. For those regional seas with multiple overall and thematic strategies and plans to consider a review, streamlining and integration of these objectives and targets into one document, with contributions to the SDG targets (and other key Global Conventions targets);
- b. UNEP administered regional seas to report on the UNEP MTS and RS directions objectives, and to consider a common format for this purpose, so that these reports are comparable;
- c. Presenting all strategies, action plans, work-programs and progress reports clearly together on the regional seas web-site, so they can be easily accessed, possible on a page dedication to SDG reporting;
- d. Establish a Regional Seas working group to share good practices in reporting, and discuss possible common formats that will allow progress to be compared between regions; and
- e. Regional Seas to discuss timeframe of current and future strategies, and whether common timelines can be agreed



**Table 3.1. Example Regional Seas strategies and main priorities**

Strategy/Work-Programme	Time Period	Main themes/objectives
<b>East Asian Seas:</b> COBSEA Strategic Directions ( <a href="#">COBSEA, 2017</a> )	2017-2021 (4 years)	<ol style="list-style-type: none"> <li>1. Sustainable Management of Coastal and Marine Resources;</li> <li>2. Improved Management of Land-based pollution;</li> <li>3. Scaling up Habitat Protection; and Governance</li> </ol>
<b>East Africa Region:</b> Nairobi Convention Work-Programme ( <a href="#">UNEP-Nairobi Convention, 2018</a> )	2018-2022 (4 years)	<ol style="list-style-type: none"> <li>1. Create better understanding and knowledge of the coastal and marine environment</li> <li>2. Effective management, sustainable use and protection of the marine and coastal environment</li> <li>3. Strengthen the coordination structure within the Nairobi Convention for strengthened governance frameworks</li> <li>4. Provide information in an easily accessible and understandable format to assist in the decision-making processes, and to raise awareness</li> </ol>
<b>Mediterranean:</b> UNEP/MAP Mid-Term Strategy ( <a href="#">UNEP/MAP, 2016c</a> )	2016 -2021 (5 years)	<p><u>Core themes:</u></p> <ol style="list-style-type: none"> <li>1. Land and sea-based pollution;</li> <li>2. Biodiversity and ecosystems;</li> <li>3. Land and sea interactions and processes</li> </ol> <p><u>Cross-cutting themes</u></p> <ol style="list-style-type: none"> <li>4. Integrated coastal zone management;</li> <li>5. Sustainable consumption and production; and</li> <li>6. Climate change adaptation</li> </ol>
<b>Northwest Pacific:</b> NOWPAP Medium-term Strategy ( <a href="#">UNEP NOWPAP, 2017b</a> )	2018-2023 (5 years)	<ol style="list-style-type: none"> <li>1. Support integrated coastal and river basin management;</li> <li>2. Assess status of the marine and coastal environment;</li> <li>3. Prevent and reduce land- and sea-based pollution;</li> <li>4. Conserve marine and coastal biodiversity;</li> </ol>
<b>North-East Atlantic:</b> Environment Strategy and thematic strategies ( <a href="#">OSPAR, 2010</a> )	2010-2020 (10 years)	<ol style="list-style-type: none"> <li>1. Halt and prevent by 2020 further loss of biodiversity...</li> <li>2. Combat eutrophication in the OSPAR maritime area...</li> <li>3. Prevent pollution of the OSPAR maritime area by continuously reducing discharges, emissions and losses of hazardous substances.</li> <li>4. Prevent and eliminate pollution and take the necessary measures to protect the OSPAR maritime area against the adverse effects of offshore oil and gas activities...</li> <li>5. Prevent pollution of the OSPAR maritime area from ionising radiation...</li> <li>6. Ensure integrated management of human activities in order to reduce impacts on the marine environment, taking into account the impacts of, and responses to, climate change and ocean acidification;</li> <li>7. Facilitate and coordinate the work of relevant Contracting Parties in achieving good environmental status under the EU Marine Strategy Framework Directive by 2020.</li> </ol>
<b>Arctic:</b> Arctic Marine Strategic Plan ( <a href="#">Arctic Council, 2015</a> )	2015-2025 (10 years)	<ul style="list-style-type: none"> <li>• Improve knowledge of the Arctic marine environment and continue to monitor and assess current and future impacts on Arctic marine ecosystems.</li> <li>• Conserve and protect ecosystem function and marine biodiversity to enhance resilience and the provision of ecosystem services.</li> <li>• Promote safe and sustainable use of the marine environment, taking into account cumulative environmental impacts.</li> <li>• Enhance the economic, social and cultural well-being of Arctic inhabitants, including Arctic indigenous peoples and strengthen their capacity to adapt to changes in the Arctic marine environment.</li> </ul>
<b>Baltic Sea:</b> Baltic Sea Action Plan ( <a href="#">HELCOM, 2007</a> )	2007-2021 (14 years)	<ul style="list-style-type: none"> <li>• Baltic Sea unaffected by eutrophication</li> <li>• Favorable status of Baltic Sea biodiversity</li> <li>• Baltic Sea undisturbed by hazardous substances</li> <li>• Environmentally friendly maritime activities</li> </ul>

**Strategic Action Programmes (SAPs).** In the last 20-25 years, since its creation, GEF has provided direct funding to support this ecosystem-based management process globally (including the Ecosystem Approach to Fisheries) through a total of 97 projects, many of them sequential to the TDA-SAP and SAP implementation process (**Table 3.2**). These SAP's outline the objectives, targets and actions required to address transboundary issues and cause of environmental degradation in the marine and coastal environment of each LME, and therefore their implementation represents an important contribution to SDG 14 targets, amongst others. In 2017, a review of SAP's and their contribution to the SDG's was conducted as part of a report by UNDP and GEF, "*Large Marine Ecosystems and Sustainable Development: A review of Strategic Management Processes and Goals*" (**UNDP, 2017**). The report noted a strong contribution of the SAPs to all SDG 14 targets as well as other SDGs and provided recommendations to improve linkages in the future, including the need to address climate change impacts, establish fisheries yield data, greater emphasize on research and development, and to include BBNJ. Most of the SAPs focus their objectives according to the following three priorities: Pollution and water quality (in particular contributing to SDG 14.1, 6.3 and 6.5); Coastal and marine habitats and ecosystems (contributing to SDG 14.2 and 14.5); and Living Marine Resources (SDG 14.4, 14.6 and 14.7), with the example of the Canary Current LME presented in **Box 3.1**. Additional themes include climate change issues, ocean acidification, sustainable consumption and production amongst others.

**Challenges and suggested actions.** There are several challenges to align and use the SAP's as a contribution to the SDG follow-up and review. Firstly, objectives and in particular targets across SAPs are often not comparable, due to different approaches in defining objectives and targets between regions and even within the same region. Secondly, some of the SAP targets and indicators are not easily measurable and based on SMART criteria. Thirdly, not all SAPs once adopted are followed up in terms of regular SAP implementation reports, although several SAP implementation projects recently began in 2016-2017, and therefore it is still early to report on progress (see **Table 3.2**). Finally, whilst the majority of the SAPs engaged all relevant regional organizations in their development, including the regional seas programmes, their objectives and targets have not been aligned fully into these regional organization's strategies and action plans, and there is an overall need for the alignment of objectives and targets between the SAPs and Regional Seas strategic documents, along with other Regional Organizations such as Fisheries Management bodies. Therefore, the following actions can be considered as appropriate:

- a. Ensure that all new and recently started SAP implementation projects review and revise objectives, targets and indicators to be measurable and aligned with relevant SDGs, in particular in consideration of Regional Seas and other organizations (such as Fisheries management bodies) strategic documents, objectives, targets and indicators, in order to streamline them as appropriate;
- b. Regional Seas, SAP projects and IW-Learn to consider SAP working group for all new SAP implementation projects to exchange and align (as appropriate) objectives and targets between regions;
- c. Ensure SAP targets are integrated in regional seas strategic documents; and
- d. SAP implementation projects to agree on the production of regular SAP implementation reports, during and beyond the lifespan of the projects, based as much as possible on indicators and in cooperation with Regional Seas reporting that can also contribute to regional seas State of Environment and other regional assessment reporting.

**Table 3.2 Strategic Action Programmes (SAPs) for each Regional Sea and current GEF projects**

<b>Regional Sea</b>	<b>Strategic Action Programme(s)</b>	<b>GEF SAP implementation projects</b>
<b>Western and Central Africa</b>	Canary Current SAP (2016) Guinea Current SAP (2008), Benguela Current SAP	Canary Current SAP Implementation Project Document under preparation 2 <sup>nd</sup> SAP implementation project document underway.
<b>Eastern African Region</b>	Land-based Activities for the Western Indian Ocean SAP (2009) Agulhas and Somali Currents SAP (2015)	WIOSAP Project Inception 2017 SAPPHIRE Project Inception 2017
<b>East Asian Sea</b>	Arafura and Timor Seas SAP (2013), South China Sea SAP (revised 2008) Sulu-Celebes SAP (2013),	Implementation of the Arafura and Timor Seas Regional and National Strategic Action Programs approved 2017.
<b>Northwest Pacific</b>	Yellow Sea LME SAP (2009)	
<b>South Asian Seas</b>	Bay of Bengal LME SAP (2015)	GEF project under development.
<b>Red Sea and Gulf of Aden</b>	Red Sea and Gulf of Aden SAP (1998)	No current projects
<b>Wider Caribbean</b>	Caribbean Sea SAP (2013) Gulf of Mexico Large Marine Ecosystems (revised 2015)	Catalyzing Implementation of the SAP for the Caribbean and North Brazil Shelf Large Marine Ecosystems – CMLE+ approved 2015 and under implementation.
<b>Mediterranean</b>	SAP-Med for pollution and SAP-Bio for biodiversity (2003 and 2005)	Mediterranean Sea Programme (MedProgramme), concept approved in 2016. Regional Climate Change Adaptation in the Mediterranean Marine and Coastal Areas, concept approved in 2016.
<b>Black Sea</b>	Black Sea SAP (revised 2007) Caspian Sea SAP (2006)	No current projects
<b>Arctic</b>	Russian Arctic SAP (2009)	No current projects
<b>South-East Pacific</b>	Humboldt Current LME (2016)	SAP implementation Project Concept approved by GEF 2016. Currently awaiting approval for full project document.

**Box 3.1 Example of the 2016 Canary Current LME (CCLME) SAP objectives and targets (FAO, 2015)**

**CCLME SAP three themes and objectives.**

*The CCLME – A healthy ecosystem, sustainably managed, providing services and equitable benefits for human well-being by 2030*

Theme 1: Living marine resources	Theme 2: Habitats	Theme 3: Water quality
<b>Ecosystem quality objective:</b>	<b>Ecosystem quality objective:</b>	<b>Ecosystem quality objective:</b>
Sustainably manage fisheries, restore degraded fish stocks and reduce threats to vulnerable species by 2030	Rehabilitate and/or preserve critical habitats in marine and coastal areas by 2030	Ensure that the water quality of the CCLME is of a high standard and contributing to the good health of the ecosystem by 2030
<b>Specific objectives</b>	<b>Specific objectives</b>	<b>Specific objectives</b>
<ol style="list-style-type: none"> <li>1. Sustainably manage and restore the small pelagic resources.</li> <li>2. Sustainably manage and restore the demersal resources.</li> <li>3. Reduce threats to vulnerable species and mitigate their impacts.</li> </ol>	<ol style="list-style-type: none"> <li>1. Restore and conserve mangroves.</li> <li>2. Sustainably manage and conserve marine and coastal wetlands.</li> <li>3. Reduce the negative impacts of human activities on the seabed and other critical habitats.</li> </ol>	<ol style="list-style-type: none"> <li>1. Mitigate the negative impacts of human activities on coastal processes and sediment dynamics.</li> <li>2. Combat alien invasive species.</li> <li>3. Monitor and control the sources and levels of different types of pollution in the marine and coastal environment.</li> </ol>

**Example of CCLME SAP targets (Theme 1)**

*Sustainably manage fisheries, restore degraded fish stocks and reduce threats to vulnerable species by 2030*

Specific objective 1: Restore the small pelagic resources	Specific objective 2: Sustainably manage and restore the demersal resources	Specific objective 3: Reduce threats to vulnerable species and mitigate their impacts
<b>Targets:</b>	<b>Targets:</b>	<b>Targets:</b>
<ul style="list-style-type: none"> <li>• Maintain the abundance and biomass of all small pelagic stocks at/above ecologically sustainable level by 2030.</li> <li>• Implement the scientific recommendations of CECAF or responsible national institutions.</li> <li>• Minimize catches of juvenile fish across all small pelagic fisheries.</li> </ul>	<ul style="list-style-type: none"> <li>• Rebuild overexploited demersal stocks by 2030.</li> <li>• Implement the scientific recommendations of CECAF or responsible national institutions.</li> <li>• Agree to management measures to maintain fish stocks at acceptable biological levels.</li> <li>• Reduce bycatch and discards (compared to the previous five year period).</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce the catch of vulnerable species, including marine mammals and sea turtles.</li> <li>• Minimize the negative impacts of offshore activities (oil, gas, and mining exploration and production, maritime operations) on marine mammals.</li> </ul>

**Other Strategic target setting: Ecosystem Approach and Sustainable Development.** In addition to the action plans, strategies, thematic plans and SAP, certain regions have developed strategic documents for implementation of the ecosystem approach in accordance with the UN Environment Ecosystem Approach to Regional Seas (UNEP, 2016d). Ecological Objectives, targets and indicators have been developed and the Baltic, Northeast Atlantic and recently the Mediterranean and Black Sea in line with the Marine Strategy Framework Directive (MSFD). The North-West Pacific (NOWPAP) is also in the process of agreeing on the operational criteria and indicators for 5 Ecological Objectives (Biodiversity, Alien Species, Eutrophication, Contaminants and Marine Litter) recently discussed at the Fourteenth NOWPAP POMRAC Focal Points Meeting in August 2017 (UNEP NOWPAP, 2017). These ecological objectives, targets and indicators correspond directly with several SDG targets, in particular 14.1, 14.2 and 14.5, as well as indirectly contributing to 15.5, 15.8, 6.3 and others (see UNEP/MAP, OSPAR and NOWPAP Case Study - Supplementary Annex).

The two main examples of regional sustainable strategies development are in the Mediterranean (UNEP/MAP 2016b) and East Asian Seas (PEMSEA, 2015), and in both cases recent work has been undertaken to align these strategies closely with the SDGs. In the case of the Mediterranean, 6 over objectives, with 26 indicators contribute in particular to SDG 4 (quality education), 6 (clean water and sanitation), 8 (decent work and economic growth), 11 (sustainable cities), 12 (consumption and production), 13 (climate action), 14 (oceans) and 15 (life on land). The Sustainable Development Strategy for the Seas of East Asia (SDS-SEA), is now in the process of developing a new 5-year SDS-SEA implementation plan for the years 2017-2022 with the three priorities: Climate Change Adaptation and Disaster Risk Reduction and Management (SDG 13), Marine Biodiversity Management and Pollution Reduction and Waste Management (SDG 6, 11 and 14).<sup>18</sup>

**Challenges and suggested actions.** There is a high degree of comparability between regions in terms of ecological objectives, and also strong links to SDG targets, in particular 14.1, 14.2, 14.5. The main challenge for each region is to ensure each country reports regular quality-controlled data and the resources and capacity required at the national and regional level to manage this data for reporting and assessment purposes. Several regions have been developing assessment criteria, background assessment criteria (BACs) and environmental assessment criteria (EAC) which represent the concentration in the environment below which no chronic effects are expected to occur in marine species, including the most sensitive species. These values differ per sub-region, and also there are complex issues regarding the calculations of these values. However, such criteria can provide a valuable reference to assess the status of the marine environment and define “Good” and “Bad” status per indicator. Therefore, the following actions can be considered as appropriate:

- a. Regional Seas Indicator working group to compile good practices in setting Ecosystem Approach Ecological Objectives and targets as well as the development assessment criteria;
- b. Ensure there is full alignment between SAP and Ecosystem Approach ecological objectives (for those regions which have developed both); and
- c. Make available sustainable development strategies and in particular any reports that contribute to the SDGs.

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<sup>18</sup> <http://pemsea.org/publications/brochures-and-infographics/brochures/how-does-pemsea-contribute-sdgs>



## Step II: Streamline objectives, outputs and targets in line with the SDG's and other relevant Global and Regional targets

Overall, Regional Seas' have ensured their key targets are aligned with those of key Global Conventions, such as the Aichi Biodiversity Targets, Basel, Stockholm and Minamata Conventions, UN Environment Assembly resolutions, as well as the targets of Regional Fisheries Commissions. However, between the action plans, strategies and work-programmes, SAPs, thematic strategies or plans, there is the need for the occasional review and streamlining of objectives, targets, indicators and reporting mechanisms. Evaluations of the Regional seas experience highlight significant achievements, but also place emphasis on differences between regional arrangements and variations resulting from intrinsic limitations reflecting fragmented international governance. The differing levels of implementation of individual regional Action Plans (reflecting variation in governance arrangements, funding, activity and influence) have so far not been systematically centrally monitored to indicate the level of achievement of the implementation of Action Plans in different regions. Thus, there is a need for enhanced result-based monitoring and evaluation of policies, programmes and projects based on measurable indicators of success (UNEP, 2014).

**Challenges and suggested actions.** There are a number of overall challenges to using the strategic objectives and targets of the regional seas for the purposes of SDG reporting. Firstly, different approaches have been taken in the development of strategies, and the categories of objectives and targets. Some include, goals, others different types of objectives (ecological, operational, specific etc), some include outcomes and outputs, others target (and indicators). In several cases outputs and targets are included that are not measurable. Secondly, regular and systematic reporting mechanisms at the national and regional level are not in place for all these strategic documents, and reporting is often descriptive rather than quantitative. Also, it should be noted that some strategic documents have been developed with a specific time-frame, and others have objectives and targets but without mentioning the timeline expected to achieve this. Therefore, the following actions can be considered as appropriate:

- a. Regional seas to compile their existing objectives and targets and reporting (from strategies, work programmes, SAPs etc.) into a common format in relation to the SDG targets, specifically related to SDG 14 but which may also include several other SDG targets (see [Annex 1](#)). The compiled list of objectives, targets and indicators for the Regional Sea would be available in a format similar to [Table 3.3](#), with further information on the indicator data sources, methodology reporting etc. [Annex 4](#) presents an example of a partially completed mapping of targets for SDG 14. This mapping exercise would have a number of benefits and uses: (i) It would present clearly the relationship between SDG targets and existing Regional Seas objectives, targets and indicators, and how existing reporting can be used to contribute to SDG target reporting within the region; (ii) It would facilitate a review process of all objectives, targets, indicators and reporting mechanisms, for a future revision and identification of key targets and indicators to be included in future updated strategies, work-programmes and Convention reporting; and (iii) It would enable comparison between each of the regional Seas to identify common objectives, targets and indicators to contribute to global reporting.
- b. Plan a revision of strategic objectives and targets (if required) to ensure clear and measurable targets, and integration of SDG and other relevant global and regional targets (see [Table 3.4](#)). This should include coordination between Regional Seas, to identify a set of comparable targets between Regional Seas, and approach (with objectives, outputs, targets and indicators clearly defined).
- c. Consider a common approach to future strategies and action plans, with similar time frames and structure.



**Table 3.3 Example structure of the streamlined Regional Seas objectives, targets and indicators (see also Annex 4)**

SDG Target	Regional Strategic and/or Ecological Objective	Sea and/or Operational Objective	Regional Sea Objective	Regional Sea Target	Indicators	Strategic document	Monitoring/Reporting mechanism (and timeline of reports)
SDG 14.1 etc							

**Table 3.4 Expected synergies between some key MEAs and SDG 14 targets (from OECD, 2017b)**

MEAs	SDG 14 targets
Convention on Biological Diversity	14.1 14.2 14.3 14.4 14.5 14.6 14.7 14.a 14.b 14.c
Convention on Wetlands	14.1 14.2 14.3 14.5 14.7 14.b 14.c
Convention on the Conservation of Migratory Species of Wild Animals	14.2 14.4 14.5
United Nations Framework Convention on Climate Change	14.2
Regional Seas Conventions and Action Plans	14.1 14.2 14.3 14.5 14.7 14.a 14.b 14.c
Chemicals conventions (Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, Stockholm Convention on Persistent Organic Pollutants and others)	14.1
Convention on International Trade in Endangered Species of Wild Flora and Fauna	14.2 14.4

## **Area of Action 2: Harmonized indicator development and standardized reporting, in line with SDG's.**

Each region has indicator frameworks linked to specific strategic documents and monitoring programmes as summarized in [Annex 2](#). Within the regional seas there are two main purposes of indicators: 1) To assess the achievement of the defined and agreed management targets such as the Conventions, Protocols and regional seas action plans, thematic strategies, GEF SAPs, projects etc.; and 2) To assess and monitor the state of the marine and coastal environment and assess trends and changes over time. Regarding state of environment indicators, these can be categorized according to the DSPIR framework (example in [Table 3.5](#)) as follows:

- **Drivers** (human activities). i.e. population numbers and increase, industrial/agricultural production, export/import values, Gross Domestic Product (GDP) etc.;
- **Pressure indicators** (emissions, fish captures), i.e. pollutant emissions, oil spills, fishing effort etc;
- **State indicators** i.e. pollutant and nutrient concentrations, species abundance etc.; and
- **Response** (policy, conventions, regulations), such adoption and implementation of legal reforms, establishment of marine protected areas, coastal zone management, implementation of SCP, mobilization of resources and investments, disposal of hazardous wastes etc.

In addition to indicators, indices may be included which are a combination of indicators or parameters, for example TRI, GDP, Ecological Footprint, Human Development Index. It should be noted that a combination of state, pressures and response indicators per objective or target will enable a more thorough and quantifiable assessment of the relationship between human pressures, state of environment and effectiveness of responses (i.e. activities implemented at the national and regional level) in future assessments.

**Table 3.5 Illustrative matrix of environmental indicators (from UNEP, 2014)**

Issues	Pressure	State	Response
Climate Change	GHG emissions	Concentrations	Energy intensity; environmental measures
Eutrophication	(N, P, water, soil) emissions	(N, P, BOD) concentrations	Treatment connections; investments/costs
Acidification	(SO <sub>x</sub> , NO <sub>x</sub> , NH <sub>3</sub> ) emissions	Deposition; concentrations	Investments; signed agreements
Toxic contamination	(POC, heavy metal) emissions	(POC, heavy metal) concentrations	Recovery hazardous waste; investments/costs
Biodiversity	Human uses esp. fishing	Species abundance compared to pristine area	Protected areas
Fish resources	Fishing effort	Sustainable stock levels	Quotas
Oceans/Coastal Zones	Emissions, oil spills, depositions	Water quality	Coastal zone management; ocean zoning

### Step I: Review, revision and alignment of indicators with relevant SDG targets

Following the template and example mapping of objectives and targets in **Table 3.3** and **Annex 4**, all existing indicators can be compiled for each target and aligned with the corresponding SDG targets. Future revisions of indicators should consider the integration of SDG and Regional Seas indicators (summarized in **Table 3.6**), considering also good examples such as:

- from other regional seas (see example of HELCOM in **Box 3.2**),
- TWAP (see **Box 3.3**);
- NOAA indicators and data;
- FAO and Fisheries bodies, data and statistics.
- OECD indicators and data<sup>19</sup> (**OECD, 2017b**);
- EU SDG and European Environment Agency (EEA) indicators<sup>20</sup> and
- Regarding water related indicators, UN Environment DHI center for water and environment has recently developed a water indicator toolkit<sup>21</sup> with climate, water quantity and quality, ecosystems and governance related indicators.

<sup>19</sup> <https://data.oecd.org/>

<sup>20</sup> [https://www.eea.europa.eu/data-and-maps/indicators#c0=10&c5=&b\\_start=0,https://ec.europa.eu/eurostat/web/sdi/overview](https://www.eea.europa.eu/data-and-maps/indicators#c0=10&c5=&b_start=0,https://ec.europa.eu/eurostat/web/sdi/overview)

<sup>21</sup> <http://www.waterindicatorbuilder.com/indicators>

### Box 3.2 Example of HELCOM Core Indicators

HELCOM Contracting Parties have been jointly monitoring the state of the Baltic Sea for decades, and in 2013 agreed on the HELCOM Monitoring and Assessment Strategy, with core indicators as a major component of this approach. The extensive data gathered is quality assured and used to show how the marine environment has changed over time, as well as assessing status against regionally agreed threshold values. HELCOM monitors trends in the marine environment and how the environment responds to management actions. The trends are followed under the four thematic sections, as defined in the Baltic Sea Action Plan: Biodiversity, Eutrophication, Hazardous substances and Maritime activities. HELCOM regularly produces a Pollution Load Compilation (PLC), which assesses the data collected by the Contracting Parties related to total air and waterborne inputs of nutrients, and some hazardous substances, to the Baltic Sea. Commonly agreed indicators are regularly updated to periodically produce thematic, integrated and holistic assessments, as well as detailed indicator reports.

See: <http://www.helcom.fi/baltic-sea-trends> and <http://stateofthebalticsea.helcom.fi/>.

## HELCOM indicators

### Birds



- Abundance of waterbirds in the breeding season.
- Abundance of waterbirds in the wintering season.
- Number of drowned mammals and waterbirds in fishing gear.\*

### Marine mammals



- Population trends and abundance of seals.
- Nutritional status of seals.
- Reproductive status of seals.
- Distribution of Baltic seals.
- Number of drowned mammals and waterbirds in fishing gear.

### Fish



- Abundance of key coastal fish species.
- Abundance of coastal fish key functional groups.
- Abundance of sea trout spawners and parr.
- Abundance of salmon spawners and smolt.

### Benthic habitats



- State of the soft bottom macrofauna community.
- Oxygen debt.

### Pelagic habitats



- Zooplankton mean size and total stock.
- Chlorophyll-a.
- Cyanobacterial bloom index.\*
- Diatom/Dinoflagellate index.\*
- Seasonal succession of dominating phytoplankton groups.\*

### Commercial fish



- Spawning stock biomass (cod, dab, sole, herring, sprat).\*\*\*\*
- Fishing mortality (cod, dab, sole, herring, sprat).\*\*\*\*

### Eutrophication



- Dissolved inorganic nitrogen.
- Dissolved inorganic phosphorus.
- Total nitrogen.
- Total phosphorus.
- Chlorophyll-a.
- Cyanobacterial bloom index.\*
- Oxygen debt.
- State of the soft-bottom macrofauna community.
- Coastal water indicators (national).

### Non-indigenous species



- Trends in arrival of new non-indigenous species.

### Marine litter



- Beach litter.
- Litter on the seafloor.
- Microlitter in the water column.

### Contaminants



- HBCDD.
- Metals (Mercury, Lead, Cadmium).
- PBDEs.
- PFOS.
- PAHs and their metabolites.
- PCBs, dioxins and furans.
- TBT and imposex.\*
- Radioactive substances.
- White tailed sea eagle productivity.
- Reproductive disorders: malformed embryos of amphipods.\*\*\*
- Diclofenac.\*

### Pressures



- Input of nutrients to the subbasins.
- Number of drowned mammals and waterbirds in fishing gear.
- Operational oil-spills from ships.

### Energy and noise



- Continuous low frequency anthropogenic sound.
- Distribution in time and space of loud low-frequency and mid-frequency impulsive sound.

### Seafloor integrity



- Cumulative impacts on benthic biotopes.\*\*

#### Additional information

Indicator development within HELCOM is an ongoing process and those indicators listed above represent the more developed members of the HELCOM indicator catalogue. For example, there is ongoing work to develop indicators for harbour porpoise, condition of benthic habitats, and other emerging contaminants. In addition, some of the indicators listed above have differing levels of development, as shown in the following key. Key: \* currently being tested and may require further development, and \*\* remains under development. Other indicators are used by selected countries (\*\*\*) or based on data from ICES (\*\*\*\*).

**Table 3.6 Regional Seas indicators for SDG targets 14.1, 14.2 and 14.5. In bold are the indicators agreed to be initially tested.**

SDG Target	SDG Indicator	Regional Sea Indicator
14.1 Marine Pollution	14.1.1 Index of coastal eutrophication and floating plastic debris density	<p><b>1. Chlorophyll a concentration as an indicator of phytoplankton biomass</b>                  2. Trends for selected priority chemicals including POPs and heavy metals  <b>3. Quantification and classification of beach litter items</b>                  9. Locations and frequency of algal blooms reported                  10. Pollution hotspots (i) Concentration of Status of selected pollutant contamination in biota and sediments and temporal trends; (ii) Number of hotspots                  16. % National action plans ratified / operational                  17. Waste Water (i) % coastal urban population connected to sewage facilities and (ii) % of waste water facilities complying with adequate standards; (iii) % of untreated waste water                  18. Marine Litter incentives (i) % port waste reception facilities available, (ii) Incentives to reduce land-based sources, (iii) Amount of recycled waste on land (%)</p>
14.2 Manage and protect marine and coastal ecosystems	14.2.1 Proportion of national exclusive economic zones managed using ecosystem-based approaches	<p>8. Length of coastal modification and km2 of coastal reclamation  <b>22. National ICZM guidelines and enabling legislation adopted</b></p>
14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels	14.3.1 Average marine acidity (pH) measured at agreed suite of representative sampling stations	<p>4. Annual mean sea surface temperature (25m below the surface)                  11. Ocean Acidification: 1) Aragonite saturation; 2) pH; 3) Alkalinity</p>
14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices.	14.4.1 Proportion of fish stocks within biologically sustainable levels	<p>5. Fish catches within EEZs (tonnes) – total capture production                  6. Application of risk assessment to account for pollution and biodiversity impacts (on Aquaculture).                  7. Destruction of habitat due to aquaculture                  12. FAO stock status: % stocks overfished compared to MSY                  20. Fisheries measures in place (by-catch limits, area-based closures, recovery plans, capacity reduction measures) and multilateral/bilateral fisheries management arrangements</p>
14.5 Conserve at least 10 per cent of coastal and marine areas.	14.5.1 Coverage of protected areas in relation to marine areas	<p>13. Marine trophic index                  14. Distribution of Red List Index species                  15. Trends in critical habitat extent and condition                  21. % Marine protected areas designated</p>
13.2 Integrate climate change measured into national policies, strategies and planning	13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change....	<p>19. Climate change adaptation: 1) % national adaptation plans in place; 2) Sector based national adaptation plans; 3) Number of existing national and local coastal and marine plans incorporating climate change adaptation</p>

### Box 3.3 TWAP indicators and indices by LME module

Recognizing the value of transboundary water systems and the fact that many of them continue to be degraded and managed in fragmented ways, the indicator-based Global Environment Facility Transboundary Waters Assessment Programme (GEF TWAP) was developed. The Programme aims to provide a baseline assessment to identify and evaluate changes in these water systems caused by human activities and natural processes, and the consequences such have on dependent human populations. The final reports on status and trends are for transboundary water system categories (groundwater, lakes/reservoirs, rivers, large marine ecosystems); and a thematic evaluation of the open ocean. Below are the core indicators for large marine ecosystems (IOC-UNESCO and UNEP, 2016)

Module	Indicators
Socio-economics	<ul style="list-style-type: none"> <li>Coastal population and area of country segment within 100 km coastal zone</li> <li>Coastal population by elevation up to 10 m and by distance from shore up to 50 km</li> <li>Coastal poor</li> <li>Fisheries revenues</li> <li>Fish contribution to animal protein consumption</li> <li>Tourism revenues</li> <li>Tourism contribution to GDP</li> <li>Night Light Development Index</li> <li>Human Development Index</li> <li>Projected Human Development Index 2100</li> <li>Present-day Climate-related Extreme Events Index</li> <li>Sea-level Rise Threat Index 2100</li> <li>Contemporary Threat Index (includes measures of ecosystem state, socio-economic dependence, climate event risk, and capacity to adapt)</li> </ul>
Governance	<p>Governance arrangements or architecture related to fisheries, pollution, and biodiversity (including habitat destruction):</p> <ul style="list-style-type: none"> <li>Completeness of the structure of arrangements to address a given issue or issues</li> <li>Integration of institutions involved in addressing identified transboundary issues</li> <li>Engagement of countries participating in arrangements</li> </ul>
Productivity	<ul style="list-style-type: none"> <li>Average annual primary productivity, 1998–2013</li> <li>Chlorophyll <i>a</i> concentrations and trends, 2003–2013</li> <li>Sea surface temperature trends, 1957–2012</li> </ul>
Fish and Fisheries	<ul style="list-style-type: none"> <li>Ratio of capacity-enhancing subsidies to value of landed catch</li> <li>Primary production required (ecological footprint of fisheries)</li> <li>Marine Trophic Index</li> <li>Fishing-in-Balance Index</li> <li>Stock status by number of stocks and catch biomass of exploited stocks</li> <li>Catch from bottom-impacting gear types</li> <li>Fishing effort</li> <li>Change in catch potential under global climate change (2050s)<sup>1,2</sup></li> <li>Fishery production potential</li> </ul>
Pollution and Ecosystem Health	<ul style="list-style-type: none"> <li>Relative abundance of floating micro- and macro-plastics<sup>1</sup></li> <li>Concentrations of three types of persistent organic pollutants (POPs) in plastic resin pellets washed up on shore</li> <li>Indicator of coastal eutrophication based on two sub-indicators: nitrogen input from rivers and nutrient ratios<sup>1,2</sup></li> <li>Extent of mangroves</li> <li>Reefs at Risk Index<sup>2</sup></li> <li>Extent of warm-water coral reefs</li> <li>Changes in the areas protected in LMEs between 1983 and 2014</li> <li>Cumulative Human Impacts Index – CHI (incorporating data layers for ocean acidification and sea-level rise, commercial and artisanal fishing, land-based pollution, oil rigs, light pollution, invasive species, commercial shipping, and direct human impact on sensitive ecosystems)</li> <li>Ocean Health Index (measuring progress on ten widely-agreed public goals for healthy oceans, including food provision, carbon storage, coastal livelihoods and economies, and biodiversity)</li> </ul>

<sup>1</sup>Where empirical time series data were unavailable, modelling approaches were used.

<sup>2</sup>Projections to 2030 and 2050 were carried out.

See <http://geftwap.org/publications/lmes-technical-report>



**Challenges and suggested actions.** There are several issues noted in the review of Regional Seas indicators, in particular older indicator sets and SAP indicators. Firstly, is that not all are in line with SMART criteria (i.e. Specific Measurable, Achievable, Relevant, Time-bound), making it difficult to be reported in a quantifiable manner. Also, there is not always a clear understanding on the different types of indicators such as the mixing of management type indicators (term “progress” indicators in the SAPs) with pressure and state indicators. There are however many good examples of indicators developed with the regional seas associated with state of environment and ecosystem approach reporting in recent years that should be reviewed and common indicators identified. Therefore, the following actions can be considered as appropriate:

- a. Each regional sea to map all regional indicators in line with the relevant SDG’s, and compiled list of all indicators to be shared between regions with the view to identify common and overlapping indicators;
- b. Review and revise if required indicator frameworks (if outdated or not according to SMART criteria), and identify gaps, whilst considering the integration of SDG and Regional Seas indicators and other relevant regional and global indicator frameworks;
- c. Regional Seas Working Group on indicators to review and identify common indicators to be reported by all Regional Seas, in addition to the 22 Regional Seas indicators.

## **Step II: Ensure a clear, regular and realistic reporting mechanism in place for each indicator**

Each indicator should have clear methods and guidance, to ensure it is monitored in a consistent and comparable manner between countries. Monitoring quality status/state of environment indicators require standard methodologies, common parameters, spatial and temporal aspects need to be agreed by all countries. Especially complex are issues related to timing, frequency and locations of sampling. For each indicator, the data/information sources may be different. There are several types of data/information sources which include:

- **National reporting process within the Convention/Action Plan (and other agreed strategic documents).** The majority of Regional Seas have in place regular reporting from Contracting Parties in relation to the obligations of the respective Convention and Protocols.
- **National reporting of data to the monitoring programs.** A number of the Regional Seas compile data provided from the countries on the status of the environment, water quality, status of biodiversity etc. It should be noted that few have long term data due to challenges in ensuring regular high-quality data from countries, many of which require additional support in terms of finance, capacity and training.
- **Data provided through other national and regional databases, initiatives and projects.** There may be environment, water and climate change data that is not reported to Regional Seas as part of national monitoring from national institutions or national/regional initiatives and projects. These can be identified and steps undertake to develop data exchange agreements or agreements that those institutions to contribute directly to the indicator reporting.
- **Regional/Global databases.** Many regions utilize existing global and regional databases, including socio-economic data, satellite data and maps, to complement existing data gaps, which is publicly available.

UN Environment is also currently preparing a manual of regional seas 22 indicators, and future guidance will be developed regarding the development of monitoring programmes and will therefore not be addressed in detail in this report. In addition, guidance/methodology for the monitoring of the indicator, data reporting templates and assessment report template, many good examples exist developed by EEA and as part of the MSFD implementation, as well as by some of the Regional Seas. Regarding reporting templates, there are many good examples of indicator reporting and assessment templates. Indicator assessment templates have been used for the OSPAR and Mediterranean assessments (see [Annex 5](#)). The SDG Reporting initiative web-site has dedicated resources on SDG reporting and data management<sup>22</sup> including the example of the UNECE Self-assessment template for countries on availability of global SDG indicators (see [Box 3.4](#)). In addition, UN Environment has initiated work with experts and the regional seas on the SDG pollution indicators, with the first “*Experts workshop on marine pollution indicators under SDG target 14.1*” held in September 2018, Paris.<sup>23</sup>

### Box 3.4 UNECE Self-assessment template for countries on availability of global SDG indicators

Below is an extract of the UNECE Self-assessment template for countries on availability of global SDG indicators (<https://www.sdgreporting.org/topic/assessment/#top>)

Part	Name	Columns			How to fill it in?	
		Question	Columns			
1	Information on the indicator <i>(note that some of these columns are hidden to facilitate filling in the sheet)</i>	-	A	Goal	Pre-filled	
			B	Target	Pre-filled	
			C	Indicator code	Pre-filled	
			D	Indicator	Pre-filled	
			E	Observations on indicator (duplicate, non-statistical, etc)	Pre-filled	
			E	Custodian agencies	Pre-filled	
			G	IAEG-SDGs Tier classification	Pre-filled	
			H	Name of data producer	Write the name of your office if the indicator is in your area of expertise	
			I	Related institutions/organisations	Fill in	
2	Data availability	1	J	Data availability	Select option (drop down list)	
3	If the indicator is AVAILABLE	2	L	Frequency	Select option (drop down list)	
		3	M/N	Time coverage	Fill in	
		4	O	Data source	Select option (drop down list)	
		5	P	Data disaggregation available	Select YES/NO option (drop down list)	
			Q-W	Types of data disaggregation	Select YES/NO option (drop down list)	
		X	Types of data disaggregation (others)	Fill in		
		6	Y	Website link or publication reference	Fill in	
		7	Z	Transmission of indicator to International Organization	Select YES/NO option (drop down list)	
			AA	Which international organization?	Fill in	
		8	AB	Contact person for this indicator at NSO	Fill in	
4	If the indicator is NOT AVAILABLE	9	AC	Availability at short term (global SDG indicator)	Select YES/NO option (drop down list)	
			AD	Availability at short term (proxy indicator)	Select YES/NO option (drop down list)	
5	Complementary information	11	AE	Why indicator is not available	Select option (drop down list)	
			AF	Relevance of indicator	Select option (drop down list)	
			12	AG	Is the indicator produced out of statistical system?	Select option (drop down list)
				AI	Name of data producer	Fill in
			13	AJ	Extra comments	Fill in

<sup>22</sup> <https://www.sdgreporting.org/topic/assessment/#top>

<sup>23</sup> <http://www.nutrientchallenge.org/sites/default/files/Agenda.pdf>

**Challenges and suggested actions.** Regarding monitoring, only few of the regions have the capacity to develop and implement a coordinated monitoring programme with comparable data reported by the countries. For regions with limited data, and capacity to establish in-depth monitoring programmes, data can be used from other organizations databases and initiatives. Agreements can be established for joint reporting and collaborations for future assessments. Considering the limited data available in many regions, consideration should also be given to innovative approaches for SDG 14 data collection, including drones, automated monitoring, satellite data, civil society monitoring programmes etc. Therefore, the following actions can be considered as appropriate:

- a. Ensure an exchange between regions on current indicator methodologies, to be compiled and available online;
- b. Finalization of the work underway on the manual for the 22 Regional Seas indicators, reviewed and discussed by regional seas;
- c. Regional Seas to review existing templates for indicator reporting based on good examples (i.e. EEA and UNECE templates) and agree on common assessment template for reporting purposes for the common indicators between regions (the 22 Regional Seas indicators, and any others identified);
- d. Identify key gaps in capacity and data in order to report on the 22 Regional Seas indicators, and establish an exchange on best-practices, including cooperation with regional scientific bodies and institutions and other partners; and
- e. Exchange on best practices and experiences regarding the inclusion of innovative approaches for SDG 14 data collection, and identify options for possible future implementation in conjunction with relevant scientific partners.

### Step III: Define a data management strategy

A number of regional databases and clearing house web-sites have been developed in recent years (see **Annex 2**). Geographic Information Systems (GIS) are common for most regions and includes information on maritime traffic, MPAs and biodiversity, coastal zones, pollution etc. Monitoring databases exist for some of the Regional Seas for example the Baltic and North Atlantic (see **Box 3.5** and **Case Studies Supplementary Annex**) but for many regions work is still under development. Some regions have developed a number of GIS, databases and clearing house mechanisms, for example:

- The Caribbean has a Maritime traffic GIS (<http://www.caribbeanmaritimetraffic.org/>) and a MPA database (<http://campam.gcfi.org/CaribbeanMPA/CaribbeanMPA.php>);
- The Mediterranean has an overall information system, InfoMAP (<http://www.geo.info-rac.org/>) still under development and several existing GIS and several thematic sites for Climate change and ICZM (<http://climvar.grid.unep.ch/>), coastal aquifers<sup>24</sup>, Marine Pollution Risk Assessment and Response (<http://medgismar.rempec.org/>), and MPA's (<http://medgis.medchm.net/>), which will need integration into the new system and regular updating.
- ROPME ([http://ropme.org/23\\_RIIS\\_EN.clx](http://ropme.org/23_RIIS_EN.clx)), the Baltic (<http://www.helcom.fi/baltic-sea-trends/data-maps/>) and North-East Atlantic (<https://odims.ospar.org/>) have integrated information systems in place, which for the latter two are publicly available with maps, meta data, data and assessments.

The issue of data management is quite complex. A clear step-by-step strategy for the data flow is required, including quality control, and integration into an overall database. It is also critical to coordinate with other national reporting obligations in order to move towards a streamlined, one-fits-

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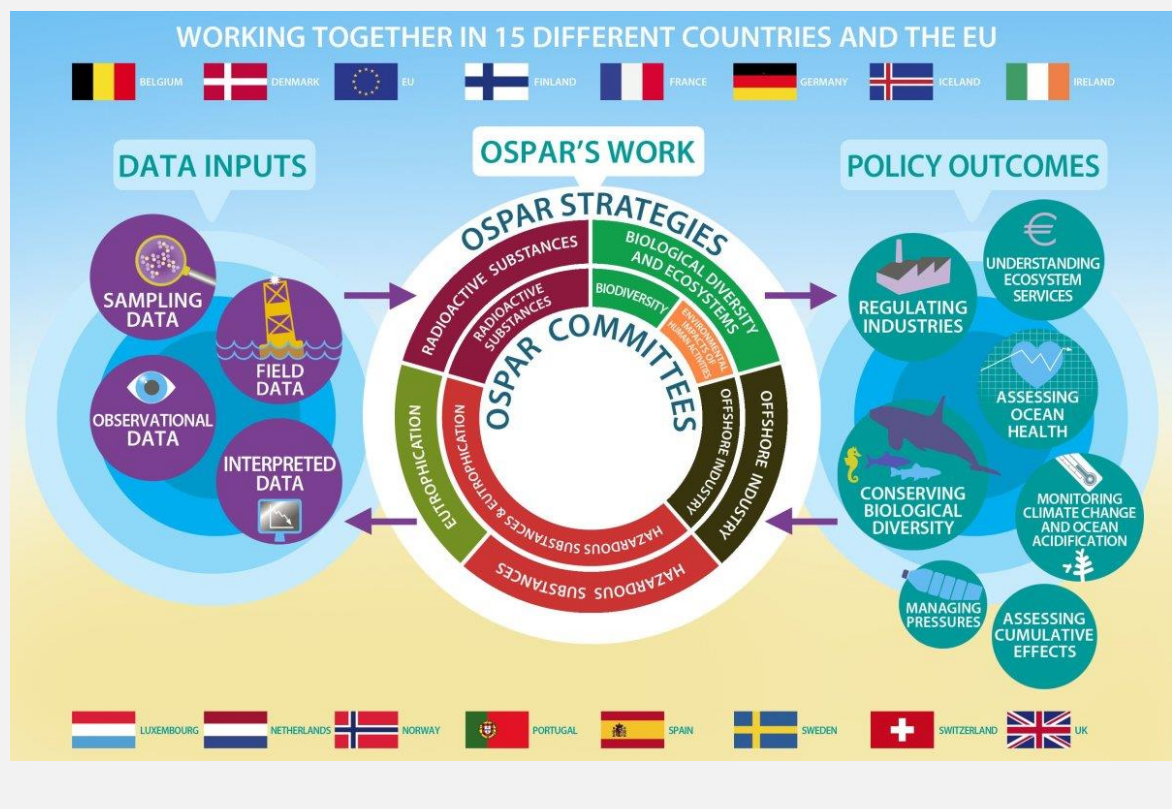
<sup>24</sup> [http://www.inweb.gr/index.php?option=com\\_wrapper&view=wrapper&Itemid=220](http://www.inweb.gr/index.php?option=com_wrapper&view=wrapper&Itemid=220)

all, reporting. There are several initiatives, such as the EC/EEA "Shared Environmental Information System (SEIS)" SEIS<sup>25</sup> to support a more integrated collection and exchange of environmental data, which supports infrastructure in national institutions to use cutting-edge ICTs, including web services (where machines talk to each other without the need for costly or less efficient human involvement). Spatial data infrastructure (SDI) is a framework of technologies, policies, and institutional arrangements that together facilitate the creation, exchange, and use of geospatial data and related information resources across an information-sharing community. Data is controlled and managed within the information/data provider.

### Box 3.5 OSPAR Cooperation for data management

OSPAR's Joint Assessment & Monitoring Programme (JAMP) describes the strategy, themes and products that OSPAR Contracting Parties are committed to deliver, through collaborative efforts in OSPAR, over the period 2014-2021 (OSPAR, 2006) with reference to the relevant provisions of: the OSPAR Convention (Art. 6 and Annex IV, and Art. 8), in particular as support for the implementation of the OSPAR North-East Atlantic Environment Strategy ('OSPAR Strategy'); and the EU Marine Strategy Framework Directive (MSFD, Directive 2008/56/EC)

OSPAR has produced a number of JAMP Guidelines over the years in relation to monitoring and assessment. Following the adoption of the broadened Coordinated Environmental Monitoring Programme (CEMP) in 2016, it was agreed that these Guidelines will become CEMP Guidelines. As a number of the existing JAMP Guidelines are due for review over the coming years they will retain the name "JAMP Guidelines" until that review is complete. The CEMP Guidelines adopted from 2016 and the existing JAMP Guidelines can now be found on the CEMP section of the website.



<sup>25</sup> <https://www.eea.europa.eu/about-us/what/shared-environmental-information-system-1/shared-environmental-information-system>

**Challenges and suggested actions.** The resources and human capacity required to establish and maintain databases and GIS and is significant, and in some cases, they have been funded partly through projects, and then no longer updated following the project completion. Also, many countries are burdened by increasing requests for data/information related to Regional and Global obligations, using difference formats and for different indicators and parameters. There is therefore a need to review at the national level reporting obligations, and support a process of one reporting that can serve all purposes, from SDG's to Regional and Global Conventions etc. Finally, countries do not always allow national data to be made publicly available, and therefore agreements need negotiation on how the data is managed and made available in reports. Therefore, the following actions can be considered as appropriate:

- a. Regional Seas to exchange of best-practices on data management and identify capacity needs for the future management of data; and
- b. UN environment to prepare an outline of options to support regional seas in data management and training.

#### **Step IV. Coordination with other organizations to identify additional sources of data**

In addition to the Regional Seas reporting and indicators, each region has different national and regional institutions engaged in data and information regarding the SDG 14 targets, which includes Regional Seas and other regional organizations databases, as well as national databases. The same data and information for SDG 14 targets in national or regional data platforms should also be available to Regional Seas, and visa-versa. Each Regional Sea Programme in cooperation with its partners and other relevant organizations should identify and review sources of information and data and define a reporting mechanism, whereby SDG targets can be assessed. A common regional strategy for SDG 14 data and information management should be defined, which may differ according to the region, and may also link to other regional and global sources of information and data. Of particular importance coordinating with fisheries bodies (for example the cooperation of UNEP/MAP with GFCM<sup>26</sup>). A similar exercise is being undertaken for all the European Regional Seas (see <https://water.europa.eu/marine>), and UN Environment, the EC and EEA could coordinate to see how this process is useful and applicable in the future for all global Regional Seas.

**Challenges and suggested actions.** Cooperation between relevant regional organizations on SDG reporting is key, especially with fisheries bodies, UN Economic commissions and other IGO's and NGO's working within the region on SDGs. The following actions can be considered as appropriate:

- a. SDG 14 Regional Coordination Group to define the sources of data and information that will contribute to reporting for each SDG 14 targets, identify gaps and propose use of innovative and new data initiatives for future reporting.

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<sup>26</sup> <http://web.unep.org/unepmap/cooperation-between-environmental-and-fisheries-organizations-prerequisite-sdg14>



### **Area of Action 3: Common methodologies for indicator-based assessments and use of the existing regional reporting mechanisms for SDG reporting purposes.**

The systematic monitoring and reporting of regional seas objectives, targets and indicators should contribute to regular regional assessments. This may focus on the state of the environment but also address the pressures, drivers and actions undertaken in each region. As mentioned in **Chapter 2**, the majority of regional seas prepare regular state of environment type reports. Most of the regional seas state of environment assessments include similar core themes related to marine and coastal pollution and biodiversity and with additional cross cutting or integrated themes such as MPAs, ICZM, climate change, sustainable development and sustainable consumption and production/green economy. In several cases these regional assessments are based on numerous thematic supporting assessments. Recent Regional Seas assessments have used the DPSIR approach (see example of West Indian Ocean State of the Coast Report in **Box 3.6**), although some focus predominantly on the state or quality of the environment and corresponding pressures, and less on drivers and responses. In spite of broadly similar issues addressed between different regional assessments, the methodology and timing of these reports differs and therefore, to begin the process of aligning these reports, a common methodology and timeline should be discussed and agreed between Regional Seas whilst also respecting region's specificities and obligations. Three main methods are generally used for assessments as outlined in the UN Environment Guidelines for conducting Integrated Environmental Assessments (**UNEP, 2017b**):

- **Indicator-based assessments** are those based on quantitative primary measurements of field data that monitor a particular variable. The variable is chosen because its status is an indicator of the condition of an ecosystem or habitat. For example, water quality measures such as dissolved oxygen content or nutrient levels are commonly used as indicators of the overall status of estuaries;
- **Literature-review based assessments** do not rely directly upon primary data sources but rather upon a survey of published literature and readily accessible information; the Global Environment Outlook (GEO) assessments and UN World Ocean Assessment are of this type.
- **Expert consultation-based assessments** rely on expert judgment supported by published and readily available data.

In reality, most assessments are developed using a combination of the three methods, data, literature and reports, and expert knowledge. The majority of past state of environment reports have been predominantly based on existing literature and expert's consultation, with the inclusion of data when available, rather than fully based on indicators. Recent exceptions to this are the 2017 OSPAR Intermediate Assessment (**Box 3.7**) and the 2018 State of the Baltic Sea - Second HELCOM holistic assessment<sup>27</sup> (**Box 3.8**). The Mediterranean Quality Status Report undertook a similar approach based on more limited data available mostly regarding pollution indicators (see <https://www.medqsr.org/>). These reports focus mainly on the state and immediate pressures, with limited data and analysis regarding drivers (socio-economic aspects) or response. The Caribbean State of the Convention Area Report (SOCAR) report is under preparation to be published in 2018, and with a focus on pollution is based on agreed indicators. By combining a DPSIR approach with indicator-based assessments, future state of environment assessments can also monitor the progress towards achieving the associated SDG targets, depending also on cooperation with other regional organizations. Indicator Assessment templates have been developed by several Regional Seas, such as recently the Mediterranean Quality Status Report (2017), the State of the Baltic Sea - Second HELCOM holistic assessment 2018 and the Northeast Atlantic Intermediate Assessment (2017).

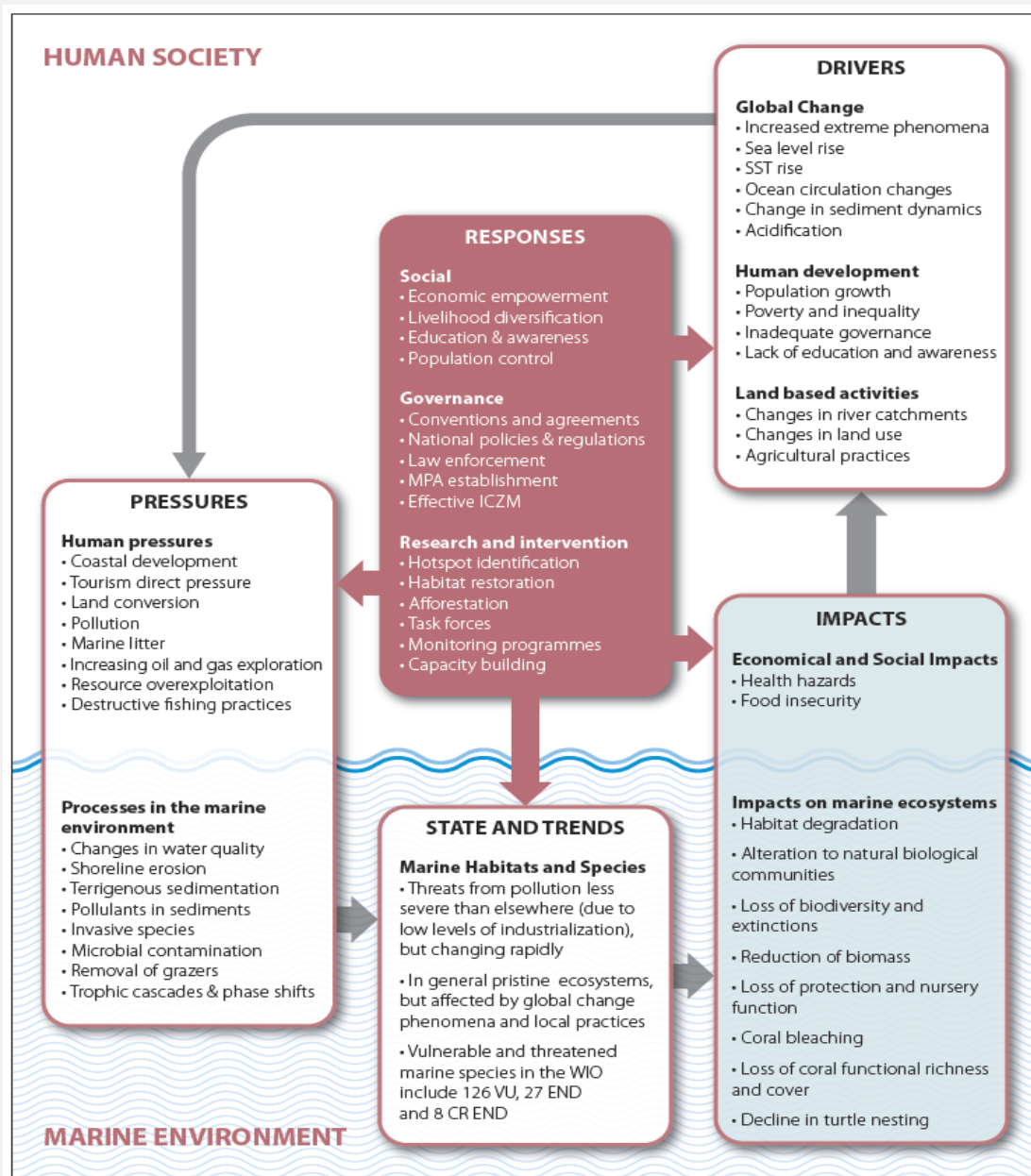
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<sup>27</sup> <http://stateofthebalticsea.helcom.fi/>

The Final State of Environment Report can be presented either as a publication or as an online report with links to the meta-data and data used within. Indicator assessment templates can be included for key state and pressure indicators and can be used to assess progress towards achieving the corresponding SDG targets. Indicator assessments can also be published separately. Specific reports related to each relevant SDG target could be extracted and published, comprising of the indicator assessments and overall analysis of progress towards the target. In the future, UN Environment may also consider a compiled global report, combining all SDG target indicator assessments and progress, with some overall analysis at the global level which could provide the basis of inputs to the WOA and GEO reports.

### Box 3.6 West Indian Ocean State of the Coast Report

Diagrammatic summary of DPSIR analysis for marine biodiversity in the WIO (UNEP- Nairobi Convention and WIOMSA, 2015).




**Challenges and suggested actions.** In order to move towards indicator-based state of environment assessments, indicators and regular reporting would need to be established, which can take several years. Where data gaps exist due to lack of reporting, or lack of data, alternative data and reports would need to address these gaps. Coordination with other regional organizations would be needed and the use of additional regional and global data and information. The following actions can be considered as appropriate:

- Future State of Environment Reports to integrate regional seas objectives, targets and indicators in line with SDG's and use the Guidelines for conducting Integrated Environmental Assessments (UNEP, 2017b);
- Identify partnerships and establish agreements within the region (fisheries bodies, scientific bodies etc) towards preparing joint marine and coastal state of environment assessments;
- Regional Seas to discuss possible use of a common indicator assessment template (see Annex 5) to be completed at a regional level and based on available data and information within the region. Where data is limited the assessment can incorporate information from other national and regional initiatives and reports;
- Regional Seas to consider publication of a progress report towards SDG implementation as compliment to state of environment reporting; and
- Regional Seas to discuss possible common timeline of assessment reporting

### Box 3.7 OSPAR Intermediate Assessment Structure


The Intermediate Assessment 2017 provides background information and assessments of human pressures on the marine environment and biological diversity of the OSPAR Maritime Area. Ultimately, there are some key messages articulated. These provide concise assessments, often in respect of species or delivery of The OSPAR Strategy. Each indicator assessment is also summarized as a separate printable version, with the example of beach litter below.



Area assessed in blue

## Beach Litter - Abundance, Composition and Trends

MSFD Descriptor: 10 - Beach litter  
MSFD Criterion: 10.1 - Characteristics of litter in the marine and coastal environment



**Key Message** Litter is abundant on beaches in the OSPAR Maritime Area. Plastic fragments, fishing-related litter and packaging are the most common types of litter found. Plastics comprise over 90% of items in some areas. There are no overall trends in the number of beach litter items recorded in the period 2009–2014

#### Background

OSPAR has a stated aim to 'substantially reduce marine litter in the OSPAR Maritime Area to levels where the properties and quantities of marine litter do not cause harm to the coastal and marine environment'. This indicator assessment describes the abundance and composition of beach litter in the OSPAR Maritime Area across 76 beaches in 2014/15, and trends in litter items that have been identified across 19 beaches in the period 2009–2014.

The abundance of marine litter in the OSPAR area provides information on the magnitude of litter pollution in adjacent waters and coastal areas, indicating spatial differences in litter pollution. The litter on a given beach may be generated locally at sea or on land, or may arrive from distant sources transported by rivers or ocean currents.

Beach litter composition gives an indication of the scale and magnitude of the problem, as well as the level of threat to the environment. Spatial differences in litter composition between survey sites indicate regional differences in sources.

Changes in composition and trends in the abundance of beach litter highlight where reduction measures are needed and, when implemented, the extent of their success.

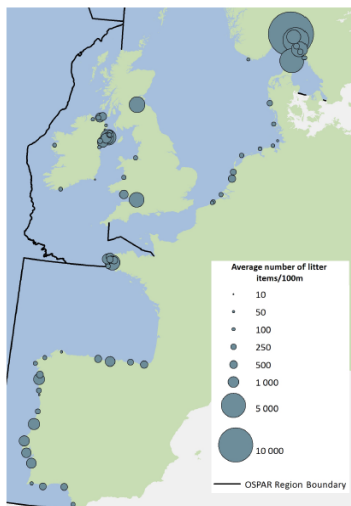


Figure 1: Average number of litter items per 100m for the period 2014–2015

#### Results

There are no overall trends in the abundance of beach litter items recorded in the OSPAR Maritime Area for the period 2009–2014. However significant decreasing trends, as well as increasing trends, could be identified for individual litter items on individual survey sites (such as on the north-western coast of Spain where the abundance of cotton bud sticks decreased by 12%).

The average total abundance of litter items per 100 m of coast varies widely in the OSPAR Maritime Area and within sub-regions. Values are presented for the period 2014–2015 (Figure 1), as longer data series were not available for the whole OSPAR Maritime Area. The averages were similar for survey sites in the southern North Sea (311), Celtic Seas (434) and Bay of Biscay / Iberian Coast (365), but an order of magnitude higher for the northern North Sea (mainly in the Skagerrak; 6090). However there was huge variation in abundance, both between sites and on individual sites, in the northern North Sea.

The majority of litter items were made of plastic or polystyrene (Figure 2). Across all OSPAR survey sites, plastic fragments are the most commonly found type of litter item, followed by packaging (food and drink), and fishing-related items (Figure 3). Packaging mainly consists of plastic items (including caps and lids, food containers, crisp / sweet packets / lolly sticks and plastic bags). Fishing-related items comprise nets and ropes and tangled nets / cord. Drinks bottles and containers are among the most recorded items at survey sites in all seas except the northern North Sea. All these items are considered harmful to the marine environment, due to their potential for entanglement, ingestion or injury.

Other items are also frequently recorded, especially on survey sites in the following regions:

- Cotton bud sticks in the Celtic Seas, Bay of Biscay / Iberian Coast and northern North Sea
- Cigarette butts in the Bay of Biscay / Iberian Coast
- Rubber balloons in the southern North Sea, northern North Sea, some survey sites in the Celtic Seas and one survey site on the Bay of Biscay / Iberian Coast
- Shotgun cartridges in the southern North Sea, northern North Sea and Celtic Seas

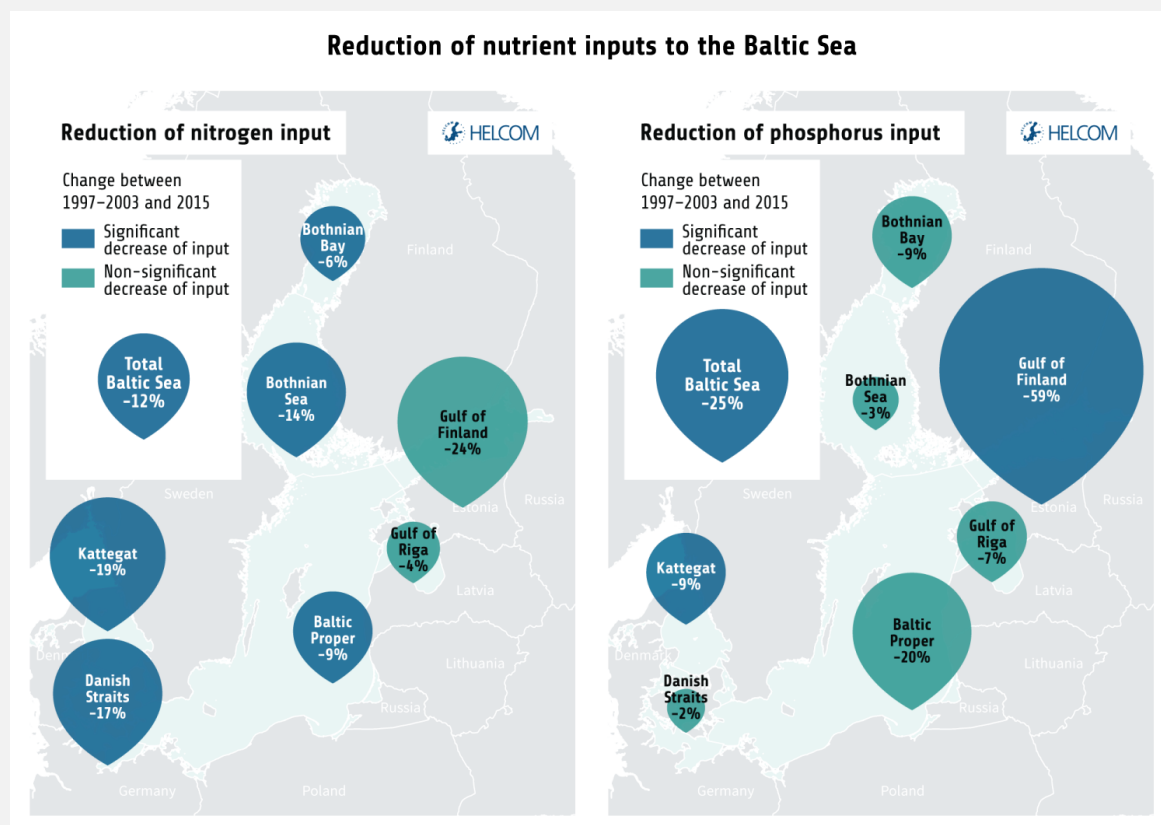
The abundance of these items indicates region-specific issues with wastewater outlets, smoking- and hunting-related litter, and public and private events where balloons are released.

There is moderate confidence in the methodology and data.

<https://oap.ospar.org/en/ospar-assessments/intermediate-assessment-2017/>

### Box 3.8 State of the Baltic Sea - Second HELCOM holistic assessment (2018)

Extract from the State of the Baltic Sea - Second HELCOM holistic assessment on the status of eutrophication in the Baltic Region. The inputs of nitrogen and phosphorous to the Baltic Sea sub-basins have decreased significantly in recent years. The drop shapes show the relative change in annual average normalised net nutrient input to the sub-basins, including riverine, direct and airborne inputs comparing the year 2015 with the reference period 1997–2003. The size of each drop shape is proportional to the amount of change. Significance is determined based on the whole series of observations, starting from 1995.



See: <http://stateofthebalticsea.helcom.fi/pressures-and-their-status/eutrophication/>  
<http://www.helcom.fi/baltic-sea-trends/indicators/inputs-of-nutrients-to-the-subbasins/>

## 3.2 Objective B. To strengthen cooperation with other regional organizations and define approaches to contribute to SDG reporting

Objective B is to strengthen cooperation with other regional organizations and define approaches to contribute to SDG reporting, at the national level through the VNR reporting, at the regional level in cooperation with UN Economic Commissions and other regional organizations working on SDGs, and at the global level by contributing data to UN Environment regarding SDG 14 indicators (14.1.1, 14.2.1 and 14.5.1), as well as contribution to global SDG reports, such as the World Ocean Assessment.

#### **Area of Action 4. Ensure data and information from Regional Seas contribute to VNR reports and SDG databases.**

As outlined in **Chapter 1** reporting of the SDG's is undertaken at the national, regional and global level. Countries are responsible for reporting on the SDG targets and Voluntary National Reports 2016 have been presented at the annual HLPF since 2016 and are available at <https://sustainabledevelopment.un.org/vnrs/>. A clear definition and mechanism is needed to ensure regional seas and regional organizations contribute to these reporting mechanisms, in particular regarding SDG 14, and other relevant SDGs. As previously mentioned IISD found that SDG 14 (along with 12, 13, 15 and 17) are the least reported of the SDGs (**IISD, 2017**) and in the 2017 Synthesis of the VNR reports, the major challenges regarding the implementation of SDG 14 included the lack of human and financial resources, the lack of, or limited, data availability, gaps in data management, the lack of clear institutional arrangements and regulations, limited resources for monitoring, control and surveillance, and the lack of interagency coordination. Also, whilst guidance has been provided to countries for the development of VNR reports, many of these reporting in since 2016 vary in format and content, including reference to the regional seas. Therefore, regional seas have an important role to support countries in their SDG reporting and VNR reports.

**Challenges and suggested actions.** Currently the major challenge is that work is being conducted on SDG reporting and implementation at the national and regional level by many organizations, and whilst coordination mechanisms are in place in many regions, overall there is a need to strengthen coordination and the inclusion of Regional Seas with regards SDG 14. Almost 50% of VNR reports prepared so far do not refer to the regional sea's conventions and action plans. The following actions can be considered as appropriate:

- a. Establishment of a **SDG Regional Coordination Group** (or an equivalent body) for the region, building upon the network of partnerships already established and including: Regional Fisheries bodies; Regional Economic Commissions; Scientific institutions and key scientific projects; IGO's and NGO's and other partners, Relevant Convention/Action Plan and SDG focal points; Global organizations as relevant (such as IMO, UNWTO, etc.);
- b. Ensure a common approach to the assessment of SDG 14 (and other relevant targets) in VNR reporting. Through the SDG 14 regional coordination group, agreement could be made between countries within each region on a common approach to reporting SDG targets in their VNR reports, and to include regional sea assessment results for the relevant SDG targets. The coordination group could also undertake a peer review process of the VNR of SDG 14 and other relevant SDG Goals; and
- c. Contribute to global reports and SDG databases such as the Sustainable Development Goals Report, the World Ocean Assessment and the Global Environment Outlook (GEO) global assessments.

#### **Area of Action 5: Information portal on regional reporting to SDG 14**

Within each region, various strategic documents and reports on reporting, monitoring and assessments are available including recent work on alignment with the SDGs. However, strategic documents and reports are often not easily accessible on regional seas web-sites, often as meeting documents.



**Challenges and suggested actions.** Information on the status of SDG 14 targets and the work of regional organizations should be more visible and accessible, and in this regard, each regional sea can consider how best to present its work in light of the SDGs, and overall, whether a specific global oceans and coasts portal should be established. The following actions can be considered as appropriate:

- a. Each Regional Sea can consider include a web-page dedicated to the alignment of its objectives, targets and indicators with the SDG's and include the following information: (i) Present the mapping of all objectives, targets and indicators with the SDG's and provide links to all strategic documents (reporting templates for the Conventions, work-programmes, SAPs and strategies); (ii) Provide links to all reports on progress towards these objectives (progress reports, SAP implementation reports etc.); (iii) Provide links to all relevant assessments conducted, and those planned for the future; (iv) Provide links to all relevant SDG indicators for the region and a brief description on the current status in achieving the targets within the region. Consideration should be given to update this brief information on a regular basis (such as every 2 years); (v) Provide links to all relevant regional databases and monitoring programmes; (vi) Provide links to national SDG data platforms if relevant, and any other regional SDG data initiatives; and (vii) Include guidelines on indicator monitoring and reporting.
- b. UN Environment to consider a global SDG oceans and coasts portal. All these regional seas SDG sites, plus all other websites related to SDG reporting should be easily accessible in one appropriate forum. The development of a global platform should be closely interlinked with all existing platforms. It should make easily accessible information and reports from Regional Seas in relation to the SDG's.

## **Area of Action 6: Contribute to UN Environment global reporting on SDG 14**

**Chapter 1** presents the SDG 14 indicators and role of custodian agencies and the workplans for the three SDG 14 indicators for which UN Environment is the custodian agency. Indicators 14.1.1 and 14.2.1 are still in development and it specifically mentions the Regional Seas as the source of data regarding floating plastic litter and ICZM in line with the Regional Seas Indicators:

1. Chlorophyll a concentration as an indicator of phytoplankton biomass;
3. Quantification and classification of beach litter items; and
22. National ICZM guidelines and enabling legislation adopted.

Work is underway to define guidance for these indicators to be reported systematically by all regional seas in future. The regional seas can be used to define data sources for these indicators, and the mechanism for data submission to UN Environment. UN Environment has initiated work with experts and the regional seas on the SDG pollution indicators, with the first “*Experts workshop on marine pollution indicators under SDG target 14.1*” held in September 2018, Paris.<sup>28</sup> This mechanism may be different according to the data management in place in each region and a data flow linked to regional databases would need to be established (such as Baltic Sea, Mediterranean Sea, Northwest Pacific, ROPME Sea Area). This would require standard reporting templates, clear guidance and methods and the definition of spatial reporting units from offshore to coastal. Such a proposal should also undertake an approach for the integrated collection and exchange of environmental data, which supports infrastructure in national institutions to use ICTs, including web services. Such a data portal could also link to existing databases of monitoring, modelled and satellite data, thus providing a complete overview of all existing data for these indicators that can be used for all global and regional assessments.

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<sup>28</sup> <http://www.nutrientchallenge.org/sites/default/files/Agenda.pdf>

**Challenges and suggested actions.** Work is currently underway to coordinate data between the regional seas towards SDG 14.1. The following actions can be considered as appropriate:

- a. Regional seas to confirm availability of data available regarding chlorophyll a, beach litter and ICZM that can be submitted to UN Environment towards global reporting of SDG 14.1.1 and 14.2.1 indicators; and
- b. UN Environment to elaborate global data management strategy for the compilation of data for SDG 14.1.1 and 14.2.1 indicators, including the data flow from the national to global level and the role of regional seas in supporting countries in reporting on these indicators.

### **Area of Action 7: Compilation of information in an SDG Outlook document**

Based on this report, additional case studies, and the work undertaken within each region to map and align strategic objectives, targets and indicators with the relevant SDG's, each regional sea may consider compiling information in an SDG Outlook document which would include:

- Mapping of strategic objectives, targets and indicators with the SDGs;
- Present the list of main indicators relevant to the key SDG's relevant for the region, with a main focus on SDG 14 targets, including the regional seas 22 indicators where relevant, SDG indicators, and any other global indicators;
- Present current reporting and monitoring mechanisms, indicator reporting templates and guidance, good practices in reporting and monitoring, challenges and major gaps in data and capacity needs;
- Proposal on integrating indicator assessments into future state of environment and other assessments in line with the SDG's;
- Proposal on regional coordination mechanisms with relevant organizations and SDG focal points to ensure coordinated contribution to SDG reporting and VNR reports related to SDG 14 and other relevant targets; and
- Any other actions to support countries in strengthening their reporting on the relevant SDG's,

**Challenges and suggested actions.** A report or SDG Outlook for each regional sea, capturing the challenges and approach to contribute to SDG implementation and reporting can serve as an important reference for discussion with partners and also Contracting Parties. The following actions can be considered as appropriate:

- a. Based on this report, the [Case Studies Supplementary Annex](#) and work undertaken by each region, prepare a report or SDG Outlook document; and
- b. Based on discussion with the regional seas Contracting Parties/Member States, propose a decision for the future reporting on SDG targets.

## Chapter 4. Summary and Further Actions

The main focus of this report is to address the integration and alignment of strategic objectives, targets, indicators and information and data management from the national to global level in order to strengthen SDG 14 reporting, also considering other relevant SDG targets to the marine and coastal environment, with specific emphasis on the work of the Regional Seas. Given that each region has its own specificities and capacity for reporting, the recommendations in Chapter 3, are not applicable to all regions. Many have already been addressed by some regions, and other are ambitious for the present without additional support, guidance and potentially funding. In addition to this report, UN Environment is preparing case studies reviewing the targets and indicators of several regional seas and their alignment to the SDG's. These case studies will enable an exchange between regions on their best practices and challenges and can be used as the basis to develop regional SDG Outlook documents, if appropriate. **Table 4.1** provides a summary of the objectives, areas of action and possible actions for regional seas towards enhanced reporting on the SDGs.

The 20<sup>th</sup> Regional Seas Annual Meeting for the Regional Seas Conventions and Action Plans was held in 23-25 September, 2018 in Split, Croatia and discussed the report and the future reporting on SDGs by the Regional Seas. Since initiation of this work several regional seas have already begun implementation of actions to strengthen linkages with the SDGs both in terms of implementation and reporting. This includes detailed mapping and alignment of regional seas objectives, targets with the SDG's with the SDGs, strengthening cooperation with fisheries bodies and other organizations for joint reporting on the SDG's and revising assessment methodologies to report on SDGs. The **Case Studies Supplementary Annex**, also provide a detailed analysis for several regional seas, which have been used by several regions to prepare specific reports for discussion with Contracting Parties and focal point of the regional seas and action plans.

In the next steps to strengthening SDG reporting, priority should be given to:

- Preparation of an SDG Outlook document (Area of Action 7) and in particular including a list of key indicators relevant for the SDG's, with the inclusion of SDG and Regional Seas indicators, where appropriate, along with current indicator reporting templates and guidance, gaps, future actions and recommendations;
- Ensure a regular coordination mechanism between regional seas, using the Indicator Working Group, to agree on best practices regarding indicator reporting templates, guidelines and information and data management, including other partners experiences (i.e. IOC-UNESCO, EEA, EC and others);
- Consider a possible pilot reporting data to UN Environment regarding the 3 Regional Seas indicators relevant for SDG 14.1 and 14.2: chlorophyll-a, beach litter and national ICZM guidelines;
- Consider possible other future pilots regarding reporting and indicator-based assessments (i.e. coupled with the new SAP projects just under implementation);
- Consider the compilation of good practices and innovative solutions to address data gaps, from the use of global and other regional databases, civil society monitoring, partnerships with scientific organizations, and use of new technology such as drones, and automated monitoring systems; and
- UN Environment to elaborate how it will support the regional seas future exchange and implementation of these recommendations, including a common information portal.

**Table 4.1 Summary of objectives, areas of action and possible actions for regional seas towards enhanced reporting on the SDGs**

Area of Action/	Steps	Possible Actions
<b>Objective A. To align regional seas monitoring, reporting and assessments with the relevant SDG's</b>		
<b>1. Review and align objectives, outputs and targets with the SDGs</b>	<p>Step I: Identification and review of existing regional policies and reporting</p> <p><i>Regional Seas Strategies and Work-programmes</i></p>	<p>a. For those regional seas with multiple overall and thematic strategies and plans to consider a review, streamlining and integration of these objectives and targets into one document, with contributions to the SDG targets (and other key Global Conventions targets);</p> <p>b. UNEP administered regional seas to report on the UNEP MTS and RS directions objectives, and to consider a common format for this purpose, so that these reports are comparable;</p> <p>c. Presenting all strategies, action plans, work-programs and progress reports clearly together on the regional seas web-site, so they can be easily accessed, possible on a page dedication to SDG reporting;</p> <p>d. Establish a Regional Seas working group to share good practices in reporting, and discuss possible common formats that will allow progress to be compared between regions;</p> <p>e. Regional Seas to discuss timeframe of current and future strategies, and whether common timelines can be agreed.</p>
	<p><i>Strategic Action Programmes (SAPs)</i></p>	<p>a. Ensure that all new and recently started SAP implementation projects review and revise objectives, targets and indicators to be measurable and aligned with relevant SDGs, in particular in consideration of Regional Seas and other organizations (such as Fisheries management bodies) strategic documents, objectives, targets and indicators, in order to streamline them as appropriate;</p> <p>b. Regional Seas, SAP projects and IW-Learn to consider SAP working group for all new SAP implementation projects to exchange and align (as appropriate) objectives and targets between regions;</p> <p>c. SAP implementation projects to agree on the production of regular SAP implementation reports, during and beyond the lifespan of the projects, based as much as possible on indicators and in cooperation with Regional Seas reporting; and</p> <p>d. Consider how SAP implementation reports can contribute to Regional Seas State of Environment and other regional assessment reporting.</p>
	<p><i>Other Strategic target setting: Ecosystem Approach and Sustainable Development</i></p>	<p>a. Regional Seas Indicator working group to compile good practices in setting Ecosystem Approach Ecological Objectives and targets as well as the development assessment criteria;</p> <p>b. Ensure there is full alignment between SAP and Ecosystem Approach ecological objectives (for those regions which have developed both); and</p> <p>c. Make available sustainable development strategies and in particular any reports that contribute to the SDGs.</p>

Area of Action/	Steps	Possible Actions
<b>2: Harmonized indicator development and standardized reporting, in line with SDG's.</b>	Step I: Review, revision and alignment of indicators with relevant SDG targets	<ul style="list-style-type: none"> <li>a. Each regional sea to map all regional indicators in line with the relevant SDG's, and compiled list of all indicators to be shared between regions with the view to identify common and overlapping indicators;</li> <li>b. Review and revise if required indicator frameworks (if outdated or not according to SMART criteria), and identify gaps, whilst considering the integration of SDG and Regional Seas indicators and other relevant regional and global indicator frameworks;</li> <li>c. Regional Seas Working Group on indicators to review and identify common indicators to be reported by all Regional Seas, in addition to the 22 Regional Seas indicators.</li> </ul>
	Step II: Ensure a clear, regular and realistic reporting mechanism in place for each indicator	<ul style="list-style-type: none"> <li>a. Ensure an exchange between regions on current indicator methodologies, to be compiled and available online;</li> <li>b. Finalization of the work underway on the manual for the 22 Regional Seas indicators, reviewed and discussed by regional seas;</li> <li>c. Regional Seas to review existing templates for indicator reporting based on good examples (i.e. EEA and UNECE templates) and agree on common assessment template for reporting purposes for the common indicators between regions (the 22 Regional Seas indicators, and any others identified);</li> <li>d. Identify key gaps in capacity and data in order to report on the 22 Regional Seas indicators, and establish an exchange on best-practices, including cooperation with regional scientific bodies and institutions and other partners; and</li> <li>e. Exchange on best practices and experiences regarding the inclusion of innovative approaches for SDG 14 data collection, and identify options for possible future implementation in conjunction with relevant scientific partners.</li> </ul>
	Step III: Define a data management strategy	<ul style="list-style-type: none"> <li>a. Regional Seas to exchange of best-practices on data management and identify capacity needs for the future management of data; and</li> <li>b. UN environment to prepare an outline of options to support regional seas in data management and training.</li> </ul>
	Step IV. Coordination with other organizations to identify additional sources of data	<ul style="list-style-type: none"> <li>a. SDG 14 Regional Coordination Group to define the sources of data and information that will contribute to reporting for each SDG 14 targets, identify gaps and propose use of innovative and new data initiatives for future reporting.</li> </ul>



Area of Action/	Steps	Possible Actions
<b>3: Common methodologies for indicator-based assessments and use of the existing regional reporting mechanisms for SDG reporting purposes.</b>		<ul style="list-style-type: none"> <li>a. Future State of Environment Reports to integrate regional seas objectives, targets and indicators in line with SDG's and use the Guidelines for conducting Integrated Environmental Assessments (UNEP, 2017b);</li> <li>b. Identify partnerships and establish agreements within the region (fisheries bodies, scientific bodies etc) towards preparing joint marine and coastal state of environment assessments;</li> <li>c. Regional Seas to discuss possible use of a common indicator assessment template (see Annex 5) to be completed at a regional level and based on available data and information within the region. Where data is limited the assessment can incorporate information from other national and regional initiatives and reports;</li> <li>d. Regional Seas to consider publication of a progress report towards SDG implementation as compliment to state of environment reporting; and</li> <li>e. Regional Seas to discuss possible common timeline of assessment reporting</li> </ul>
<b>Objective B. To strengthen cooperation with other regional organizations and define approaches to contribute to SDG reporting</b>		
<b>4. Ensure data and information from Regional Seas contribute to VNR reports and SDG databases.</b>		<ul style="list-style-type: none"> <li>a. Establishment of an SDG Regional Coordination Group (or an equivalent body) for the region, building upon the network of partnerships already established and including: Regional Fisheries bodies; Regional Economic Commissions; Scientific institutions and key scientific projects; IGO's and NGO's and other partners, Relevant Convention/Action Plan and SDG focal points; Global organizations as relevant (such as IMO, UNWTO, etc.);</li> <li>b. Ensure a common approach to the assessment of SDG 14 (and other relevant targets) in VNR reporting. Through the SDG 14 regional coordination group, agreement could be made between countries within each region on a common approach to reporting SDG targets in their VNR reports, and to include regional sea assessment results for the relevant SDG targets. The coordination group could also undertake a peer review process of the VNR of SDG 14 and other relevant SDG Goals; and</li> <li>c. Contribute to global reports and SDG databases such as the Sustainable Development Goals Report, the World Ocean Assessment and the Global Environment Outlook (GEO) global assessments.</li> </ul>
<b>5: Information portal on regional reporting to SDG 14</b>		<ul style="list-style-type: none"> <li>a. Each Regional Sea can consider include a web-page dedicated to the alignment of its objectives, targets and indicators with the SDG's</li> <li>b. UN Environment to consider a global SDG oceans and coasts portal. All these regional seas SDG sites, plus all other websites related to SDG reporting should be easily accessible in one appropriate forum.</li> </ul>
<b>6: Contribute to UN Environment global reporting on SDG 14</b>		<ul style="list-style-type: none"> <li>a. Regional seas to confirm availability of data available regarding chlorophyll a, beach litter and ICZM that can be submitted to UN Environment towards global reporting of SDG 14.1.1 and 14.2.1 indicators; and</li> <li>b. UN Environment to elaborate global data management strategy for the compilation of data for SDG 14.1.1 and 14.2.1 indicators, including the data flow from the national to global level and the role of regional seas in supporting countries in reporting on these indicators.</li> </ul>

Area of Action/ Steps	Possible Actions
<b>Area of Action 7: Compilation of information in an SDG Outlook document</b>	<ul style="list-style-type: none"> <li>a. Based on this report, the Case Studies Supplementary Annex and work undertaken by each region, prepare a report or SDG Outlook document; and</li> <li>b. Based on discussion with the regional seas Contracting Parties/Member States, propose a decision for the future reporting on SDG targets.</li> </ul>

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*The associated report links were last validated on the 20 October 2018, but may not be accessible in the future depending on the web-site revision.*

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<sup>51</sup> <http://web.unep.org/uneppmap/what-we-do/mid-term-strategy-2016-2021>

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<sup>56</sup> <https://iwlearn.net/documents?pid=3522&pdt=192>

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<sup>58</sup> <https://iwlearn.net/iw-projects/basins/lmes/sulu-celebes-sea>

<sup>59</sup> <http://www.fao.org/in-action/canary-current-lme/documentation/detail/en/c/431466/>

<sup>60</sup> <https://iwlearn.net/iw-projects/basins/lmes/guinea-current>

<sup>61</sup> <http://www.asclme.org/data-and-information/meda-tda-sap.html>

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<http://www.indiaenvironmentportal.org.in/files/file/WIO%20Regional%20State%20of%20Coast%20Report.pdf>

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<sup>67</sup> <https://iwlearn.net/documents/2332>

<sup>68</sup> <https://iwlearn.net/iw-projects/basins/lakes/1>

<sup>69</sup> <https://oaarchive.arctic-council.org/handle/11374/1029>

<sup>70</sup> <https://oaarchive.arctic-council.org/handle/11374/413>

<sup>71</sup> <http://www.helcom.fi/baltic-sea-action-plan>

<sup>72</sup>

<http://www.helcom.fi/Documents/Action%20areas/Monitoring%20and%20assessment/Monitoring%20and%20assessment%20strategy/Monitoring%20and%20assessment%20strategy.pdf>

<sup>73</sup> <https://www.ospar.org/convention/strategy>

<sup>74</sup> <https://www.ospar.org/work-areas/cross-cutting-issues/jamp> and

[https://qsr2010.ospar.org/media/assessments/Basic\\_documents/EN\\_03-22e\\_JAMP.pdf](https://qsr2010.ospar.org/media/assessments/Basic_documents/EN_03-22e_JAMP.pdf)

## Annex 1. Sustainable Development Goals and Associated Targets Relevant to the Regional Seas Programme and List of 26 SDG indicators for which UN Environment is custodian agency.

### Sustainable Development Goals and Associated Targets Relevant to the Regional Seas Programme

*This is an indicative list that may not be relevant for each Regional Sea.*

<b>SDG Target</b>	<b>SDG Indicator</b>	<b>Source/Custodian Agency</b>
<b>Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development</b>		
14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	14.1.1 Index of coastal eutrophication and floating plastic debris density	UN Environment in cooperation with IOC-UNESCO
14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	14.2.1 Proportion of national exclusive economic zones managed using ecosystem-based approaches	UN Environment in cooperation with IOC-UNESCO
14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels	14.3.1 Average marine acidity (pH) measured at agreed suite of representative sampling stations	IOC-UNESCO in cooperation with UN Environment
14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics	14.4.1 Proportion of fish stocks within biologically sustainable levels	FAO
14.5 By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information	14.5.1 Coverage of protected areas in relation to marine areas	UNEP WCMC, UN Environment
14.6 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	14.6.1 Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing	FAO

<u>SDG Target</u>	<u>SDG Indicator</u>	<u>Source/Custodian Agency</u>
developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation (Footnote 2: Taking into account ongoing World Trade Organization negotiations, the Doha Development Agenda and the Hong Kong ministerial mandate)		
14.7 By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism	14.7.1 Sustainable fisheries as a proportion of GDP in small island developing States, least developed countries and all countries	FAO, UN Environment - WCMC
14.a 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 the development of developing countries, in particular small island developing States and least developed countries	14.a.1 Proportion of total research budget allocated to research in the field of marine technology	IOC-UNESCO in cooperation with UN Environment
14.b Provide access for small-scale artisanal fishers to marine resources and markets	14.b.1 Progress by countries in the degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries	FAO
14.c Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want	14.c.1 Number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nation Convention on the Law of the Sea, for the conservation and sustainable use of the oceans and their resources	UN-DOALOS, FAO, UN Environment, ILO, other UN-Oceans agencies



The other goals that may be considered to be relevant by some of the Regional Seas Conventions and Action Plans are:

<u>SDG Target</u>	<u>SDG Indicator</u>	<u>Source/Custodian Agency</u>
<b>Goal 1. End Poverty in all its forms everywhere</b>		
1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	1.5.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population	UNISDR
	1.5.2 Direct economic loss attributed to disasters in relation to global gross domestic product (GDP)	
	1.5.3 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030	
	1.5.4 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	
<b>Goal 5. Achieve gender equality and empower all women and girls</b>		
5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws	5.a.1 (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure	FAO, UN Women, UNSD
	5.a.2 Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control	FAO, World Bank, UN Women
<b>Goal 6. Ensure availability and sustainable management of water resources and sanitation for all</b>		
6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	6.3.1 Proportion of wastewater safely treated	WHO, UN-Habitat, UNSD
	6.3.2 Proportion of bodies of water with good ambient water quality	UN Environment
	6.5.1 Degree of integrated water resources management implementation (0-100)	UN Environment

<b><u>SDG Target</u></b>	<b><u>SDG Indicator</u></b>	<b><u>Source/Custodian Agency</u></b>
6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	6.5.2 Proportion of transboundary basin area with an operational arrangement for water cooperation	UNESCO-UIS, UNECE
6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes	6.6.1 Change in the extent of water-related ecosystems over time	UN Environment
<b>Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all</b>		
7.2 By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1 Renewable energy share in the total final energy consumption	"UNSD, IEA, IRENA"
7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and clear fossil-fuel technology, and promote investment in energy infrastructure and clean energy efficiency	7.a.1 International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems	"OECD, IRENA "
<b>Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</b>		
8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small-, and medium-sized enterprises, including through access to financial services	8.3.1 Proportion of informal employment in non-agriculture employment, by sex	ILO
8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead	8.4.1 Material footprint, material footprint per capita, and material footprint per GDP 8.4.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP	UN Environment
8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	8.9.1 Tourism direct GDP as a proportion of total GDP and in growth rate 8.9.2 Proportion of jobs in sustainable tourism industries out of total tourism jobs	UNWTO
<b>Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable</b>		

<b><u>SDG Target</u></b>	<b><u>SDG Indicator</u></b>	<b><u>Source/Custodian Agency</u></b>
11.6 By 2030, reduce the adverse per capita environmental impacts of cities, including paying special attention to air quality and municipal and other waste management	11.6.1 Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities	UN-Habitat, UNSD
	11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)	WHO
11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels	11.b.1 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030	UNISDR
	11.b.2 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	
<b>Goal 12. Ensure sustainable consumption and production patterns</b>		
12.2 By 2030 achieve the sustainable management and efficient use of natural resources	12.2.1 Material footprint, material footprint per capita, and material footprint per GDP	UN Environment
	12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP	
12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment	12.4.1 Number of parties to international multilateral environmental agreements on hazardous waste, and other chemicals that meet their commitments and obligations in transmitting information as required by each relevant agreement	UN Environment
	12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment	UNSD, UN Environment
<b>Goal 13. Take urgent action to combat climate change and its impacts</b>		
13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	13.1.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population	UNISDR
	13.1.2 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030	

<u>SDG Target</u>	<u>SDG Indicator</u>	<u>Source/Custodian Agency</u>
	13.1.3 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	
13.2 Integrate climate change measured into national policies, strategies and planning	13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)	UNISDR
13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula 13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions	UNFCCC, UNESCO-UIS
<b>Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</b>		
15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	15.1.1 Forest area as a proportion of total land area 15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type	FAO UNEP WCMC, UN Environment
15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	15.5.1 Red List Index	IUCN
15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	15.8.1 Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species	IUCN

<b><u>SDG Target</u></b>	<b><u>SDG Indicator</u></b>	<b><u>Source/Custodian Agency</u></b>
15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts	15.9.1 Progress towards national targets established in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011-2020	"CBD-Secretariat, UN Environment
15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems	15.a.1 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems	"OECD, UN Environment, World Bank"
<b>Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development</b>		
17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism	17.6.1 Number of science and/or technology cooperation agreements and programmes between countries, by type of cooperation 17.6.2 Fixed Internet broadband subscriptions per 100 inhabitants, by speed	UNESCO-UIS ITU
17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries	17.16.1 Number of countries reporting progress in multi-stakeholder development effectiveness monitoring frameworks that support the achievement of the sustainable development goals	OECD, UNDP"
17.18 By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national context"	17.18.1 Proportion of sustainable development indicators produced at the national level with full disaggregation when relevant to the target, in accordance with the Fundamental Principles of Official Statistics 17.18.2 Number of countries that have national statistical legislation that complies with the Fundamental Principles of Official Statistics 17.18.3 Number of countries with a national statistical plan that is fully funded and under implementation, by source of funding	UNSD, PARIS21, Regional Commissions, World Bank  PARIS21



## Annex 2. Summary of status of Regional Sea strategic documents, assessments, indicators and databases<sup>75</sup>

Regional Sea	Strategic documents	Reporting and Assessments	Indicators and monitoring	Clearing Houses and Databases
Wider Caribbean – Caribbean Environment Programme <a href="http://cep.unenvironment.org/">http://cep.unenvironment.org/</a>	Cartagena Convention and its Protocols			
	Wider Caribbean Action Plan			Maritime Traffic in the Wider Caribbean Region <sup>76</sup> - a comprehensive GIS-based database
	Strategic Action Programme for the Caribbean Sea	Reporting template for the Cartagena Convention and its Protocols - process indicators relating to policy-(every 2 yrs)	Process indicators for the Cartagena Convention and its Protocols	Caribbean Marine Protected Area Management (CaMPAM) Network <sup>77</sup>
	Strategic Action Programme for the Gulf of Mexico Large Marine Ecosystems	TDA (2011)	Coastal water quality monitoring linked to the 2018 State of the Convention Area Report	Marine Mammal database and maps, hosted by the SPAW RAC <sup>78</sup> , a bibliographic database
	Regional Action Plan on Marine Litter Management (RAPMaLi)	Development of the State of Convention Area Report (under LBS Protocol) – process underway (4-6yrs)		Marine Mammal Interactive Mapping Tool <sup>79</sup>
Mediterranean Action Plan <a href="http://web.unenvironment.org/UNEnvironmentmap/">http://web.unenvironment.org/UNEnvironmentmap/</a>	Barcelona Convention and its Protocols	Barcelona Convention and its Protocols reporting every 2 years	Reporting template and indicators for national reports to the Barcelona Convention and Protocols (every 2 years)	Barcelona Convention, and Pollution load and monitoring databases only available to Contracting Parties and UN ENVIRONMENT/MAP
	Mediterranean Action Plan (revised)			
	Strategic Action Programmes (SAP-Med and SAP-Bio)	TDA (2001) and SAP-Med (Pollution) implementation status (2015)	Pollution load (NBB and PRTR) online reporting	INFO/RAC InfoMAP and GIS to integrate all data. (password protected, still under development) <sup>80</sup>
	Mid-Term Strategy 2016-2021	Ecosystem Approach -Quality Status Report (first in 2017 and every 6 years after)	MEDPOL Pollution database (reporting from countries every year)	Climate Adaptation and ICZM Portal (funded by GEF project, 2014) <sup>81</sup>
	Ecosystem Approach/Integrated Monitoring and Assessment Programme (IMAP)			

<sup>75</sup> From UNEP (2014) Summary of regional indicator system (UNEP/EARS/WG.1/INF5) and UNEP (2016) Regional Seas implementation and monitoring of the Sustainable Development Goals (SDGs) (UNEP/WBRS.18/2), plus Regional Seas web-sites

<sup>76</sup> <http://www.caribbeanmaritimetraffic.org/>

<sup>77</sup> <http://campam.gcfi.org/CaribbeanMPA/CaribbeanMPA.php>

<sup>78</sup> [www.car-spaw-rac.org](http://www.car-spaw-rac.org)

<sup>79</sup> <http://www.car-spaw-rac.org/?-SPAW-RAC-Mapping-Application->

<sup>80</sup> <http://www.geo.info-rac.org/>

<sup>81</sup> <http://climvar.grid.unep.ch/>

Regional Sea	Strategic documents	Reporting and Assessments	Indicators and monitoring	Clearing Houses and Databases
	<p>Mediterranean Sustainable Development Strategy (MSSD) 2016-2025</p> <p>Several thematic Regional Action Plans and Strategies (e.g. SCP, Offshore, Marine Litter, Pollution from Ships, Ballast Water, Biodiversity)</p> <p>Mediterranean Sustainable Development Strategy (MSSD) 2016-2025</p> <p>Several thematic Regional Action Plans and Strategies (e.g. SCP, Offshore, Marine Litter, Pollution from Ships, Ballast Water, Biodiversity)</p>	<p>State of the Mediterranean Marine and Coastal Environment (2012)</p> <p>State of Environment and Development (2005, 2009, 2019)</p> <p>EEA-UN ENVIRONMENT/MAP joint report Horizon 2020 Mediterranean report (2014, 2019)</p>	<p>Ecosystem Approach/IMAP 26 adopted indicators (database and reporting under development)</p> <p>MSSD indicators (from global databases analysed by Plan Bleu)</p>	<p>Aquifer GIS (UNESCO-IHP, funded by GEF project, 2014)<sup>82</sup></p> <p>Pollution Risk Assessment and Response GIS<sup>83</sup> (REMPEC and IMO)</p> <p>Biodiversity GIS<sup>84</sup> (SPA/RAC)</p> <p>MAPAMED Marine Protected Area GIS (MedPan and SPA/RAC) moving to new web-site in 2018</p>
<p>East Asian Seas</p> <p>Coordinating Body on the Seas of East Asia</p> <p><a href="http://www.cobsea.org/">http://www.cobsea.org/</a></p>	<p>East Asian Seas Action Plan</p> <p>COBSEA Strategic Directions 2017-2021</p> <p>Strategic Action Programmes for Arafura and Timor Seas, South China Sea, Sulu-Celebes</p> <p>PEMSEA (Partnership for Environment Management of the Seas of East Asia) Sustainable Development Strategy for the Seas of East Asia</p> <p>Coral Triangle Initiative Regional Plan of Action</p>	<p>State of the Marine Environment Report for the East Asian Seas (2009)</p> <p>The State of the Coasts (SOC) reporting system</p> <p>Integrated Information Management System (IIMS)</p>	<p>- The SOC uses a series of process, social, economic and environmental indicators as a basis to measure existing conditions at an ICM site as well as to determine changes that occur overtime. Details on the indicators can be accessed through <a href="http://www.pemsea.org/publications/guidebook-state-coasts-reporting">http://www.pemsea.org/publications/guidebook-state-coasts-reporting</a>.</p>	<p>The SOC reporting system is developed and owned by the local governments. Except for the published report, data collected for the indicators are consolidated and maintained by the local government.</p> <p>The use of the Integrated Information Management System, a decision support system and a relational environmental database, is also being promoted in ICM sites. This will allow governments to systematically store data sets, facilitate retrieval and generation of outputs such as state of the coasts or state of environment, which can aid in planning and decision making for coastal and marine and river basin management.</p>

<sup>82</sup> [http://www.inweb.gr/index.php?option=com\\_wrapper&view=wrapper&Itemid=220](http://www.inweb.gr/index.php?option=com_wrapper&view=wrapper&Itemid=220)

<sup>83</sup> <http://medgismar.rempec.org/>

<sup>84</sup> <http://medgis.medchm.net/>

Regional Sea	Strategic documents	Reporting and Assessments	Indicators and monitoring	Clearing Houses and Databases
Northwest Pacific Northwest Pacific Action Plan <a href="http://www.nowpap.org/">http://www.nowpap.org/</a>	Northwest Pacific Action Plan			
	NOWPAP Medium-term Strategy, 2012-2017			
	Ecological Objectives (under development)	SOMER (2007, 2014) <sup>85</sup>	Indicators for Ecological Objectives under development	Data and Information Network Regional Activity Centre DINRAC is responsible for data sharing: <a href="http://dinrac.nowpap.org">http://dinrac.nowpap.org</a>
	Strategic Action Programme for the Yellow Sea Large Marine Ecosystem			
	PEMSEA Sustainable Development Strategy for the Seas of East Asia			
East Africa Region <a href="http://web.UNEnvironment.org/nairobi-convention/">http://web.UNEnvironment.org/nairobi-convention/</a>	Nairobi Convention and its Protocols	Nairobi Convention and its Protocols reporting every 2 years	Reporting template and indicators for national reports to the Nairobi Convention and its Protocols	Nairobi Convention Clearing House mechanism, with hubs for all countries
	East African Seas Action Plan			
	Strategic Action Programme on Land-based Activities for the Western Indian Ocean	WIO-Lab SAP (2009)	WIO-LAB SAP indicators (process, stress reduction, environmental status)	
	Strategic Action Programme for Aglhus/Somali Current Large Marine Ecosystems	Regional State of the Coast Report Western Indian Ocean (2015)		
	2018-2022 Work-Programme	WIO-Lab TDA		
Caspian Sea The Tehran Convention <a href="http://www.tehranconvention.org/">http://www.tehranconvention.org/</a>	Tehran Convention and its Protocols			
	Strategic Action Programme for the Caspian Sea			
Black Sea The Commission on the Protection of the Black Sea Against Pollution	Bucharest Convention	State of Environment Report every 5 years (2003, 2008, 2013)	Black Sea Integrated Monitoring and Assessment Programme 2017- 2022 (BSIMAP) -In the Black Sea region, the indicators were selected according to the DPSIR framework; still the process of elaboration of indicators to express	The Black Sea Information System (BSIS) includes a database, developed recently within a project funded by EC-DG Environment (Baltic2Black). The database is dedicated to the collection of data for pollution; it is hosted by its
	Black Sea Action Plan			
	Strategic Action Programme for the Black Sea	-The assessment report is coupled with the implementation of the SAP-Report on the Implementation		

<sup>85</sup> [http://dinrac.nowpap.org/documents/NOWPAP\\_POMRAC\\_SOMER.pdf](http://dinrac.nowpap.org/documents/NOWPAP_POMRAC_SOMER.pdf)

Regional Sea	Strategic documents	Reporting and Assessments	Indicators and monitoring	Clearing Houses and Databases
<a href="http://www.blacksea-commission.org/main.asp">http://www.blacksea-commission.org/main.asp</a>		of the Black Sea Strategic Action Plan (BBSAP)	the status, pressures and impacts for the marine environment is ongoing in order to be further harmonized with EEA and MSFD indicators	developer, Ukrainian Scientific Centre for Ecology of the Sea (UkrSCES) that function as the Regional Activity Centre for Pollution Monitoring and Assessment (PMA RAC) and is available online at <a href="http://rdbp.sea.gov.ua">http://rdbp.sea.gov.ua</a> .
Red Sea and Gulf of Aden	The Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA) <a href="http://www.persga.org/index.php">http://www.persga.org/index.php</a>	Jeddah Convention Strategic Action Programme for the Red Sea and Gulf of Aden	State of Marine Environment Report (2006, 2015)	State and pressure indicators for SOMER Further indicators under development, and limited data collection from countries
ROPME Sea Area	Regional Organisation for Protection of the Marine Environment (ROPME) <a href="http://ropme.org/">http://ropme.org/</a>	Kuwait Convention and its Protocols Kuwait Action Plan Ecosystem-based Management strategy (under development)	State of the Marine Environmental Report (SOMER) 1999, 2000, 2003, 2013 report based in DPSIR approach in line with GEO reports	SOMER indicators, with data regular data collection ROMPE Integrated Information System (RIIS) database ( <a href="http://ropme.org/23_RIIS_EN.cix">http://ropme.org/23_RIIS_EN.cix</a> )
Southeast Pacific <a href="http://www.cpps-int.org/">http://www.cpps-int.org/</a>	Lima Convention and its Protocols Southeast Pacific Action Plan Galapagos Commitment for the XXI Century (2012)	Compilation of 158 assessment documents for the region <sup>86</sup>	Monitoring and impact indicators These indicators are set up for a biannual period but evaluated annually. Systematic data collection program of annual regional	ATLAS of metadata under development for different databases (distribution and whales, sharks and marine turtles,) oceanographic data from regional cruises, pollution, marine protected areas

<sup>86</sup> <http://cpps.dyndns.info/cpps-docs-web/planaccion/biblioteca/pordinario/>

Regional Sea	Strategic documents	Reporting and Assessments	Indicators and monitoring	Clearing Houses and Databases
	Regional Integrated Ocean Policy (may be developed)		oceanographic cruises ongoing for 14 years,	
Pacific Secretariat of the Pacific Environment Programme <a href="https://www.sprep.org/">https://www.sprep.org/</a>	Noumea Convention Waigani Convention Pacific Action Plan Pacific Islands Regional Ocean Policy	State of Environment (SoE) Report (2017) State of the Pacific report (2010)	Refining indicators used in the PECCO report and the 2010 State of the Pacific report	Under development
South Asian Seas South Asian Seas Action Plan <a href="http://www.sacep.org/">http://www.sacep.org/</a>	South Asian Seas Action Plan (SASAP) Regional Marine Biodiversity Strategy Strategic Action Programme for Bay of Bengal Large Marine Ecosystem Regional Oil and Chemical Spill Contingency Plan for SAS region (under development) Regional Taskforce for Coral Reef Management in SAS region Regional Tankforce for Ballast Water Management in SAS region (under development)		Indicators based on CBD Aichi targets used	
Baltic Sea Helsinki Commission <a href="http://www.helcom.fi/">http://www.helcom.fi/</a>	Helsinki Convention Baltic Sea Action Plan	State of Environment Reports since the 1980's (latest in 2017)	Since 2009, the state of environment reports were based on integrated indicator-based assessments. HELCOM Monitoring and Assessment Strategy. Core indicators adopted in 2013 (with updates in 2016 and 2017) which are a set of quantitative indicators to be used by all countries in the assessments. The core indicators will be integrated by specific HELCOM assessment tools, which were already used in the previous assessments but need revision	The HELCOM Contracting Parties report the monitoring data to International Council for the Exploration of the Seas (ICES) which is the datahost to HELCOM and the data is available on their web site <a href="http://www.ices.dk/marine-data/dataset-collections/Pages/HELCOM.aspx">http://www.ices.dk/marine-data/dataset-collections/Pages/HELCOM.aspx</a> Also the HELCOM data and map service: <a href="http://www.helcom.fi/GIS/en_GB/HelcomGIS/">http://www.helcom.fi/GIS/en_GB/HelcomGIS/</a>



Regional Sea	Strategic documents	Reporting and Assessments	Indicators and monitoring	Clearing Houses and Databases
Antarctic/Southern Ocean  Commission for the Conservation of Antarctic Marine Living Resources <a href="https://www.ccamlr.org/">https://www.ccamlr.org/</a>	Antarctic Treaty  CCAMLR	Periodic assessments on status and trends of Southern Ocean marine ecosystem  Statistical Bulletin is published annually	The CCAMLR Ecosystem Monitoring Program (CEMP) uses indicator species and environment indicators to detect the effects of changes in krill-based ecosystems caused by the harvesting of Antarctic living marine resources.	Data centre with limited data publicly available <a href="https://www.ccamlr.org/en/data/ccamlr-data">https://www.ccamlr.org/en/data/ccamlr-data</a>  CCAMLR GIS <a href="https://gis.ccamlr.org/home">https://gis.ccamlr.org/home</a>
Arctic  Protection of the Arctic Marine Environment <a href="http://www.pame.is">http://www.pame.is</a>	Arctic Marine Strategic Plan for 2015-2025  Ecological Objectives (under development)			
Northeast Atlantic  OSPAR Commission <a href="http://www.ospar.org/">http://www.ospar.org/</a>	OSPAR Convention  North-East Atlantic Environment Strategy and thematic strategies (2010-2020)  Regional Action Plan for Marine Litter	Quality Status Report (2000, 2010, 2021)  Intermediate Assessment (2017)	OSPAR Joint Assessment & Monitoring Programme (JAMP)  Parameter monitoring data and other information combined into more integrated assessments  Common and candidate indicators agreed (2013)  Most data streams reported annually	OSPAR Data & Information Management System <a href="https://odims.ospar.org/">https://odims.ospar.org/</a> with maps, GIS, metadata and data files

### Annex 3. Regional Seas Core Indicators Set

No	Category of Indicator	Possible regional Seas Coordinated Indicator	SDG 14 (plus SDG 1 SDG 2 others)	TWAP indicators <sup>87</sup>	Desirability in RS
1	Total inputs of nitrogen and phosphorus from agriculture, sewage and atmospheric nitrogen	<b>Chlorophyll a concentration</b> as an indicator of phytoplankton biomass	14.1	Chlorophyll time series; <b>DIN, DIP</b> (modelled data) ( <b>both concentration and flux</b> )	Med / BS/ NOWPAP/ ROPME / SACEP / HELCOM / Nairobi
2	Inputs of marine chemical pollution Trends for selected priority chemicals	Trends for selected <b>priority chemicals including POPs and heavy metals</b>	14.1	POPS (Persistent Organic Pollutants) status	NOWPAP /Nairobi / BS/ CPPS
3	Overall levels of marine litter Quantification of beach litter items	Quantification <b>and classification</b> of <b>beach litter</b> items	14.1	Marine Plastic Litter	NOPAP / HELCOM/ PERSGA /Nairobi
4	Ocean warming	Annual mean <b>sea surface temperature</b> (25m below the surface)	14.3	Sea Surface Temperature (SST)	Agreed
5	Fish landings	Fish catches within EEZs (tonnes) – total capture production	14.4	Fish landings and Landed Value, Fishing effort, Fish stock status, Primary Production required, Marine Trophic Index, Fishing in Balance Index	FAO to provide inputs
6	Aquaculture	Application of risk assessment to account for pollution and biodiversity impacts	14.4		FAO to provide inputs
7	Aquaculture	Destruction of habitat due to aquaculture			FAO to provide inputs

<sup>87</sup> A detailed table is presented below.

No	Category of Indicator	Possible regional Seas Coordinated Indicator	SDG 14 (plus SDG 1 SDG 2 others)	TWAP indicators <sup>87</sup>	Desirability in RS
8	Population pressure / urbanization	<b>Length of coastal modification and km<sup>2</sup> of coastal reclamation</b>	14.2	Rural/ Urban population, %poor,	ROPME / MAP / NOWPAP/ SACEP
9	Eutrophication status	<b>Locations and frequency of algal blooms reported</b>	14.1	Index of coastal eutrophication	agreed
10	Pollution hot spots <sup>88</sup>	1) Concentration of selected <b>pollutant</b> contamination in biota and sediments and temporal trends 2) Number of hotspots	14.1	Floating plastic debris	agreed
11	Ocean acidification	1) Aragonite saturation 2) pH 3) Alkalinity	14.3	Pteropods at risk:	ROPME (pH)
12	Level of exploitation of commercial fisheries	FAO stock status: % stocks overfished compared to MSY	14.4	Catch Stock Status, Marine Trophic Index, Fishing in Balance Index	FAO to provide inputs
13	Species replacement as a consequence of capture fisheries	Marine trophic index	14.5	Marine Trophic Index	FAO to provide inputs
14	Endangered species	Distribution of Red List Index species	14.5		NOWPAP
15	Loss of critical habitat	Trends in critical habitat extent and condition	14.5	Mangrove status; Reefs at Risk Index; seagrass; salt marshes	NOWPAP / CPPS

<sup>88</sup> Actual pollution hotspot and source of hotspot

No	Category of Indicator	Possible regional Seas Coordinated Indicator	SDG 14 (plus SDG 1 SDG 2 others)	TWAP indicators <sup>87</sup>	Desirability in RS
16	National Action Plans to reduce input from LBS	% National action plans ratified / operational	14.1	Transboundary Legal Instruments	agreed
17	Waste water treatment facilities	1) % coastal urban population connected to sewage facilities 2) % of waste water facilities complying with adequate standards 3) % of untreated waste water	14.1	NA	agreed
18	Incentive to reduce marine litter at source	1) % port waste reception facilities available 2) Incentives to reduce land based sources <sup>89</sup> 3) Amount of recycled waste on land (%)	14.1	NA	agreed
19	Climate change adaptation	1) % national adaptation plans in place 2) Sector based national adaptation plans 3) Number of existing national and local coastal and marine plans incorporating climate change adaptation	14.3	Transboundary Legal Instruments	agreed
20	Fish harvested within safe ecological limits	Fisheries measures in place (by-catch limits, area-based closures, recovery plans, capacity)	14.4	Catch Stock Status, Marine Trophic Index, Fishing in Balance Index; Fishery Production Potential of LMEs	FAO to provide inputs

<sup>89</sup> In monetary terms

No	Category of Indicator	Possible regional Seas Coordinated Indicator	SDG 14 (plus SDG 1 SDG 2 others)	TWAP indicators <sup>87</sup>	Desirability in RS
		reduction measures) and multilateral/bilateral fisheries management arrangements			
21	Critical marine habitat under protection	% Marine protected areas designated	14.5	Change in Protected Area Coverage	agreed
22	National ICZM in place	National ICZM guidelines and enabling legislation adopted	14.2		agreed

\* Fishery-related indicators are highlighted in Blue

## Annex 4. Example partial mapping of targets and indicators for SDG 14

Below is an example mapping some of the main objectives, targets and indicators from the Mediterranean Action Plan for SDG 14.1. It includes the following:

- a) The Ecosystem approach ecological objectives, operational objectives, targets and indicators as adopted by the Contracting Parties of the Barcelona Convention:
  - o Decision IG.20/4: Implementing MAP ecosystem approach roadmap: Mediterranean Ecological and Operational Objectives, Indicators and Timetable for implementing the ecosystem approach roadmap (COP 17, 2012)
  - o Decision IG.21/3 on the Ecosystems Approach including adopting definitions of Good Environmental Status (GES) and targets (COP 18, 2013)
  - o Decision IG.22/7 Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (COP 19, 2016)
- b) The Strategic Action Programme to Address Pollution from Land-Based Activities (SAP-Med) with its thematic targets adopted in 2003

Additional thematic targets are included taken from the detailed analysis of LBS/SAP-MED and Regional Plans commitments for Ecological Objective at the “*Regional meeting on applying methodology for programmes of measures and economic analysis in the NAP update*” in 2015 (UNEP(DEPI)/MED WG.414/3) which include:

- c) Decision IG.19/7 “Regional Plan on the Reduction of BOD from Urban Wastewater”.
- d) Decision IG.19/8 “Regional Plan on the Elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene”.
- e) Decision IG.19/9 “Regional Plan on the Phasing Out of DDT”.
- f) Decision IG.20/8.1 “Regional Plan on the Reduction of Inputs of Mercury”.
- g) Decision IG.20/8.2 “Regional Plan on the Reduction of BOD5 in the food sector”.
- h) Decision IG.20/8.3 Regional Plan on the elimination in the framework of the implementation of Article 15 of the LBS Protocol, 1996 of Alpha hexachlorocyclohexane; Beta hexachlorocyclohexane; Hexabromobiphenyl; Chlordecone; Pentachlorobenzene; Tetrabromodiphenyl ether and Pentabromodiphenyl ether; Hexabromodiphenyl ether and Heptabromodiphenyl ether; Lindane; Endosulfan, Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride
- i) Decision IG.20/9 “Criteria and Standards for bathing waters quality”.
- j) Decision IG.20/10 “Adoption of the Strategic Framework for Marine Litter Management”.
- k) Decision IG.21/7 “Regional Plan on Marine Litter Management in the Mediterranean”.

The synopsis of the 2016 NAP updates presented at the Regional Meeting on NAPs Implementation – Lessons learned and the way forward (UNEP(DEPI)/MED WG.426/3) provided the analysis of common NAP targets and proposed NAP indicators.

It should be noted that in this example, full alignment of targets was not completed where targets overlap between commitments, and further consideration should be given to integrate the objectives and outputs of Decision IG.22/1 UNEP/MAP Mid-Term Strategy 2016-2021, and additional indicators developed such as the Horizon 2020 indicators and the Mediterranean Strategy on Sustainable Development targets and indicators



Regional Sea Strategic and/or Ecological Objective	Regional Sea Operational Objective	Regional Sea Target	Indicators	Strategic document	Monitoring/Reporting mechanism
<b>14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution</b>					
<b>[Indicator 14.1.1. Index of Coastal Eutrophication (ICEP) and Floating Plastic debris Density]</b>					
<b>Eutrophication</b>					
<b>Ecological Objective 5:</b> Human-induced eutrophication is prevented, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms and oxygen deficiency in bottom waters.	<b>Operational Objective:</b> Human introduction of nutrients in the marine environment is not conducive to eutrophication  <b>Operational Objective:</b> Direct effects of nutrient over-enrichment are prevented	<b>[State]</b> 1. Reference nutrients concentrations according to the local hydrological, chemical and morphological characteristics of the un-impacted marine region 2. Decreasing trend of nutrients concentrations in water column of human impacted areas, statistically defined <b>[Pressure/Response]</b> 1. Reduction of BOD emissions from land-based sources 2. Reduction of nutrients emissions from land-based sources  <b>[State]</b> 1. Chl-a concentrations in high-risk areas below thresholds 2. Decreasing trend in chl-a concentrations in high risk areas affected by human activities	Common indicator (CI) 13: Concentration of key nutrients in water column (Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast Related Assessment Criteria (IMAP))  CI 14: Chlorophyll-a concentration in water column (IMAP)	EcAp Decisions IG.20/4, IG.21/3 and IG.22/7	MEDPOL Monitoring Program and new IMAP monitoring under development. Data reported every year from countries  Barcelona Convention Reporting (every 2 years)
<b>Objectives of the LBS Protocol</b>  <b>SAP-MED : Municipal sewage</b>		<b>[Pressure/Response]</b> - Promotion of separate collection of rain waters and municipal wastewaters - Promotion of reuse of treated effluents for the conservation of water resources - Coastal cities and urban agglomerations of more than 100,000 inhabitants are connected to a sewer system - Reduce nutrient inputs, from agriculture and aquaculture practices into areas where these inputs are likely to cause pollution - Dispose all wastewater from industrial installations which are sources of BOD, nutrients and suspended solids	Links to MEDPOL indicators: Biochemical Oxygen Demand in effluents and Chemical Oxygen Demand in effluents Chlorophyll a and Dissolved oxygen Nitrate and other forms of Inorganic Nitrogen in transitional, coastal and marine waters, Nutrients in effluents PH, Salinity, Temperature, transparency	SAP-MED (2003)	
<b>Objectives of the LBS Protocol and the Regional Plan Marine Litter</b>		<b>[Pressure/Response]</b>		Regional Plan Marine Litter Decision IG.21/7	

Regional Sea Strategic and/or Ecological Objective	Regional Sea Operational Objective	Regional Sea Target	Indicators	Strategic document	Monitoring/Reporting mechanism
		<ul style="list-style-type: none"> <li>- Take necessary measures to establish adequate urban sewer and wastewater treatment plants that prevent run-off and riverine inputs of litter</li> </ul>			
<b>Objectives of the LBS Protocol</b>	<b>Regional Plan BOD requirements</b>	<p><b>[Pressure/Response]</b></p> <ul style="list-style-type: none"> <li>- Adopt emission limit values (ELV) for BOD5 in urban wastewater after treatment in accordance with the requirements of the “regional guideline on the reduction of BOD5 from urban waste water”</li> <li>- Enforce the adopted ELVs by monitoring discharges from municipal wastewater treatment plants into the environment</li> <li>- Ensure that all agglomerations of more than 2000 inhabitants collect and treat their urban wastewater before discharging them into the environment</li> <li>- Industrial Food Plants outlined in Appendix I which discharge more than 4 000 PE into water bodies shall meet the following requirements: COD 160 mg/l or TOC 55 mg/l and BOD 30 mg/l</li> <li>- In case the food sector installation discharges into the sewerage system, the competent authorities shall establish ELV and an authorization compatible with the operation and the emission discharge values of the urban waste water treatment plant</li> </ul>	Links to MEDPOL indicators (as above)	<b>Regional Plan BOD</b> Decision IG.19/7 Decision IG.20/8.2	
<b>Objectives of the LBS Protocol</b>	<b>Revised NAP targets (2016)</b>	<p><b>[Pressure/Response]</b></p> <ul style="list-style-type: none"> <li>- Provide XX% population with connection to sewage networks [2019 to 2025]</li> <li>- Provide XX% of agglomerations in excess of 2000 inhabitants with wastewater collection and treatment [2019 to 2025]</li> <li>- Reduce by XX% of BOD discharged to water bodies [2018 to 2021]</li> <li>- Reduce by XX% nutrient input from agricultural activities discharged to water bodies [2019 to 2020]</li> </ul>	<p>Proposed NAP Indicators:</p> <ul style="list-style-type: none"> <li>- Share of population with access to an improved sanitation system (total, urban, rural)</li> <li>- Volume of wastewater collected, of which volume of wastewater treated (in population equivalent)</li> <li>- Wastewater treated (in population equivalent)</li> <li>- Total loads of BOD5, Total nitrogen, Total phosphorus discharged to the Mediterranean Sea from urban wastewater treatment</li> </ul>	2016 Revised NAPS  UNEP(DEPI)/MED WG.426/3	

Regional Sea Strategic and/or Ecological Objective	Regional Sea Operational Objective	Regional Sea Target	Indicators	Strategic document	Monitoring/Reporting mechanism
			- Concentration of key nutrients in the water column		
<b>Marine Litter</b>					
<b>Ecological Objective 10:</b> Marine and coastal litter do not adversely affect coastal and marine environment	<b>Operational Objective:</b> 10.1 The impacts related to properties and quantities of marine litter in the marine and coastal environment are minimized  10.2 Impacts of litter on marine life are controlled to the maximum extent practicable	<b>[State]</b> Decreasing trend in the number of/amount of marine litter (items) deposited on the coast  <b>[State]</b> Decreasing trend in the number/amount of marine litter items in the water surface and the seafloor  <b>[State]</b> Decreasing trend in the cases of entanglement or/and a decreasing trend in the stomach content of the sentinel species.	CI 22: Trends in the amount of litter washed ashore and/or deposited on coastlines (IMAP) CI 23: Trends in the amount of litter in the water column including microplastics and on the seafloor (IMAP) CI 24: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, and marine turtles (IMAP)	EcAp Decisions IG.20/4, IG.21/3 and IG.22/7	MEDPOL Monitoring Program and new IMAP monitoring under development. Data reported every year from countries  Barcelona Convention Reporting (every 2 years)
<b>Objectives of the LBS Protocol</b>  <b>SAP Theme:</b> Urban Solid Waste		<b>[Pressure/response]</b> - Urban solid waste management is based on reduction at source with the following waste hierarchy: prevention, re-use, recycling, recovery, and environmentally sound disposal - Establish environmentally suitable and economically feasible systems of collection and disposal of urban solid waste in cities of more than 100,000 inhabitants		SAP-Med (2003)	SAP-Med Evaluation (2015) based on data from acquired from the pollutant loads releases into the marine environment (NBB) 2003, 2008, 2013 and the latest E-PRTR
<b>Overall Objectives</b> (a) Prevent and reduce to the minimum marine litter pollution in the Mediterranean and its impact on ecosystem services, habitats, species in particular the endangered species, public health and safety; (b) Remove to the extent possible already existent marine litter by using environmentally respectful methods;		<b>[Pressure/Response]</b> - Take necessary measures to establish adequate urban sewer and wastewater treatment plants that prevent run-off and riverine inputs of litter - Minimization of impacts related to properties and quantities of marine litter in the marine and coastal environments - Control of impacts of litter on marine life to the maximum extent practicable		Regional Plan Marine Litter Decision IG.21/7	MEDPOL Monitoring Program and new IMAP monitoring under development. Data reported every year from countries  Barcelona Convention

Regional Sea Strategic and/or Ecological Objective	Regional Sea Operational Objective	Regional Sea Target	Indicators	Strategic document	Monitoring/Reporting mechanism
	<p>(c) Enhance knowledge on marine litter; and</p> <p>(d) Achieve that the management of marine litter in the Mediterranean is performed in accordance with accepted international standards and approaches as well as those of relevant regional organizations and as appropriate in harmony with programmes and measures applied in other seas.</p>	<ul style="list-style-type: none"> <li>- Reduction of fraction of plastic packaging waste that goes to landfill or incineration</li> <li>- Ensuring adequate urban sewer systems, WWTP and waste management systems to prevent run-off and riverine inputs of Marine Litter</li> <li>- Application of cost effective measures to prevent any marine littering from dredging activities</li> <li>- Adopt preventive measures to minimize inputs of plastic in the marine environment</li> <li>- Enforce measures to combat illegal dumping including littering on beaches and illegal sewage disposal in coastal zones and rivers</li> <li>- Implement programmes on regular removal and sound disposal of accumulations/hotspots of marine litter</li> <li>- Implement adequate waste reducing/reusing/recycling measures in order to reduce the fraction of plastic packaging waste that goes to landfill or incineration without energy recovery</li> <li>- Close to the extent possible existing illegal solid waste dump sites</li> <li>- Remove existing accumulated litter from Specially Protected Areas of Mediterranean Importance (SPAMI) and litter impacting endangered species</li> </ul>			Reporting (every 2 years)
<p><b>Objectives of the LBS Protocol</b></p> <p><u><b>NAP targets (2016)</b></u></p>		<p><b>[Pressure/Response]</b></p> <ul style="list-style-type: none"> <li>- Provide for the collection of XX% of solid waste [2019 to 2025]</li> <li>- Construct XX municipal solid waste landfills [2019 to 2025]</li> <li>- Adopt good practices in solid waste management including waste reduction, sorting, recycling, recovery, and reuse [2020 to 2025]</li> <li>- Regulate/reduce usage/ discharge of XX% of fraction of plastics [2015 to 2025]</li> <li>- Close/ remediate XX% of illegal solid waste dump sites [2019 to 2020]</li> <li>- Reduce XX% of disposed marine litter on beaches/sea [2019 to 2025]</li> </ul>	<p>Proposed NAP indicators:</p> <ul style="list-style-type: none"> <li>- Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities</li> <li>- Share of recycled, landfilled and incinerated municipal waste with respect to collected amount</li> <li>- Amounts/trends of marine litter washed ashore and/or deposited on coastlines, including analysis of its composition,</li> </ul>	<p>2016 Revised NAPS</p> <p>UNEP(DEPI)/MED WG.426/3</p>	<p>MEDPOL Monitoring Program and new IMAP monitoring under development. Data reported every year from countries</p> <p>Barcelona Convention Reporting (every 2 years)</p>

Regional Sea Strategic and/or Ecological Objective	Regional Sea Operational Objective	Regional Sea Target	Indicators	Strategic document	Monitoring/Reporting mechanism
		<ul style="list-style-type: none"> <li>- Prevent riverine run-off of marine litter to the sea by XX% [2019 to 2020]</li> </ul>	<ul style="list-style-type: none"> <li>- spatial distribution and, where possible, source.</li> <li>- Index of coastal eutrophication and floating plastic debris density</li> <li>- Share of existing illegal solid waste dumpsites on land that have been closed (in past 10 years) with respect to the total number</li> </ul>		
<b>Other Contaminants</b>					
<p>EO 9: Contaminants cause no significant impact on coastal and marine ecosystems and human health (Ecosystem Approach Roadmap)</p>	<p><b>Operational Objective:</b></p> <p>9.1 Concentration of priority contaminants is kept within acceptable limits and does not increase</p> <p>9.2 Effects of released contaminants are minimized</p> <p>9.3 Acute pollution events are prevented and their impacts are minimized</p> <p>9.4 Levels of known harmful contaminants in major types of seafood do not exceed established standards</p> <p>9.5 Water quality in bathing waters and other recreational areas does not</p>	<p><b>[State]</b> Concentrations of specific contaminants below EACs or below reference concentrations<sup>25</sup></p> <p>No deterioration trend in contaminants concentrations in sediment and biota from human impacted areas, statistically defined.</p> <p><b>[Pressure]</b> Reduction of contaminants emissions from land-based sources</p> <p><b>[State]</b> Contaminants effects below threshold</p> <p>Decreasing trend in the operational releases of oil and other contaminants from coastal, maritime and off-shore activities.</p> <p><b>[Pressure]</b> Decreasing trend in the occurrences of acute pollution events</p> <p><b>[State]</b> Concentrations of contaminants are within the regulatory limits set by legislation</p> <p><b>[State]</b> Decreasing trend in the frequency of cases of seafood samples above regulatory limits for contaminants</p> <p><b>[State]</b> Increasing trend in the percentage of intestinal enterococci concentration measurements within established standards</p>	<p>CI 17: Concentration of key harmful contaminants measured in the relevant matrix (IMAP)</p> <p>CI 18: Level of pollution effects of key contaminants where a cause and effect relationship has been established (IMAP)</p> <p>CI 19: Occurrence, origin (where possible), extent of acute pollution events (e.g. slicks from oil, oil products and hazardous substances), and their impact on biota affected by this pollution (IMAP)</p> <p>CI 20: Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (IMAP)</p> <p>CI 21: Percentage of intestinal enterococci concentration measurements within established standards (IMAP)</p>	<p>EcAp Decisions IG.20/4, IG.21/3 and IG.22/7</p>	<p>MEDPOL Monitoring Program and new IMAP monitoring under development. Data reported every year from countries</p> <p>Barcelona Convention Reporting (every 2 years)</p>

Regional Sea Strategic and/or Ecological Objective	Regional Sea Operational Objective	Regional Sea Target	Indicators	Strategic document	Monitoring/Reporting mechanism
	undermine human health				
<b>Objectives of the LBS Protocol</b> <b>SAP-MED</b>	POPS  Heavy Metals (Hg, Cd, Pb, Zn, Cu, Cr)  Organometallic Compounds  PAH Organohalogen compounds  Radioactive substances  Hazardous wastes  Nutrients and suspended solids  Physical Alterations and Destruction of Habitats	<p><b>[Pressure/Response]</b></p> <ul style="list-style-type: none"> <li>- Application of BAT and BEPs for environmentally sound management of POPs</li> <li>- Concentration of priority contaminants in biota, sediment or water is kept within acceptable limits</li> <li>- Phase out discharges and emissions and losses of mercury, cadmium and lead</li> <li>- Eliminate to the fullest possible extent pollution of the Mediterranean Sea caused by discharges, emissions and losses of zinc, copper and chrome</li> <li>- Phase out to the fullest possible extent discharges, emissions and losses of organomercuric compounds and reduce those of organolead and organotin compounds</li> <li>- Phase out inputs of PAHs</li> <li>- Eliminate to the fullest possible extent pollution caused by discharges, emissions and losses of organohalogen compounds</li> <li>- Eliminate to the fullest possible extent inputs of radioactive substances</li> <li>- Dispose all hazardous wastes in a safe and environmentally sound manner</li> <li>- Reduce nutrient inputs, from agriculture and aquaculture practices into areas where these inputs are likely to cause pollution</li> <li>- Dispose all wastewater from industrial installations which are sources of BOD, nutrients and suspended solids</li> <li>- Safeguard of the ecosystem function and maintenance of the integrity and biological diversity of species and habitats</li> <li>- Restore marine and coastal habitats that have been adversely affected by anthropogenic activities</li> </ul>		SAP-Med (2003)	SAP-Med Evaluation (2015) based on data from acquired from the pollutant loads releases into the marine environment (NBB) 2003, 2008, 2013 and the latest E-PRTR
<b>Objectives of the LBS Protocol</b>		- Industrial Food Plants outlined in Appendix I which discharge more than 4000 PE into water		<b>Regional Plan BOD</b>	MEDPOL Monitoring



Regional Sea Strategic and/or Ecological Objective	Regional Sea Operational Objective	Regional Sea Target	Indicators	Strategic document	Monitoring/Reporting mechanism
Regional Plan BOD requirements		<p>bodies shall meet the following requirements:            COD 160 mg/l or TOC 55 mg/l and BOD 30 mg/l</p> <ul style="list-style-type: none"> <li>- In case the food sector installation discharges into the sewerage system, the competent authorities shall establish ELV and an authorization compatible with the operation and the emission discharge values of the urban waste water treatment plant</li> </ul>		Decision IG.19/7 Decision IG.20/8.2	<p>Program and new IMAP monitoring under development. Data reported every year from countries</p> <p>Barcelona Convention Reporting (every 2 years)</p>
<p><b>Objectives of the LBS Protocol</b></p> <p>Regional Plan Mercury requirements</p>		<ul style="list-style-type: none"> <li>- Prohibit the installation of new Chlor alkali plants using mercury cells and vinyl chloride monomer production plants using mercury as a catalyst</li> <li>- Adopt National ELVs for mercury emissions based on values included in the “regional plan on the reduction of inputs of mercury” from other than Chlor Alkali industry</li> <li>- Cease releases of mercury from the activity of Chlor alkali plants</li> <li>- Identify existing sites which have been historically contaminated with mercury</li> <li>- Apply environmentally sound management measures to sites which have been historically contaminated with mercury</li> <li>- Achieve environmentally sound management of metallic mercury from the decommissioned plants</li> <li>- Progressively reduce total releases of mercury (to air, water and to products) from existing Chlor alkali plants until their final cessation</li> <li>- Take appropriate measures to isolate and contain mercury containing wastes</li> </ul>		Decision IG.20/8.1 “Regional Plan on the Reduction of Inputs of Mercury”.	
<p><b>Objectives of the LBS Protocol</b></p> <p><b>Bathing Water Quality COP Decision requirements</b></p>		<ul style="list-style-type: none"> <li>- Prohibit and/or take legal and administrative measures necessary to eliminate the production and use, import and export of POPs and their wastes</li> <li>- Identify stock piles consisting of or containing POPs</li> <li>- Phase out inputs of the 9 pesticides and PCBs and reduce inputs of unwanted contaminants: hexachlorobenzene, dioxins and furans</li> </ul>		Decision IG.20/9 “Criteria and Standards for bathing waters quality”.	
<p><b>Objectives of the LBS Protocol</b></p>		<ul style="list-style-type: none"> <li>- Phase out/reduce/control quantities or concentrations of POPs (PCB, pesticides) by 2025</li> </ul>	<u>Proposed NAP Indicators:</u>	2016 Revised NAPS	MEDPOL Monitoring

Regional Sea Strategic and/or Ecological Objective	Regional Sea Operational Objective	Regional Sea Target	Indicators	Strategic document	Monitoring/Reporting mechanism
<b><u>NAP targets (2016)</u></b>		<ul style="list-style-type: none"> <li>- Phase out/reduce discharges of PAHs by 2025</li> <li>- Reduce discharge of hazardous substances from industrial plants (apply BAT/BEP) by XX% or dispose in a safe manner [2020 to 2025]</li> <li>- Reduce discharge of heavy metals (mercury, cadmium, lead, zinc, copper, chromium) by XX% [2019 to 2025]</li> <li>- Decontaminate XX% of sites polluted with mercury or phase out/isolate mercury from closed plants by 2025</li> </ul>	<ul style="list-style-type: none"> <li>- Number of substances covered by national standards (ELV), for point source discharges into water or air</li> <li>- Concentration of key harmful contaminants in the relevant matrix (biota, sediment, seawater)</li> <li>- The amount of hazardous wastes environmentally soundly managed or exported by Y categories and by disposal/recovery operation (D- disposal, R- recovery, as well as treated in waste to energy facilities)</li> <li>- Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment</li> <li>- Share of contaminated sites with toxic, persistent and liable to accumulate substances in the coastal area which have been closed/remediated including spills from industrial accidents</li> </ul>	UNEP(DEPI)/MED WG.426/3	<p>Program and new IMAP monitoring under development. Data reported every year from countries</p> <p>Barcelona Convention Reporting (every 2 years)</p>

## Annex 5. Draft Indicator Assessment Template

The purpose of an indicator assessment template is to gather compile the results of the indicator assessment in a comparable manner for the purpose of compiling information for regional assessments. A similar approach to the template below was used for the 2017 OSPAR Intermediate Assessment (<https://oap.ospar.org/en/ospar-assessments/intermediate-assessment-2017/>) and Mediterranean Quality Status Report (<https://www.medqsr.org/>).

By using indicator assessment factsheets, this will enable future assessments to be based on indicators assessed at the regional level that will allow assessments to be linked via metadata to the underlying datasets, methods, authors, increasing transparency, and repeatability.

### Common Indicator Assessment Fact Sheet Template

Content	Actions	Guidance
<b>General</b>		
Reporter	Text	
Geographical scale of the assessment	Select as appropriate	Regional: Eco-regional: Sub-regional: Please, provide appropriate information
Contributing countries	Text	List of contributing countries (write the countries which available data and information for the assessment)
Link to SDG Target (if appropriate)	Text	
Ecological Objective or target	Write the exact text, number	Name of Ecological Objective(s). <i>Select from check-list of all EO (see Annex I)</i>
Indicator	Write the exact text, number	Name of Indicator. <i>Select from check-list of all Common Indicators</i>
Indicator Assessment Factsheet Code	Text	
<b>Rationale/Methods</b>		
Background (short)	Text (300 words)	Background and rationale for the indicator. Identify: <ul style="list-style-type: none"> <li>• What are the main concerns about this indicator?</li> <li>• What is the indicator policy context?</li> <li>• What are the key pressures and drivers?</li> </ul> Provide images for the background section in .jpg format of at least medium/high resolution. Indicate: <code>copyright_year_themelocationcountry_copyright.jpg</code> (files to be supplied in the Metadata folder and described here, see above)
Assessment methods	Text (200-300 words), images, formulae, URLs	Description of methods, periods assessed, rules, etc. used to calculate the indicator and deliver the assessment with the associated files: Image.jpg (formulas, schemes) Table/dataBayAlgeria.xlsx (Original and processed data, including a reference to the sources), URL links to relevant guidelines, assessments, methods, etc. (for the later include a direct access icon in the Metadata folder or a text file with the instructions to follow) (files to be supplied in the Metadata folder and described here, see above)

Content	Actions	Guidance
Background ( <i>extended</i> )	Text (no limit), images, tables, references	Additional background with technical background and include scientific references <ul style="list-style-type: none"> <li>• This section might include Figures and Tables</li> <li>• This section needs to include References (Regional Seas Convention Reports, Relevant Books, Scientific References)</li> </ul> (files to be supplied in the Metadata folder and described here, see above)
<b>Results</b>		NOTE: If the assessment has been performed at different geographical scales, include the results and conclusions accordingly.
Results and Status, including trends (brief)	Text (500 words), images	Summary description of key assessment results by assessment/reporting units/temporal trends (might include significant maps, images) (files to be supplied in the Metadata folder and described here, see above)
Results and Status, including trends (extended)	Text (no limit), figures, tables	Additional detailed description of assessment results with graphic, such as maps, trends graphics, etc.: <ul style="list-style-type: none"> <li>• Full maps of indicator distribution.jpg (Final representations *.jpg, including any GIS layers employed, such *.shp files, WFS)</li> <li>• Trend plots and statistical assessments</li> <li>• Tables</li> </ul> (files to be supplied in the Metadata folder and described here, see above)
<b>Conclusions</b>		
Conclusions (brief)	Text (200 words)	Indicate the main conclusion/s of the assessment of the common indicator, such as relevance for GES achievement within the EO, implications, confidence on the assessment, etc. To note, this section is for a general public audience
Conclusions (extended)	Text (no limit)	Describe the technical and scientific aspects more in details with relevance in the concluded remark with respect to the indicator assessment. This section might include also references. (files to be supplied in the Metadata folder, see above)
Key messages	Text (2-3 sentences or maximum 50 words)	Short descriptions of outcomes, e.g. trends, outcome against assessment threshold values if appropriate, (maximum 3 sentences or 50 words)
Knowledge gaps	Text (200-300 words)	Short description of gaps (monitoring, science, data, methods, etc.)
List of references	Text	

