

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

## **CASE STUDIES SUPPLEMENTARY ANNEX**

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# Case Studies Supplementary Annex

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Appendix 1: See UN Environment (2018). Regional Seas Follow Up and Review of the Sustainable Development Goals (SDGS). Conceptual Guidelines. 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.

Appendix 2: See UN Environment (2018). Regional Seas Follow Up and Review of the Sustainable Development Goals (SDGS). Conceptual Guidelines. Annex 4. Example partial mapping of targets and indicators for SDG 14.

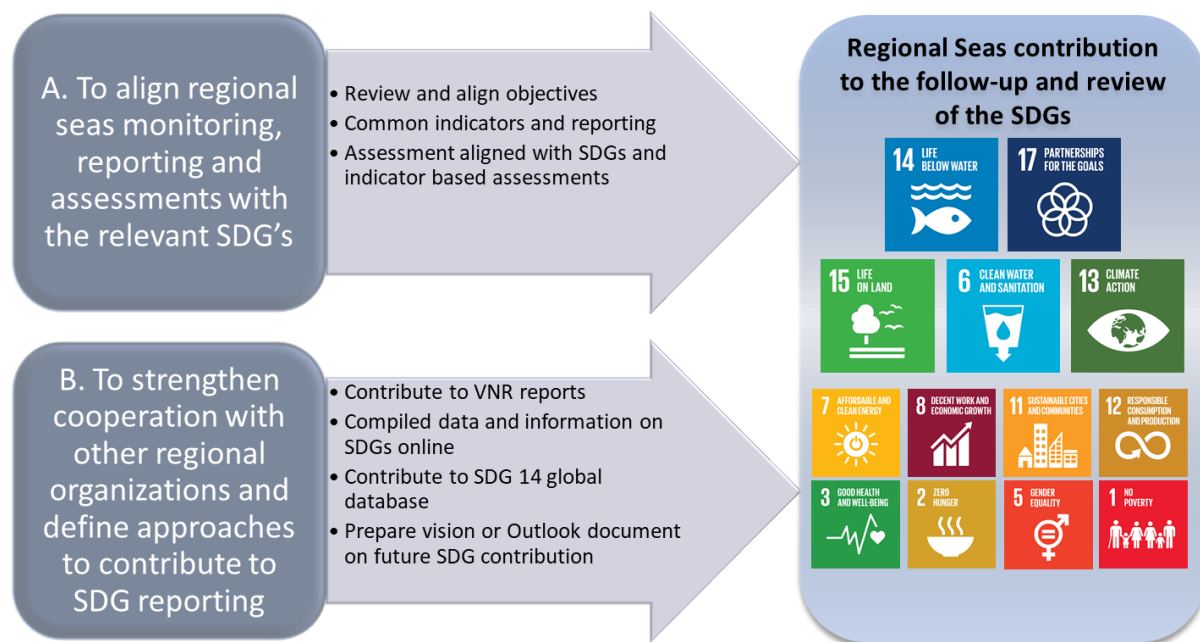
## Objective of the Case Studies

In order to achieve SDGs and implement the recommended regional-level follow-up and review, the Regional Seas Conventions and Action Plans are encouraged to work in three areas: (i) aligning the regional objectives/goals/targets with the relevant SDGs and accelerating the implementation of strategic documents through national and regional action; (ii) setting up a regionally coordinated mechanism to assist the Member States in developing national reports in a coordinated manner, targeting the shared regional seas; (iii) regional partnerships under the global multi-stakeholder partnerships; and (iv) assist the Member State

s in applying the coordinated set of Regional Seas indicators, which are aligned with the SDG indicators (UNEP, 2016b). In 2017 UN Environment published an outlook report “Moving to Strategy and Action: Regional Seas Outlook for the Implementation of the Sustainable Development Goals” presenting the overall steps to be taken for Regional Seas to contribute to SDG follow-up and review.

These case studies complement the “Regional Seas Follow Up and Review of the Sustainable Development Goals (SDGS) – Conceptual Guidelines”, which provides 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. These case studies enable more in-depth analysis for a number of regional seas, with specific suggestions and actions for the future strengthened reporting on the SDGs.

Overall, they address the following two objectives and areas of action presented below.



These case studies were prepared as part of the project implemented by the United Nations Environment Programme and the European Commission, "Integrated Management and Governance Strategies for Delivery of Ocean-related Sustainable Development Goals".

## Acronyms

ABNJ	Marine Areas Beyond National Jurisdiction
ACCOBAMS	Agreement on the Conservation of Cetaceans in the Black Sea Mediterranean Sea and Contiguous Atlantic Area
ASCLME	Agulhas and Somali Current Large Marine Ecosystems
AMCEN	African Ministerial Conference on the Environment
AMCOW	African Ministers' Council on Water
APEC	Asia-Pacific Economic Cooperation
Baltic2Black project/B2	Environmental Monitoring of the Black Sea with focus on nutrient pollution
BAT	Best Available Techniques
BEP	Best Environmental Practice
BOD	Biochemical Oxygen Demand
BDC	OSPAR Biodiversity Committee
BS CP	Black Sea Contingency Plan
BS NGO Network	Black Sea Non-Governmental Organizations Network
BS SAP	Strategic Action Plan for the Environmental Protection and Rehabilitation of the Black Sea
BSC	Black Sea Commission or Commission on the Protection of the Black Sea against Pollution
BSC PS	Black Sea Commission' Permanent Secretariat
BSIMAP	Black Sea Integrated Monitoring and Assessment Program
CARICOM	Caribbean Community
CCAD	Central American Commission for Environment and Development
CEARAC	The Special Monitoring & Coastal Environmental Assessment Regional Activity Centre [of NOWPAP]
CEMP	OSPAR Coordinated Environmental Monitoring Programme
CEP	Caribbean Environment Programme
CBD	Convention on Biological Diversity
CBD AG	Advisory Group on the Conservation of Biological Diversity
CLME	Caribbean Large Marine Ecosystem
COBSEA	Coordinating Body on the Seas of East Asia
COD	Chemical Oxygen Demand
CoG	OSPAR Coordination Group
COP	Community of Practice
CORMON	EcAp Correspondence Groups on Monitoring
CRFM	Caribbean Regional Fisheries Mechanism
DDT	Dichlorodiphenyltrichloroethane
DINRAC	Data and Information Network Regional Activity Centre [of NOWPAP]
DPSIR	Driver-Pressure-State-Impact-Response
EBSA	Ecologically or Biologically Significant Marine Area
EBM	Ecosystem Based Management
EcAp	Ecosystem Approach
ECLAC	UN Economic Commission for Latin America and the Caribbean
EcoQo/EQO	Ecosystem Quality Objective
ECOSOC	United Nations Economic and Social Council
EIHA	OSPAR Environmental Impact of Human Activities Committee
EMODNet	European Marine Observation and Data Network
ESAS AG	Advisory Group on the Environmental Safety Aspects of Shipping
FAO	Food and Agriculture Organization of the United Nations
FARI	Forum for Academic and Research Institutes

FOMLR AG	Advisory Group on the Environmental Aspects of the Management of Fisheries and other Marine Living Resources
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEO	Group on Earth Observations
GEOSS	Global Earth Observation System of Systems
GES	Good Environmental Status
GFCM	General Fisheries Commission for the Mediterranean (GFCM)
GIS	Geographic Information Systems
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
HAB	Harmful Algal Bloom
HASEC	OSPAR Hazardous Substances and Eutrophication Committee
HELCOM	Baltic Marine Environment Protection Commission
HLPF	SDG High-Level Political Forum
HNS	Harmful and Noxious Substance
HORIZON 2020	EU Research and Innovation programme (2014-2020)
IAEA	International Atomic Energy Agency (Monaco)
ICARM	• Integrated Coastal and River Basin Management
ICC	International Coastal Clean-up
ICM	Integrated Coastal Management
ICPDR	International Commission on the protection of Danube River
ICZM	Integrated Coastal Zone Management
ICZM AG	Advisory Group on the Development of Common Methodologies for Integrated Coastal Zone Management [Black Sea]
IGM	Intergovernmental Meeting
IGO	Intergovernmental Organization
IISD	International Institute for Sustainable Development
IMAP	Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria
IMO	International Maritime Organization
INFO/RAC	Regional Activity Centre for Information and Communication
IOC	Indian Ocean Commission
IOC-UNESCO	Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization
IOC-WESTPAC	Sub-Commission for the Western Pacific of the Intergovernmental Oceanographic Commission of UNESCO
IOTC	Indian Ocean Tuna Commission
IUCN	International Union for Conservation of Nature
IWCAM	Project Integrating Watershed and Coastal Area Management (IWCAM) in the Small Island Development States (SIDS) of the Caribbean
JAMP	OSPAR Joint Assessment and Monitoring Programme
LBS	Land Based Sources of Marine Pollution (Protocol)
LME	Large Marine Ecosystem
MALITA	Marine Litter Activity [of NOWPAP]
MARPOL	International Convention for the Prevention of Pollution from Ships
MEDPOL	Mediterranean Pollution Assessment and Control Programme [of UNEP/MAP]
MERRAC	Marine Environmental Emergency Preparedness and Response Regional Activity Centre [of NOWPAP]
MDG	Millennium Development Goals
MoU	Memorandum of Understanding
MPA	Marine Protected Area

MCSDD	Mediterranean Commission on Sustainable Development
MPC	Maximum Permissible Concentration
MSFD	Marine Strategy Framework Directive
MSSD	Mediterranean Strategy on Sustainable Development
MSP	Marine Spatial Planning
MTS	Mid-term Strategy
NAP	National Action Plan (for pollution from land-based sources)
NBB	National Baseline Budgets
NEAES	North-East Atlantic Environment Strategy
NGO	Non-governmental organizations
NOWPAP	Northwest Pacific Action Plan
NPEC	Northwest Pacific Environment Cooperation Center
ODIMS	OSPAR Data and Information Management Strategy
OPRC	International Convention on Oil Pollution Preparedness, Response and Co-operation
OECS	Organisation of Eastern Caribbean States
OIC	OSPAR Offshore Industry Committee
OSPAR	The Convention for the Protection of the marine Environment of the North-East Atlantic
OSPESCA,	Central American Fisheries and Aquaculture Organization
PAH	Polycyclic aromatic hydrocarbons
PAP/RAC	Priority Actions Programme Regional Activity Centre
PB/RAC	The Plan Bleu Regional Activity Centre
PCB	Polychlorinated biphenyl
PEMSEA	Partnerships in Environmental Management for the Seas of East Asia
PICES	North Pacific Marine Science Organization
POMRAC	Pollution Monitoring Regional Activity Centre [of NOWPAP]
POP	Persistent Organic Pollutants
PRTR	Pollutant Release and Transfer Register
QSR	Quality Status Report
RAC	Regional Activity Centre
RAP	OSPAR Regional Action Plan (for Marine Litter)
RAPMaLi	Regional Action Plan on Marine Litter Management
REMPEC	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea
ROLAC	Regional Office for Latin America and the Caribbean
ROPME/RECOFI	Regional Organisation for Protection of the Marine Environment/Regional Commission for Fisheries
RSC	OSPAR Radioactive substances Committee
SAPPHIRE	Western Indian Ocean Large Marine Ecosystems Strategic Action Programme Policy Harmonization and Institutional Reforms project.
SAP	Strategic Action Programme
SAPIR	Black Sea Strategic Action Plan Implementation Report
SAP-MED	Strategic Action Programme to address pollution from land-based activities
SAP-BIO	Strategic Action Plan for the conservation of marine and coastal biodiversity in the Mediterranean
SBO	Societal Benefits
SCP/RAC	Regional Activity Centre for Sustainable Consumption and Production
SDG	Sustainable Development Goal
SDS-SEA	Sustainable Development Strategy for the Seas of East Asia
sLMR	shared Living Marine Resources
SMART	Specific, Measurable, Achievable, Relevant, Time-bound
SPA/RAC	Specially Protected Areas Regional Activity Centre
SPAW	Specially Protected Areas and Wildlife (Protocol)

SOCAR	State of the Convention Area Report [Caribbean]
SoE	State of Environment Report [Black Sea]
SOMER	State of the Marine and Coastal Environment Report
SWIOFC	The South West Indian Ocean Fisheries Commission
SWIOFP	World Bank/GEF South Western Indian Ocean Fisheries Project
TDA	Transboundary Diagnostic Analysis
TEMM	Tripartite Environmental Ministers Meeting [of NOWPAP]
TN	Total Nitrogen
TOC	Total organic carbon
TP	Total Phosphorus
TSS	Total suspended solids
TWAP	Transboundary Waters Assessment Programme
UN	United Nations
UNEA	United Nations Environment Assembly
UNECA	United Nations Economic Commission for Africa
UNECE	United Nations Economic Commission for Europe
UNEP/MAP	United Nations Environment Programme/Mediterranean Action Plan
UNEP-WCMC	United Nations Environment Programme-World Conservation Monitoring Centre
UNESCAP	Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Organization for Education, Science and Culture
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
USA	United States of America
VNR	Voluntary National Reviews
WCR	Wider Caribbean Region
WIO	West Indian Ocean Region
WIO-C	Western Indian Ocean Consortium of NGOs
WIO-LaB	UNEP/GEF project Addressing Land-based Activities in the Western Indian Ocean
WIOMSA	Western Indian Ocean Marine Science Association
WIOSAP	Strategic Action Programme for the protection of the Marine and Coastal Environment of the Western Indian Ocean region from land-based activities (
WWF	World Wide Fund for Nature



# The Secretariat of the Cartagena Convention and Caribbean Environment Programme role towards the follow up and review of the SDGs

## 1. Introduction

### 1.1 The Caribbean Environment Programme and Cartagena Convention

The Wider Caribbean Region (WCR) comprises the insular and coastal states and territories with coasts on the Caribbean Sea and Gulf of Mexico as well as waters of the Atlantic Ocean adjacent to these States and Territories and includes 28 island and continental countries.<sup>1</sup>

In 1976 UN Environment launched the Caribbean Environment Programme (CEP)<sup>2</sup>, which embraces the region's diversity in its efforts to advance economic prosperity and environmental health. Laying the groundwork for the CEP, the governments identified a number of pressing issues:

- Land-based sources of municipal, industrial and agricultural wastes and run-off;
- Over-exploitation of resources such as fish, molluscs and crustaceans;
- Increasing urbanization and coastal development as populations and economies expand;
- Unsustainable agricultural and forestry practices and a profound need to strengthen government and institutional capacity to address environmental problems.

The Caribbean Action Plan was adopted in 1981 by Twenty-Two States. The action plan led to the adoption of a legal framework in 1983 – the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (**Cartagena Convention**), which entered into force in 1986. The Convention is supported by three technical agreements or Protocols on Oil Spills, Specially Protected Areas and Wildlife (SPAW) and Land Based Sources of Marine Pollution (LBS).

- The Protocol Concerning Co-operation in Combating **Oil Spills** in the Wider Caribbean Region was adopted in 1983 and entered into force on 11 October 1986.
- The Protocol Concerning **Specially Protected Areas and Wildlife** (SPAW) in the Wider Caribbean Region was adopted on 18 January 1990 and entered into force on 18 June 2000.
- The Protocol Concerning **Pollution from Land-Based Sources and Activities** was adopted on 6 October 1999 and entered into force on 13 August 2010.

The Regional Coordinating Unit (UNEP-CAR/RCU) was established in 1986 in Kingston, Jamaica and is the Secretariat to the Cartagena Convention and its Protocols. Today the activities of the CEP focus mainly on supporting Governments of the Wider Caribbean region in meeting their obligations under the Convention and their protocols with a focus on capacity building, technology transfer, policy, legislative and institutional reforms, information management and exchange, and on environmental education and training. **Figure 1.1** presents the current status of ratification maps for the Land-Based Sources (LBS), Specially Protected Areas (SPAW) and Oil Spill Protocols.

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<sup>1</sup> <https://www.unenvironment.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/regional-seas-programmes/wider>

<sup>2</sup> <http://www.cep.unep.org/>

Figure 1.1a. Ratification maps for the Land-Based Sources (LBS Protocol).<sup>3</sup>

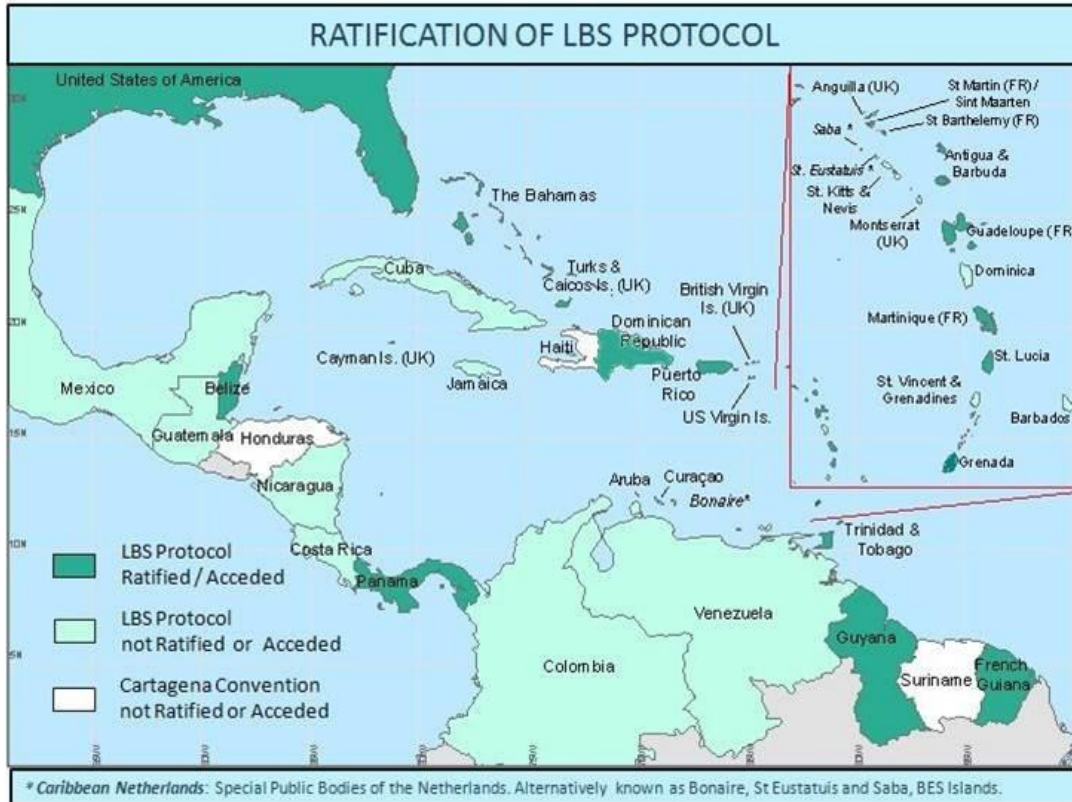
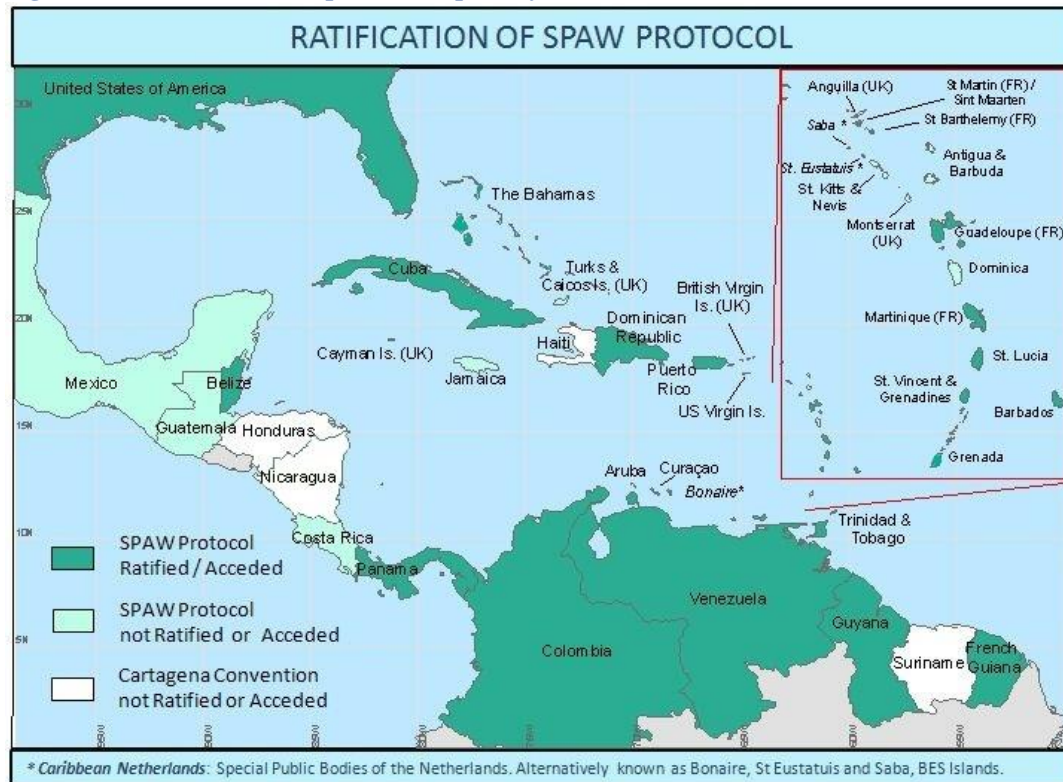


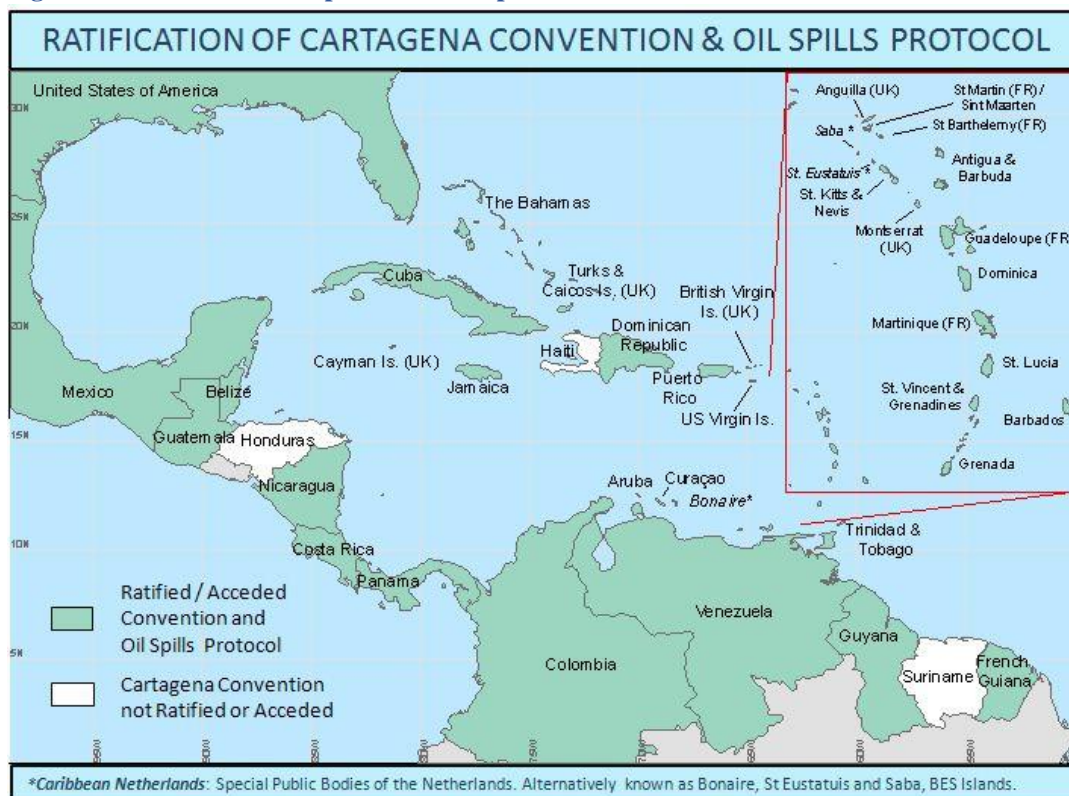
Figure 1.1b. Ratification maps for the Specially Protected Areas (SPA) Protocol.<sup>4</sup>



<sup>3</sup><http://www.cep.unep.org/cartagena-convention/ratification-lbs.png/view>

<sup>4</sup><http://www.cep.unep.org/content/about-cep/spaw/about-cep/spaw/spaw-ratification-map-may-2012/view>

Figure 1.1c. Ratification maps for the Oil Spill Protocol.<sup>5</sup>



Note: Effective of October 2018, Honduras had now also formally ratified the Convention and all three Protocols, not yet reflected in these maps

## 2. Relevant Strategies and their targets

In support of the Cartagena Convention and associated three protocols (Oil spills, SPAW and LBS), CEP has been engaged in the coordination of a number of regional level strategies and action plans. These include:

- Action Plan for the Caribbean Environment Programme, adopted in 1981 and which led to the adoption of the Cartagena Convention;
- Strategy for the Development of the Caribbean Environment Programme, under preparation to be completed for 2018;
- Regional Action Plan on Marine Litter Management (RAPMaLi) for the Wider Caribbean Region (2014)

The WCR includes two Large Marine Ecosystems (LMEs); the Gulf of Mexico (U.S and Mexico) and the Caribbean Sea<sup>6</sup>. It also includes part of the North Brazil Shelf LME (Suriname, Guyana, French Guiana are all part of the North Brazil LME). Two complementary Strategic Action Programmes (SAPs) were developed between 2008-2013 which are now under implementation:

- Strategic Action Programme for the Gulf of Mexico Large Marine Ecosystem, prepared along with a Transboundary Diagnostic Analysis (TDA) as part of the Global Environment Facility

<sup>5</sup> [http://www.cep.unep.org/cartagena-convention/ratificacion\\_convention\\_oil\\_spills\\_protocol\\_name.png/view](http://www.cep.unep.org/cartagena-convention/ratificacion_convention_oil_spills_protocol_name.png/view)

<sup>6</sup> Antigua and Barbuda, The Bahamas, Barbados, Belize, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, United States, Venezuela

(GEF) funded “*Integrated Assessment and Management of the Gulf of Mexico Large Marine Ecosystem*” project (2008-2013)<sup>7</sup>, adopted in 2012 and revised in 2015;

- Strategic Action Programme for the Caribbean and North Brazil Shelf Large Marine Ecosystems, prepared initially as part of the UNDP/GEF “*Sustainable Management of the Shared Marine Resources of the Caribbean Large Marine Ecosystem (CLME) and Adjacent Regions*” project (2009 -2014)<sup>8</sup>, and prepared in 2013, and since 2015 supported by the SAP implementation project “ UNDP/GEF *Catalyzing Implementation of the Strategic Action Programme for the Sustainable Management of Shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems*” – CLME+ (2015-2020)<sup>9</sup>;

## 2.1 Action Plan for the Caribbean Environment Programme (1981)

The overall objectives of the Action Plan (UNEP, 1983) are included in **Box 1.1** and include a strong emphasis on environmental assessment. It stresses the need for better environment and resource information to inform decision making and commits to the development of a resource inventory and environmental monitoring programme in particular for coastal and marine areas (including estuaries, deltas, marshes, mangrove lakes, rivers, coastal lagoons, coral reefs and sea-grass beds. The Action Plan does not include specific measurable targets, although it does define a clear mandate and areas of action for the Caribbean Environment Programme (CEP) which then led to the development and adoption of the Cartagena Convention and subsequent Protocols.

### Box 1.1. Action Plan for the Caribbean Environment Programme (1981)

“The principle objectives of the Action Plan are to assist the Governments of the region in minimizing environmental problems in the Wider Caribbean through assessment of the state of the environment and development activities in environmental management. Furthermore, the Action Plan will establish a framework for activities requiring regional cooperation in order to strengthen the capacity of the States and Territories of the Wider Caribbean region for implementing sound environmental management practices and thus achieve the development of the region on a sustainable basis.

In order to achieve the objective of this Action Plan, the following processes must take place:

- (a) Assessment, including an inventory and analysis of natural resources and their environment characteristics, as necessary for formulating an environmental diagnosis in order to provide a basis for sound environmental management;
- (b) Management, including the formulation of guidelines, plans and specific projects as well as the determination of the means necessary for this purpose”

## 2.2 Strategic Action Programme for the Gulf of Mexico Large Marine Ecosystem

The SAP for the Gulf of Mexico LME (UNIDO, 2015) was prepared as part of the GEF funded “*Integrated Assessment and Management of the Gulf of Mexico Large Marine Ecosystem*” project (2008-2013), adopted in 2012 and revised in 2015. It aims to promote shared policy goals and legal and institutional actions to address priority transboundary problems that have been previously identified by both the United States of America (U.S.) and Mexico. The three transboundary environmental problems identified in the TDA (**Figure 1.2**) are: 1) Pollution including eutrophication and harmful algal blooms (HABs); 2) Habitat modification (wetland loss, connectivity, loss of resilience); and 3) Overfishing of

<sup>7</sup> <https://www.thegef.org/project/integrated-assessment-and-management-gulf-mexico-large-marine-ecosystem>

<sup>8</sup> <https://www.thegef.org/project/sustainable-management-shared-marine-resources-caribbean-large-marine-ecosystem-clme-and>

<sup>9</sup> <https://www.clmeproject.org/>

shared, migratory and connected fish stocks. As a result, the SAP identified 6 strategic areas and 71 priority actions within 21 action lines, along with specific targets and indicators:

1. Improve Water Quality
2. Enhance economic vitality by avoiding depletion and recover degraded living marine resources
3. Conserve Coastal and Marine Ecosystems
4. Mitigate and Adapt to Climate Change and Sea Level Rise
5. Improve Science Education and Outreach
6. Cross-Cutting Issues

To support the implementation of the SAP, the GEF approved in 2016 the project “*Implementation of the Strategic Action Program of the Gulf of Mexico Large Marine Ecosystem*”<sup>10</sup> which began implementation in 2017 (see **Box 1.2**).

**Figure 1.2. Presentation of the main elements of the Gulf of Mexico SAP**



<sup>10</sup> <https://www.thegef.org/project/implementation-strategic-action-program-gulf-mexico-large-marine-ecosystem>

### Box 1.2. Gulf of Mexico SAP Implementation

The SAP targets and indicators will be reviewed and revised if required during the initial phase of implementation. The project has the following 4 outcomes:

- i. Water quality improved using pollution reduction measures through ecosystem-based management approach;
- ii. The rebuilding of targeted fish stocks is achieved through the implementation of measures, such as the update of the regulatory framework and enforcement, the capacity development, and the monitoring; and
- iii. Improved coastal and marine ecosystem health through the use of the ecosystem-based management approach; and
- iv. Assessment of project implementation on a results-based model, taking into account lessons learned during both the inception and implementation phases.

## 2.3 Strategic Action Programmes for the Caribbean and North Brazil Shelf Large Marine Ecosystems (2017)

The 2015-2025 SAP for the sustainable management of shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+ SAP)<sup>11</sup>, was a key output for the first UNDP/GEF CLME Project (2009-2014). The CLME+ SAP had been politically endorsed as of May 9th 2017, by 35 Ministers representing 25 countries and 6 overseas territories<sup>12</sup>. Numerous sister UN agencies, global and regional institutions and organisations, and more than 20 countries from the CLME+ region contributed to the development of the SAP (UNDP, 2013). The CLME+ SAP provides a comprehensive roadmap towards sustainable living marine resources management through strengthened and consolidated regional cooperation. Through the CLME+ SAP, the States and Territories in the region are adopting a long-term vision of a *healthy marine environment that provides benefits and livelihoods for the well-being of the people of the region in a sustainable way*. The SAP aims to contribute to preserving or restoring the health of reef, continental shelf and pelagic ecosystems as to provide goods and services in a way which optimizes the ecosystems' contributions to societal well-being and the region's development needs.

The CLME+ SAP was developed to consist of the following (Figure 1.3):

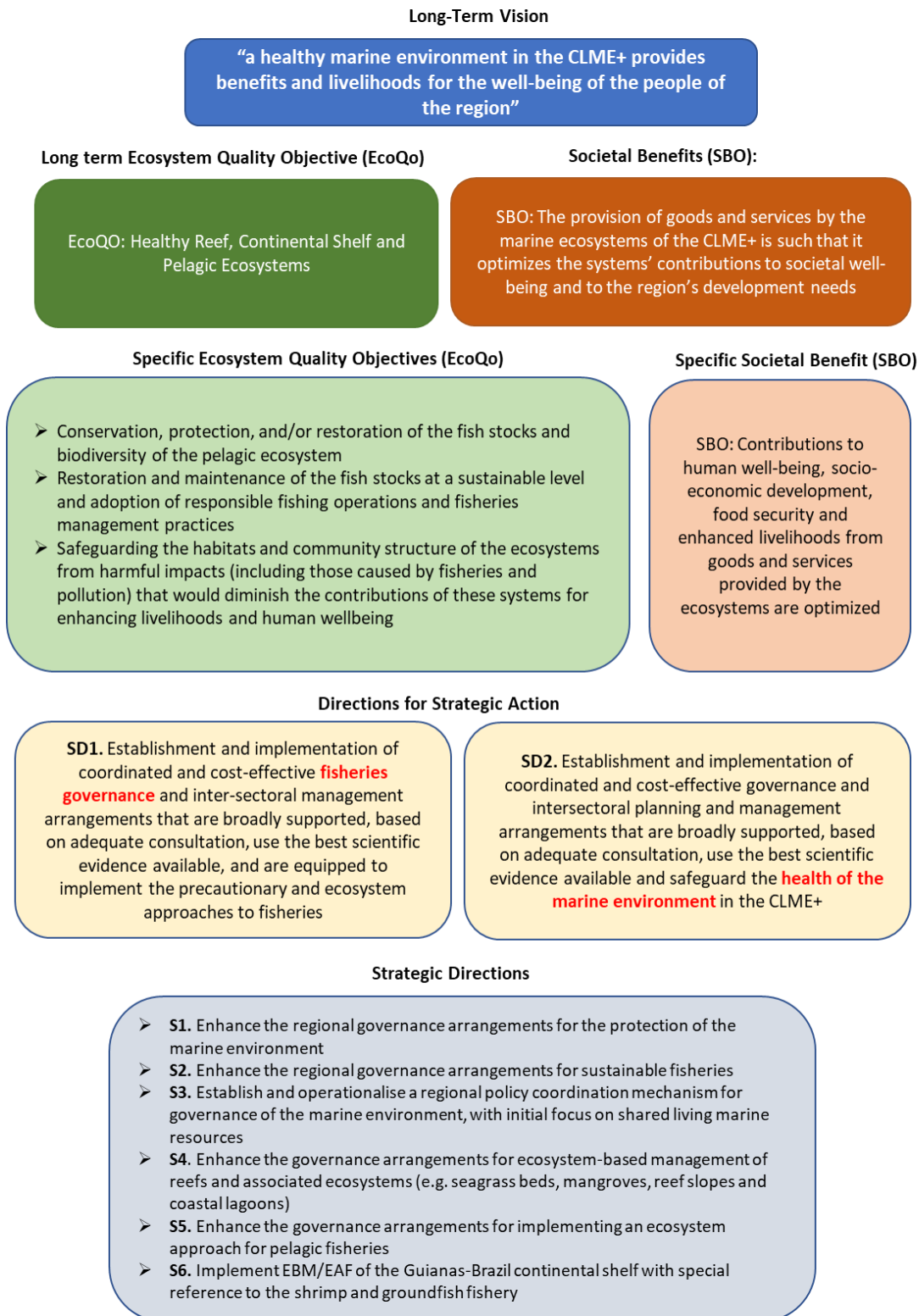
1. **A Long-term vision for the CLME+ region**, on how do the people of the CLME+ envisage the future of the marine environment (by 2025)
2. **Ecosystem Quality Objectives (EcoQOs) and Societal Benefits Objectives (SBOs)**, which specify the broader objectives to which the SAP Strategies and Actions will need to contribute. They illustrate how the 10-year CLME+ SAP will help achieving the long-term Vision for the CLME+
3. **Directions for Strategic Actions (SDs)**, which orient the development of Strategies and Actions, as they link back to root causes identified under the TDA's
4. **Overarching and ecosystem specific Strategies**
5. **Agreed Priority Actions**
6. **Agreed specific Activities**

<sup>11</sup> <https://www.clmeproject.org/sap-overview/>

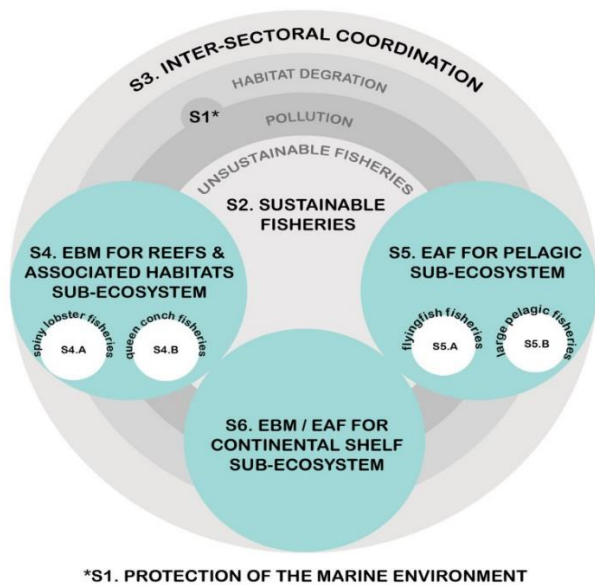
<sup>12</sup> Antigua & Barbuda, Bahamas, Barbados, Belize, Brazil, Colombia, Costa Rica, Dominica, Dominican Republic, France (with 6 overseas territories in the CLME+ region), Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Montserrat (UK overseas territory), Nicaragua, Panama, St. Kitts & Nevis, Saint Lucia, St. Vincent & the Grenadines, Suriname, Trinidad and Tobago, the United States of America.

Through the CLME+ SAP, countries from the region committed to implementing a comprehensive package of coordinated “Strategies” and “Actions”. Six Strategies and four Sub-Strategies have been defined under the SAP, covering a total of 76 short-term (0-5 years) and medium-term (6-10 years) priority actions for better marine resources governance (see [Figure 1.4](#)).

**Figure 1.3. Presentation of the main elements of the CLME+ SAP**



**Figure 1.4. The 6 CLME+ SAP Strategies and 4 Sub-Strategies**



Whilst the CLME+ SAP detailed a number of key targets and indicators, these are in the process of revision in 2018, to ensure alignment with the Gulf of Mexico SAP, the SDG’s and other key Global Convention targets and indicators (i.e. the CBD, Ramsar, Stockholm, Rotterdam and others). The SAP implementation project “UNDP/GEF Catalyzing Implementation of the Strategic Action Programme for the Sustainable Management of Shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems” – CLME+ is currently under implementation (2015-2020), with main outcomes presented in **Box 3**.

### Box 1.3. CLME+ SAP Implementation

The SAP implementation project “Catalyzing Implementation of the Strategic Action Programme for the Sustainable Management of Shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems” – CLME+ (2015-2020)<sup>1</sup> has the following key outcomes:

- i. Improved, integrative governance arrangements for sustainable fisheries and for the protection of the marine environment, in-line with the endorsed CLME+ SAP;
- ii. Strengthened institutional and stakeholder capacity (human, technical/scientific, technological and financial capacity and knowledge) for sustainable and climate-resilient sLMR management at regional, sub-regional, national and local levels (*with special attention to increased capacity of regional and sub-regional organizations with key roles in SAP implementation*);
- iii. Progressive reduction of environmental stresses, and enhancement of livelihoods demonstrated, across the thematic and geographical scope of the CLME+ SAP;
- iv. Financing catalysed for the scaling-up of priority actions for the protection of the marine environment and for ensuring sustainable, climate resilient livelihoods and socio-economic development from sLMR use in the CLME+;
- v. Regional socioeconomic benefits and Global Environmental Benefits from the SAP implementation are maximised through:
  - a. enhanced coordination and collaboration among shared Living Marine Resources (sLMR) projects and initiatives in the region;
  - b. optimised, adaptive management of sLMR related projects and initiatives in the region
  - c. exchange of best/good practices and lessons learnt among the global LME Community of Practice (CoP)



## 2.4 Strategy for the Development of the Caribbean Environment Programme

CEP is in the process of developing an overall strategy for the development of the Caribbean Environment Programme, to be finalized in 2018, which builds upon the evaluation of the previous Strategy (The Strategy for the Development of the Caribbean Environment Programme, 1990). During the drafting of the Strategy the following will be taken into consideration:

- Incorporation of the two SAP objectives, targets and indications, as well as close coordination with the current CLME+ and Gulf of Mexico SAP implementation projects;
- Close coordination with other regional organizations and IGO's;
- Linkages with the relevant SDG targets, in particular those related to Goal 14; and
- Identification of partnerships and funding mechanisms for the Strategies future implementation.

In the draft the following main aims have been identified:

- Reducing marine pollution of all kinds;
- Creating increased resilience of people, marine and coastal ecosystems, and their health and productivity;
- Developing integrated, ecosystem-based regional ocean policies and strategies for sustainable use of marine and coastal resources, paying close attention to blue growth; and
- Enhancing effectiveness of the Convention as the regional platform for supporting integrated oceans governance, and establishing the Secretariat as the primary mechanism for integrating ocean related issues with the broader development agenda for the region;

These will be further elaborated along with corresponding targets, indicators and actions for short, medium and long-term implementation.

## 2.5 Regional Action Plan for Marine Litter and other thematic strategies and action plans

The 2014 **Regional Action Plan for Marine Litter Management in The Wider Caribbean Region (RAPMaLi)** was designed to serve as a comprehensive toolkit to assist SIDS in incorporating components of proper waste management across all sectors (**UNEP-CAR, 2014**). These sectors include but are not limited to governmental legislation, enforcement, monitoring and research, community engagement, and the business sector. The primary action categories addressed in this document include: a) Legislation, Policies and Enforcement; b) Institutional Frameworks and Stakeholder Involvement; c) Monitoring Programmes and Research; d) Education and Outreach; and e) Solid Waste Management.

The primary source of data for the occurrence of anthropogenic litter in the near shore and coastal waters of the WRC is that which is catalogued annually as part of the International Coastal Clean-up (ICC) Day. During the 7-year period of 2006-2012, marine litter data was documented during the annual ICC in 13 participating countries of the Wider Caribbean Region (see **Table 1.1**). A total of 3,990,120 debris items were removed from the coastal and underwater sites with a total weight of 1,913,166 pounds, covering 2,317 miles by 142,957 volunteers. As a result of this regional assessment of beach litter, a number of actions were identified in the Regional Plan for Marine Litter, as summarised in **Table 1.2**.

**Table 1.1. Top 10 Marine Litter forms collected in the ICC in the WCR (2006-2012)**

Number	Item	Percentage (%)
1	Beverage Bottles [plastic]	19.6
2	Bags [plastic and paper]	16.9
3	Caps and Lids	11.4
4	Utensils, Cups and Plates	9.6
5	Beverage Bottles [glass]	6.7
6	Food Wrappers and Containers	6.5
7	Clothing and Shoes	4.6
8	Beverage Cans	4.4
9	Straws and Stirrers	3.5
10	Cigarettes and Cigarette Filters	2.2
	Total	85.4

**Table 1.2. The Regional Action Plan for Marine Litter Actions**

<b>1.</b>	<b>Legislation, Policies &amp; Enforcement</b>
Action 1	Evaluate existing legislation, regulations and enforcement practices that deal with marine litter and strengthen or enact new legislation/regulations as appropriate.
Action 2	Establish and/or enhance government sponsored "litter wardens or patrols" in coordination/collaboration with municipal police/security forces and establish the infrastructure for compliance.
Action 3	Implementation of the 2012 Revised MARPOL Annex V and Special Area status for the Wider Caribbean Region.
Action 4	Expand ratification and promote effective implementation of MARPOL Annex V and LBS Protocol of the Cartagena Convention by all Caribbean states.
Action 5	Ensure that debris and ecosystem health issues are integrated into emergency management plans and procedures.
Action 6	Establish a clearinghouse of information on effective strategies and practices for enforcement of waste management practices.
Action 7	Mobilise resources for improving the capacity for enforcement of appropriate integrated waste management practices.
<b>2.</b>	<b>Institutional Frameworks and Stakeholder Engagement</b>
Action 1	Develop and implement a model of a national management plan for marine litter.
Action 2	Establish the infrastructure for compliance with existing marine litter management legislation at the national and community levels.
Action 3	Establish a Caribbean Marine Litter Regional Working Group to coordinate and advise on appropriate actions for marine litter management.
Action 4	Provide training for judiciary/magistrates/ enforcement officers and sensitisation of politicians on marine litter issues.
Action 5	Present information on the marine litter issue at key environmental meetings & conferences in the Region

<b>3. Monitoring Programmes &amp; Research</b>	
Action 1	Design and implement a strategy to develop national marine litter monitoring pilot projects in the WCR, including standardised methods for data collection and reporting within the framework of the UNEP Regional Seas Global Marine Litter Monitoring Guidelines.
Action 2	Develop a regional, web-based database as a clearinghouse for marine litter information and research.
Action 3	Engage all stakeholders at community (local), national and regional levels in monitoring and research efforts.
Action 4	Solicit information/research from fisheries, wildlife, and other resource management agencies and programmes throughout the region on the environmental and economic impacts of marine litter on wildlife and ecosystems.
Action 5	Conduct an assessment of the economic impacts of marine litter, including costs for clean-up efforts, maintenance of recreational beach areas, costs for lost or abandoned fishing gear and the costs associated with loss of recreational uses of impacted coastal areas.
Action 6	Conduct a GAP analysis of overlap of high density marine litter areas with areas of high sensitivity (endangered species, key habitats, etc.) in order to prioritise clean-up and mitigation efforts.
Action 7	Review and disseminate research on the identification, removal and disposal of marine litter to enable more effective recovery efforts and disposal of marine litter.
<b>4. Education &amp; Outreach</b>	
Action 1	Develop and implement community-based public education campaigns for marine litter prevention, including specialised marine litter prevention programmes for key user-groups and stakeholders.
Action 2	Develop a regional campaign for the International Coastal Cleanup.
Action 3	Incorporate cultural concepts, including use of popular culture icons in outreach programming to promote behavioural change.
Action 4	Incorporate marine litter issues into other community calendar and environmental events.
Action 5	Integrate issues of marine litter into formal educational curricula and programming.
Action 6	Collate best management practices, case studies and lessons learnt on marine litter management at the community and national levels and communicate these with UNEP CAR/RCU for regional compilation and dissemination.
<b>5. Solid Waste Management Strategies</b>	
Action 1	Maintain/develop specialised marine litter waste management strategies for public events (either as a separate strategy or part of an existing waste management strategy).
Action 2	Research BMP's for waste management practices in the hotel, restaurant and marine transport industries and strengthen collaboration with the tourism sector for sharing of best practices and lessons learned.
Action 3	Develop and promote activities for national/regional waste minimisation.
Action 4	Identify/promote international environmental certification programmes which include waste management and minimisation.
Action 5	Maintain/develop specialised waste management strategies for marine litter problems associated with natural disasters.
Action 6	Improve Port Reception Facilities to effectively manage ship generated waste.

The future implementation of the Action Plan includes the development of a marine litter monitoring program with standardised methods for data collection and reporting coupled with a regional, web-based database as a clearinghouse for marine litter information and research. In addition to the RAPMaLi, with the support of the current GEF CLME+ project, two additional strategies are in preparation:

- **Regional Nutrients Reduction Strategy and Action Plan** (to be completed by June 2019)
- **Regional Marine Habitat Restoration Strategy and Action Plan** (also to be completed by June 2019).

Finally, at the institutional level on Regional Activity Centre for Oil Spills – RAC REMPEITC recently finalized a **RAC/REMPEITC-CARIBE Long-Term Strategic Plan 2015-2025**

### 3. Monitoring and Reporting Mechanisms

#### 3.1 Cartagena Convention Reporting Template

A reporting template for the national reporting on the Cartagena Convention and Protocols (**UNEP CAR, 2012**), was agreed during the Fifteenth Intergovernmental Meeting on the Action Plan for the Caribbean Environment Programme and Twelfth Meeting of the Contracting Parties to the Cartagena Convention (October, 2012). The reporting format or questionnaire is qualitative in nature and can be completed by the national focal points online each biennium. It includes information on the measures taken by the party to implement relevant provisions of the Cartagena Convention and its three Protocols and on the effectiveness of such measures in meeting the objectives of the Convention and its Protocols (see **Table 1.3**). Information has been reported to the Secretariat of the Cartagena Convention from national focal points spanning over three biennia, with a for the time being a relatively low percentage rate of completion (less than 50%). Information on the status of implementation, policy and legislation development and mainstreaming, and measures undertaken will be analysed.

**Table 1.3. Summary of Cartagena Convention Reporting overall questions**

Sections	Overall Questions
<b>Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention)</b>	
Section 1: Designated National Focal Point, Institution and Implementation Plans - Articles 4, 15	1. Does your country have a designated National Focal Point for the Cartagena Convention?
	2. Does your country have a designated National Agency/Ministry/Institution or other appropriate authority for coordinating the implementation of the Cartagena Convention (Article 15, paragraph 2)?
	3. Has your country developed an implementation plans(s) to carry out the general obligations of the Cartagena Convention? (Article 4)
	4. Has your country received any external financial assistance to develop and/or implement existing plan(s)?
	5. Has your country experienced any difficulties in the implementation of the abovementioned plan(s)?
Section 2: Measures to Reduce Marine Pollution from Ships, Caused by Discharges or Dumping, from Exploration or Exploitation of the Sea-	1. Is there a national definition within existing pollution related legislation or regulations for “Pollution from Ships”, “Discharging or Dumping of wastes at sea”, “Exploration or Exploitation of the Sea-Bed Activities”, and “Discharges (emissions) to the Atmosphere” (Articles 5, 6, 8, 9)?
	2. Has your country taken any measures since the last reporting period necessary to prevent, reduce and control the abovementioned sources of pollution in the Convention area?

<b>Sections</b>	<b>Overall Questions</b>
Bed, or from Discharges to the Atmosphere - Articles 5, 6, 8, 9	<p>3. Are there any other sources and/or types of pollution that may affect marine resources in the Convention area which require special consideration in your country?</p> <p>4. Does your country have any national policies, laws, or plans for marine pollution prevention, reduction and control for these activities requiring special consideration?</p>
Section 3: Cooperation in Cases of Emergency – Article 11	<p>1. Has your country experienced any pollution emergencies in the Convention area (including emergencies in which the Convention area is in imminent danger of being polluted or already polluted)?</p> <p>2. In regards to the question above, did your country respond to the situation through any of the following:</p> <p>3. Has your country, jointly with another country or with other countries, developed and promoted any contingency plans for responding to incidents involving pollution or the threat thereof in the Convention area?</p>
Section 4: Environmental Impact Assessment – Article 12	1. Does your country currently have any technical and other guidelines (e.g., EIAs) to assist the planning of major development projects in such a way as to prevent or minimize harmful impacts on the Convention Area?
Section 5: Scientific and Technical Cooperation – Article 13	1. Does your country have technical cooperation agreements with any other Contracting Parties relating to the purposes of the Convention?
Section 6: Adoption/Amendment of the Convention and its Protocols – Articles 17,18	<p>1. Please indicate the status of ratification/accession of the existing Protocols to the Cartagena Convention.</p> <p>2. Does your country currently have any plan to propose any amendments to the Cartagena Convention?</p>
<b>The Protocol Concerning Cooperation in Combating Oil Spills in the Wider Caribbean Region</b>	
Section 7: The Protocol Concerning Cooperation in Combating Oil Spills in the Wider Caribbean Region	<p>1. Does your country have a designated Focal Point for the Oil Spills Protocol?</p> <p>2. Does your country currently have any national policies, laws, or plans for prevention, reduction and control of oil spill pollution?</p> <p>3. Has your country established any national operational measures such as establishing national oil spill contingency plans for responding to oil spill incidents (Article 7 of the Oil Spills Protocol)?</p> <p>4. Has your country experienced any oil-spill incidents since 1986 (Article 1, paragraph 4)? Please indicate whether any of these incidents resulted in major consequences to the marine environment.</p>
<b>The Protocol Concerning Specially Protected Areas and Wildlife (SPAW)</b>	
Section 8: The Protocol Concerning Specially Protected Areas and Wildlife (SPAW) - Article 4, 10, 11, 20, 21	<p>1. Does your country have a designated Focal Point for the SPAW Protocol?</p> <p>2. Does your country currently have any national policies, laws, mechanisms or measures for the protection of Wild Flora and Fauna? (Article 10 of the SPAW Protocol)</p> <p>3. Has your country established any protected areas pursuant to the SPAW Protocol? (Article 4 of the SPAW Protocol)</p> <p>4. Has your country identified all of the endangered / threatened species listed in Annexes I, II, and III of the SPAW Protocol that are within your country (i.e. within areas over which your country exercises sovereignty, sovereign rights, or jurisdiction)?</p> <p>5. Has your country taken measures to ensure strict protection of the endangered/threatened species listed in Annexes I and II (Article 11.1(a) and 11.1(b) of the SPAW Protocol)?</p> <p>6. Has your country formulated, adopted, and implemented any plans for the management and use of species listed in Annex III (Article 11.1 (c) of the SPAW Protocol)?</p> <p>7. Has your country adopted exemptions to species protection (Articles 11.2 and 14 of the SPAW Protocol)?</p> <p>8. Did your country proceed to any changes in the delimitation of protected areas and/or to changes in their status (Article 15 of the SPAW Protocol)?</p> <p>9. Did your country proceed to any changes in the legal status of species listed in Annexes I, III, or III (Article 15 of the SPAW Protocol)?</p>

Sections	Overall Questions
	10. Has your country incorporated into its law or policy the common guidelines or criteria adopted under Article 21 of the SPAW Protocol?
<b>The Protocol Concerning Pollution from Land-Based Sources (LBS) and Activities</b>	
Section 9: The Protocol Concerning Pollution from Land-Based Sources (LBS) and Activities - Articles I, III, VI, VII	<p>1. Does your country have a designated Focal Point for the LBS Protocol?</p> <p>2. Is there a national definition of pollution from “Land-based sources and activities” (Article I (d))?</p> <p>3. Does your country currently have any legislation for the prevention, reduction and control pollution from land-based sources in the Convention area (Article III)?</p> <p>4. Has your country developed any implementation plans, programs, and measures to carry out the general terms of [or: meet the objectives of] the LBS Protocol, including National Programmes of Action (NPA)s? (Article III)</p> <p>5. Has your country developed new and/or amended existing national policies, laws, regulations, plans, for reducing LBS pollution over the reporting period?</p> <p>6. Are there any other types and/or sources of LBS pollution other than those listed in Annex I of the LBS Protocol that require special consideration in your country?</p> <p>7. Does your country have any existing environmental pollution monitoring and assessment programmes as outlined in LBS Protocol Article VI?</p> <p>8. Has your country developed and adopted guidelines concerning environmental impact assessments (EIAs) or has your country generated EIAs consistent with the LBS Protocol, Article VII (2)?</p> <p>9. Does your country have a total annual estimate of the pollutant loads to the marine environment for LBS activities?</p> <p>10. Has your country experienced any difficulties in the implementation of the LBS protocol?</p> <p>11. What are three major areas of assistance required to assist your country in implementing the obligations of the Cartagena Convention and its Protocols.</p>

### 3.2 National Monitoring Programmes

Article 13 of the Cartagena Convention states “*..the Contracting Parties undertake to develop and co-ordinate their research and monitoring programmes relating to the Convention area and to ensure, in co-operation with the competent international and regional organisations, the necessary links between their research centres and institutes with a view to producing compatible results...*”. With regards to the LBS Protocol, according to Article VI (Monitoring and Assessment Programmes):

1. Each Contracting Party shall formulate and implement monitoring programmes, as appropriate, in accordance with the provisions of this Protocol and relevant national legislation. Such programmes may, inter alia:
  - a) systematically identify and assess patterns and trends in the environmental quality of the Convention area; and
  - b) assess the effectiveness of measures taken to implement the Protocol.
2. Monitoring information shall be made available to the Scientific, Technical and Advisory Committee to facilitate the work of the Committee, as provided in Article XIV.
3. These programmes should avoid duplication of other programmes, particularly of similar regional programmes carried out by competent international organisations.

Pollution monitoring parameters were agreed and countries have submitted data in contribution of the 2018 State of the Convention Area Report (SOCAR), as summarized in **Table 1.4**. Internationally agreed reference methodologies for the monitoring and analyse of these parameters were provided, and national level training to support monitoring and identify key capacity needs for the future. In the future, a data exchange platform will be developed. In addition, with the support of the established working group on Monitoring and Assessments, assessment criteria defining the cut values or assessment ranges

for the Poor, Fair and Good category were determined for each parameter and are applied to the national data. In the case of **chlorophyll-*a***, these values are as follows:

SOCAR Monitoring Parameter	Good	Fair	Poor
Chlorophyll <i>a coraline</i>	<0.5 ug/L	0.5-1 ug/L	>1 ug/L
Chlorophyll <i>a Estuarine</i>	<5 ug/L	5- 20 ug/L	>20 ug/L

### 3.3 State of the Convention Area Report (SOCAR) and indicators

The SOCAR report, which is focussed on pollution and the LBS Protocol is currently in preparation for finalization in 2018. It is the first such region wide assessment undertaken by CEP and will be complemented by a similar report on the State of Marine Habitats, which will commence in 2018, predominantly based on other recent assessments in the Caribbean (by CBD, WWF, Nature Conservancy and others). These two reports will then be combined in 2019, with the support of the CLME+ project into a “State of Marine Ecosystem and Associated Economies” (SOME) report.

The vision of the Pollution SOCAR report is to undertake “A major periodic and authoritative regional assessment of the state of the WCR environment with respect to LBS (and their ecological and human impacts) that will inform decision-making and stimulate investments to reduce/eliminate land-based sources of pollution in the WCR on the longer term.” Its objective is “To provide an instrument that recognizes how pollution impacts on our shared resources and the collective management actions taken to advance environmental, social and economic development in the Wider Caribbean Region.”

The geographic scale is the entire Wider Caribbean Region, and assessment units will be the 5 Sub-regions (designated in Technical Report 52):

- *Sub-region I*: Gulf of Mexico (USA and Mexico);
- *Sub-region II*: Western Caribbean (comprising the countries of Central America with coasts on the Caribbean Sea, Belize, Guatemala, Honduras, Nicaragua, Costa Rica and Panama);
- *Sub-region III*: Southern Caribbean (comprising the countries of the South American Continent: Colombia, Venezuela, Guyana, French Guyana, Suriname, Aruba and Netherlands Antilles);
- *Sub-region IV*: Eastern Caribbean-islands (comprising Anguilla, Antigua and Barbuda, Barbados, British Virgin Islands, Dominica, Grenada, Guadeloupe, Martinique, Montserrat, St. Lucia, St. Martin, St. Barthelemy, St. Kitts and Nevis, Saint Vincent and the Grenadines, U.S. Virgin Islands and Trinidad and Tobago);
- *Sub-region V*: Northeast and Central Caribbean (comprising Bahamas, Cayman Islands, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico and Turks and Caicos).

Contributing watersheds and terrestrial areas will be identified and mapped, along with LBS hotspots.

The structure of the report will be based on a Driver-Pressure-State-Impact-Response (DPSIR) framework approach and will be built upon data collected at national level, as well as other data and information regional and global sources. Socio-economic data sources include Transboundary Waters Assessment Programme (TWAP)<sup>13</sup>, Human Development Report, World Bank Development Indicators, WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation and UNESCO.

<sup>13</sup> <http://www.geftwap.org/>

A list of indicators for the report was agreed, taking into account the CEP Technical Report 52 (UNEP-UCR/CEP, 2010), list of SOCAR monitoring parameters, Sustainable Development Goals indicators, IWCAM<sup>14</sup> indicators template, and regional Seas proposed indicators (Table 1.4).

**Table 1.4. Reference List of Relevant LBS Parameters for the Wider Caribbean Region**

<b>SOURCE</b>	<b>PARAMETERS (Parameters in blue are included in TR 52; SOCAR monitoring parameters are given in the second table)</b>
<b>Domestic including sewage</b>	% of wastewater/sewage effluent with X degree of treatment (primary, secondary, tertiary)
	Domestic wastewater flow discharged into the WCR per yr
	Biochemical oxygen demand (BOD <sub>5</sub> ) and chemical oxygen demand (COD) contained in sewage discharged to WCR
	Total suspended solids (TSS) contained in sewage discharged to WCR
	Total Nitrogen (TN) and Total Phosphorus (TP) contained in sewage discharged to WCR
	Total coliforms, <i>Enterococcus</i> species, <i>Escherichia coli</i> in coastal waters
	% of wastewater treatment facilities complying with adequate standards
	Detergents
	% Wastewater recycled, % solid waste recycled
	<b>Agriculture/watersheds</b>
BOD <sub>5</sub> and COD load discharged by river basins	
River flow	
Average annual sediment load discharged	
Fertilizer use (kg applied per ha per yr, kg per yr, kg imported per yr)	
Agricultural area (Area, % total land area cultivated by dominant crops)	
Pesticide use (kg imported per yr; kg applied per ha per yr)	
Sediment load from non-point sources	
Organophosphorus compounds	
<b>Industrial</b>	
	Total suspended solids (TSS) in industrial wastewaters discharged in WCR
	Total nitrogen (TN), Total phosphorous (TP) in industrial wastewaters discharged in WCR
	Grease and fats
	Hydrocarbons
	Oil spills (no. per year)
	Dissolved and dispersed petroleum hydrocarbons
	Heavy metals (e.g.- mercury, chromium, lead, cadmium)
	Selected priority substances including Persistent Organic Pollutants (POPs), Polychlorinated biphenyls (PCBs), methyl mercury, organotin
	Polycyclic aromatic hydrocarbons (PAH)
	Organohalogen compounds
	Lubricating oils
	Cyanides and fluorides
	<b>Marine Traffic</b>
No. port waste reception facilities in place and for receiving what type of waste (oils, wastewater, solid waste, etc.)	
Paint residue, bilge and ballast water, antifouling agents	
<b>Ambient coastal water quality (SOCAR monitoring parameters in green)</b>	Chlorophyll <i>a</i>
	Turbidity
	pH
	Salinity
	Temperature
	Dissolved Nitrogen (nitrate, nitrite OR ammonia), Total nitrogen
	Total phosphorus
	Dissolved oxygen
Fats, Oil and Grease	
Biochemical Oxygen Demand	

<sup>14</sup> <http://www.cep.unep.org/iwcam>



SOURCE	PARAMETERS (Parameters in blue are included in TR 52; SOCAR monitoring parameters are given in the second table)
	Total suspended solids
	Faecal coliform
	Enterococcus
	Floatables (e.g. floating plastic density)
	Total organic carbon (TOC)
	Conductivity
	No. of locations and frequency of algal blooms reported per yr
	No. fish kills reported per yr
Socio-economics	Upstream coastal population (size of the population up to 25 km from the coast in continental states and the large islands, and the total population of SIDS); Coastal urban population; Annual population growth rate
	% Upstream coastal population with sanitation coverage, % total population in SIDS
	Sanitation coverage- percentage with and without connection to sewer systems
	Incidence of water related illnesses per year
	Incidence of fish kills and red tides per year
	% GDP tourism
	% GDP marine fisheries
	National Action Plans to reduce input from LBS
	Incentives (\$US) to reduce land-based sources

## 4. Possible contribution of CEP to the reporting of SDG 14 Targets and Indicators

The following recommendations to strengthen the role of future CEP in the SDG monitoring and review process are elaborated below.

1. Review and align objectives, targets and indicators with the SDGs within the Wider Caribbean Region, in coordination with other partners.
2. Develop an approach to regional assessments that can report on the SDG implementation
3. Ensure regional coordination towards SDG reporting
4. Contribute monitoring data to UN Environment as part of global monitoring of targets 14.1., 14.2 and 14.5.
5. Ensure data and information from the Wider Caribbean Region (WCR) contribute to VNR reports and SDG databases through cooperation and agreements with other regional organizations and SDG Focal Points
6. Prepare an SDG Outlook document to capture the vision of how CEP will contribute to future

### 4.1 Review and align objectives, targets and indicators with the SDGs

As outlined in Sections 2 and 3, there are a number of key strategic documents and reporting mechanisms in development in the WCR region planned for 2018 and 2019 that may play a key role in the future reporting of the SDG targets and support national obligations in SDG reporting through their Voluntary National Reviews (VNR).<sup>15</sup> These contribute in particular to the follow SDG 14 targets:

- 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

<sup>15</sup> <https://sustainabledevelopment.un.org/vnrs/>

- SDG Target 14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans
- 14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels
- 14.5 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.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

The fisheries related targets (14.4, 14.6 and 14.7) are partially addressed through the SAP in coordination with FAO and regional fisheries bodies (i.e. CRFM and OSPESCA).

**Table 1.5. Overall contribution of CEP key strategic documents and monitoring programmes to SDG 14 targets.**

CEP Protocol, Strategies and Monitoring	Target 14.1	Target 14.2	Target 14.4	Target 14.5	Target 14.6	Target 14.7
Cartagena Convention and Protocols Reporting	✓	✓		✓		
Gulf of Mexico SAP	✓	✓	✓	✓	✓	✓
CLME+ SAP	✓	✓	✓	✓	✓	✓
Action Plan on Marine Litter	✓					
SOCAR report and CEP Monitoring Program	✓					

Other possible targets include:

- **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 Gulf of Mexico and CLME+ implementation projects are in the process of revising their SAP targets and indicators in 2018. In parallel CEP is in the process of developing its Strategy for the Development of the Caribbean Environment Programme. The objectives, targets and associated

indicators to be developed in these 3 processes are closely inter-linked to SDG targets, and as such should be undertaken with a view to ensuring an overall mapping and streamlining of objectives, targets and indicators in line with the SDGs. [Appendix 2](#) provides an example template. The Cartagena Convention reporting, whilst based on questions, rather than specific indicators, can also provide measurable information on the responses of countries to pollution and biodiversity degradation.

***Suggested Actions for consideration:***

- Undertake mapping of CEP strategic objectives, targets and indicators in order to align with the SDGs, as part of the process to develop the Strategy for the Development of the CEP;
- Review Gulf of Mexico and CLME SAP targets and indicators, and revise if required to be fully in line with CEP key strategic targets and SDGs, and the inclusion of SMART indicators and an agreed reporting mechanism;
- Consider the inclusion of relevant Global Convention targets, SDG and the Regional Seas indicators, to ensure there is a core set of indicators that can be comparable with other Regional Seas for each relevant SDG target;
- Potential data sources for each indicator should be identified, whether from national data or other sources;
- Targets and indicators should fit into the DPSIR framework, in particular state, pressure and response targets and indicators;
- A realistic reporting mechanism for each indicator, considering the capacity, funds and time required to report some indicators. A phased approach to implementation may be required whilst additional funds are mobilized and capacity building activities are implemented. In this context two levels of indicators could be included: core indicators (where the data or information is available for the majority of countries) and additional indicators which could be reported on where data is available with the objective to increase national capacity for future reporting.

#### **4.2 Develop an approach to regional assessments that can report on the SDG implementation**

As mentioned, CEP is coordinating two thematic assessments, the SOCAR report regarding pollution and the State of Marine Habitats, which will be combined in 2019 with the support of the CLME+ project into a “State of Marine Ecosystem and Associated Economies” (SOME) report. This report, if aligned with the relevant SDG targets and indicators, will provide an opportunity to also present trends and progress in the achievement of these targets.

These reports can contribute to SDG reporting in several ways.

- Countries that submit Indicator based data in particular related to State (S), Pressures (P) and Response (R), for the assessment, can also submit this data to the UN statistic commission as part of their SDG reporting. A proposal for this should be presented to all Contracting Parties, to ensure alignment of national SDG indicators and those for regional assessments and ensure a one reporting fits all process is developed. In the future this could also include the development of national SDG data hubs.
- The quality control, review and analysis of the data and information for the purpose of the assessment can provide valuable information for VNR reports. National experts involved in this process should also be part of the VNR report process, to ensure trends and main findings are included for each SDG target. This will enrich future VNR reports, many of which have limited information on SDG 14.
- The overall structure of the assessment should be in line with the SDG targets, so that all information related to each relevant SDG target can be extracted from the assessment and

even published as separate Regional SDG target reports. In this manner the regional assessment can serve both purposes.

In order to streamline data, reporting and regional assessments as part of SDG reporting, CEP and the Contracting Parties should consider preparing a proposal and possible decision for adoption, and for participating Caribbean countries to then bring this to the attention the HLPF.

***Suggested Actions for consideration:***

- Develop a methodology and structure for the SOMEE report that also reports on the main SDG targets;
- Develop indicator assessments, considering the approach and templates used by other Regional Seas. This indicator assessments would provide a major source of information for the final assessments;
- In addition to publishing the final assessment report, consider publishing online the indicator assessments in relation to each relevant SDG target, in particular 14.1, 14.2, and 14.5, to assess the implementation of these targets in the region. These SDG assessments can then contribute to global SDG and World Ocean Assessment reports;
- Agree on a regular cycle for assessments (5 or 6 years) in line with other regional seas

### **4.3 Ensure regional coordination towards SDG reporting**

The **Economic Commission for Latin America and the Caribbean (UN ECLAC)** is engaged in the implementation, follow up and review of the SDGs. The Forum of the Countries of Latin America and the Caribbean on Sustainable Development is considered the regional mechanism for the implementation, follow-up and review of the 2030 Agenda for Sustainable Development, including the Sustainable Development Goals and targets, its means of implementation, and the Addis Ababa Action Agenda. This Forum is convened every year under the auspices of ECLAC starting 2017 and is open to stakeholders, including government, civil society, the private sector and academia.<sup>16</sup>

Other global and regional organizations involvement in the coordination on SDG's include:

- United Nations, UNDP, the United Nations Development Assistance Framework (UNDAF) providing support in coordinating meetings between UN agencies in the Caribbean,
- Regional Offices, such as the Caribbean Community (CARICOM)<sup>17</sup>, Regional Office for Latin America and the Caribbean (ROLAC) etc.
- Other Organizations, IGO's, NGO's etc.

However, not all countries are adopting the same approach to the streamlining SDG's at the national level within the Caribbean, and integrating CEP reporting into the process. There is therefore, a future need for enhancing a regionally coordinated approach. The CEP has both formal and informal partnerships with international, regional and national organizations for the joint monitoring and implementation of actions towards pollution reduction, biodiversity conservation and fisheries management and general oceans governance:

- **Collaboration on biodiversity** monitoring and assessments with IUCN, WWF, CBD, RAMSAR and Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), especially with regards to CLME and Gulf of Mexico SAP implementation

<sup>16</sup> <https://www.cepal.org/en/topics/2030-agenda-sustainable-development/follow-and-review-2030-agenda>

<sup>17</sup> <https://www.caricom.org/>

- Under the **framework of the CLME+ project**, in 2017, eight agencies (UN Environment, FAO, UNESCO-IOC, CARICOM<sup>18</sup>, CRFM<sup>19</sup>, OSPESCA<sup>20</sup>, CCAD<sup>21</sup> and OECS<sup>22</sup>) entered into a MoU to “enhance regional coordination and collaboration, support oversight and integration of action for sustainable fisheries and the protection and sustainable use of the marine environment in the Caribbean and North Brazil Shelf region.”
- **Collaboration on pollution** monitoring and assessment has taken place through the formal establishments of Regional Activity Centres on Marine Pollution and Oil Spills as well as a Regional Activity Network of technical agencies involved in pollution research and monitoring. The Caribbean Platforms and Nodes for Nutrients, Marine Litter and Wastewater Management established with the support of the UN Environment GPA form a framework for this collaboration.
- **Cross thematic collaboration** is taken place through development and joint implementation of projects with other UN agencies, NGOs and Development Banks as well as through formal Memoranda of Cooperation signed with MEA Secretariats and regional fisheries bodies.

These collaborations and MOU’s can be used for joint reporting on the SDG 14 targets, though supporting countries in their monitoring and reporting and their contribution to regular regional assessments.

***Suggested Actions for consideration:***

- At the regional level, review and discuss possible mechanisms for coordination with relevant organizations and projects to ensure CEP contribution to reporting of SDG 14 and other relevant targets SDG reporting, based on existing cooperation and also considering greater engagement of ECLAC and the national SDG Focal Points;
- If SDG data hubs are to be established, ensure these are coordinated with CEP databases for overlapping indicators and parameters relevant to the SDGs, and ensure that key the CEP reports and assessments are made available in these data hubs and knowledge platforms.

**4.4 Contribute monitoring data to UN Environment as part of global monitoring of targets 14.1., 14.2 and 14.5.**

UN Environment for the global level reporting of targets 14.1, 14.2 and 14.5 (see **Table 1.6**) For all Tier I indicators, 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. Meta data is available in the SDG Indicator Metadata repository (<https://unstats.un.org/sdgs/metadata/>) including 14.5.1 on marine protected areas (MPA’s). Tier III indicators require work plans to be developed outlining the methodological development of the indicators for approval by the IAEG-SDGs. The current Tier III work plans are in draft form (using a standard structure), last presented at the 6<sup>th</sup> Meeting of the IAEG-SDGs (11-14 November 2017)<sup>23</sup>.

<sup>18</sup> <https://caricom.org/about-caricom/who-we-are>

<sup>19</sup> <http://www.crfm.int/>

<sup>20</sup> <http://www.fao.org/fishery/rfb/ospesca/en>

<sup>21</sup> <http://www.sica.int>

<sup>22</sup> <http://www.oecs.org/>

<sup>23</sup> <https://unstats.un.org/sdgs/meetings/iaeg-sdgs-meeting-06/>

**Table 1.6. Tier Classification of SDG Indicators (as of 20 April 2017) for Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development**

Target	Indicator	Possible Custodian Agency(ies)	Partner Agency(ies)	Updated Tier Classification
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	UNEP	IOC-UNESCO, IMO, FAO	<b>Tier III</b>
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	UNEP	IOC-UNESCO, FAO	<b>Tier III</b>
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, UNEP	Ramsar	<b>Tier I</b>

CEP and its member states, through its monitoring programmes and databases can contribute directing to these three SDG 14 indicators:

- **Eutrophication (Indicator 14.1.1)**, including data on chlorophyll-a, nitrates, nitrites, ammonium, phosphates and dissolved oxygen from the CEP database;
- **Marine Litter (Indicator 14.1.1)**, especially beach litter when monitoring is fully established;
- **Marine Protected Areas (indicator 14.5.1)**.

For this purpose, it is essential that the methodologies used to collect and analyse the above indicators and parameters are made available, as on a global scale data will need to be comparable. With regards to SDG Indicator 14.1.1, UN Environment coordinated an “Experts Workshop on Marine Pollution Indicators under Sustainable Development Goal Target 14.1.1” on the 12-13 September 2018, Paris to discuss how the Regional Seas can contribute to the reporting of eutrophication and marine litter data, bringing together in-situ and satellite data as appropriate.

***Suggested Actions for consideration:***

- CEP and UN Environment to strengthen existing mechanisms to share future data related to eutrophication, marine litter and MPAs as a contribution to the global database on SDG Indicators 14.1.1 and 14.5.1, to be discussed and agreed with Contracting Parties to the Cartagena Convention. (global and regional mechanism of SDG data bases should interact to facilitate country reporting): (i) Include support to national institutions to generate more data to fulfil SDG reporting needs; (ii) Strengthen mechanism of reporting to CEP and UN Environment on the existing data and the need for different regional institutions to exchange information and relevant data to facilitate country reporting.

#### 4.5 Ensure data and information from the Wider Caribbean Region (WCR) contribute to VNR reports and SDG databases

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.<sup>24</sup> The 2018 HLPF is planned for 9-18 July 2019 and within the WCR, Guatemala, Guyana and Saint Lucia will present their VNR reports. Costa Rica, Honduras and Trinidad and Tobago will prepare VNR reports for the 2020 HLPF. All reports and links for 2016-2018 are provided in [Table 1.7](#).<sup>25</sup>

**Table 1.7. VNR Reports submitted to the HLPF from the WCR**

Country	Year that VNR presented at HLPF	Brief comments on SDG 14 priorities and reference to the Cartagena Convention
<a href="#">The Bahamas</a>	2018	Detailed analysis of SDG 14. Key actions include development of an Integrated Coastal Zone Management Plan, expansion of MPAs and management plans, National Maritime Policy. Main challenges are regarding fisheries management, funding and potential expanding of natural resource mining
<a href="#">Belize</a>	2017	Detailed analysis of SDG 14. Reference to the Cartagena Convention and CARICOM, as well as several national policies and action plans developed, including the National Integrated Coastal Zone Management (ICZM) Plan. The establishment of the Turneffe Atoll Marine Reserve in 2012 and the expansion of Hoi Chan Marine Reserve in 2015 raised the proportion of national waters under protection to 21%.
<a href="#">Colombia</a>	2018 2016	2016 report (in Spanish) overall summary and 2018 report (in Spanish) focussed on main SDG's excluding SDG 14.
<a href="#">Costa Rica</a>	2017	Detailed analysis of SDG 14 (in Spanish), including 14 initiatives have been developed to improve the sustainable management of marine resources.
<a href="#">Dominican Republic</a>	2018	Includes a brief summary of each SDG (Spanish and English). Major challenges highlighted include sustainable management of marine ecosystems, pollution (especially solid wastes and river pollution), unsustainable practices in consumption and production, and the need for updated regulatory framework.
<a href="#">Guatemala</a>	2017	Analysis of selected SDG's (1,2,3,5 and 9) in Spanish and status of indicators
<a href="#">Honduras</a>	2017	Overall review without specific analysis of individual SDGs
<a href="#">Jamaica</a>	2018	Detailed analysis of SDG 14 noting advances in terms of legislation and enforcement, protected areas, data collection, fisheries and international commitments (with specific

<sup>24</sup> <https://sustainabledevelopment.un.org/vnrs>

<sup>25</sup> Antigua and Barbuda, Barbados, Cuba, Dominica, Grenada, Haiti, Nicaragua, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago have not yet submitted VNR reports.

Country	Year that VNR presented at HLPF	Brief comments on SDG 14 priorities and reference to the Cartagena Convention
		reference to the Cartagena Convention and LBS Protocol). Future priorities related to climate change, IUU fishing, pollution, improved data for policy makers and the need to focus on Blue Economy.
<a href="#">Mexico</a>	2018 2016	Includes detailed analysis of SDG 14, including status of MPAs (22.05% covered), with challenges related to watershed management, capacity for inspections in industry, the need to assess coastal degradation from agrochemicals, the need to update legislation on marine and coastal zones, fishing and aquaculture, and scientific research for policy makers.
<a href="#">Panama</a>	2017	Includes detailed analysis of SDG 14 (in Spanish). Challenges include the need for contingency plans to respond to incidents of pollution and other incidents; integrate into the national and regional strategies for the management of marine debris, especially in the coastal zone, ports and maritime industries, including recycling, re-use, reduction and disposal; address consumption and production patterns.
<a href="#">Venezuela</a>	2016	Overall summary without analysis of individual SDGs

It should be noted that so far, the majority of the VNR reports have not engaged CEP in their development and very few refer to the work of the Cartagena Convention and CEP (Jamaica and Belize as notable exceptions). In addition to the VNR reports submitted, data is also provided to SDG data platforms. Many SDG data portals are under development, some at the national level, regional level (such as through Regional Commissions) and currently at the Global level two main SDG data platforms:

- i. The **Sustainable Development Goals indicators database**<sup>26</sup> provides transparency on the data used for global reporting. 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. A few national data hubs have also been created including Mexico, although no data has yet been reported for SDG14.<sup>27</sup>
- ii. **IISD data portal on indicators for the Sustainable Development Goals (SDGs)**.<sup>28</sup> This portal, 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. The data will be updated periodically as more countries submit these reports.

***Suggested Actions for consideration:***

- Establish a regional coordination mechanism to ensure SDG Focal point and teams responsible for future VNR reports incorporate CEP assessment results and coordinate with CEP and Cartagena Convention national focal points and experts; and
- Ensure inputs provided to future VNR reports (in particular Guatemala, Guyana and Saint Lucia for the 2019 HLPF and Costa Rica, Honduras and Trinidad and Tobago for 2020).

<sup>26</sup> <https://unstats-undesa.opendata.arcgis.com/>

<sup>27</sup> <http://hubmexico-ods-inegi.opendata.arcgis.com/>

<sup>28</sup> <https://sustainable-development-goals.iisd.org/country-data>



#### **4.6 Prepare an SDG Outlook document to capture the vision of how CEP will contribute to future**

Based on the work undertaken so far by CEP and this case study, develop an SDG Outlook document to define the future contribution of CEP to SDG follow up and review including:

- Contribution of the Cartagena Convention and associated Protocols and regional plans and strategies to the implementation of the SDGs in the Wider Caribbean region
- Coordination mechanism to be established with CEP partners, Regional Economic Commissions and SDG Focal Points for future contribution to VNR and global SDG assessments
- Strategy for sharing data and results regarding SDG indicators 14.1 and 14.2 with UN Environment as part of the global monitoring of these indicators.

This should also consider discussion with Contracting Parties on a possible Conference paper and/or a decision on the role of the Cartagena Convention in the follow up and review of the SDGs, to be discussed and presented at the Cartagena Conference of the Parties or IGM meetings.

# Mediterranean Action Plan Ecosystem Approach and indicators role towards the follow up and review of the SDGs

## 1. Introduction

### 1.1 The Mediterranean Action Plan

In 1974, UNEP established its Regional Seas Programme with the scope of coordinating activities aimed at the protection of the marine environment through a regional approach. In 1975, the Mediterranean States and the European Community approved the Mediterranean Action Plan (MAP) as the institutional framework for cooperation in addressing common challenges of marine environmental degradation. In 1995, in the aftermath of the Rio Summit, the Contracting Parties decided to revise the MAP and the Convention. MAP Phase II was designed, taking into consideration the achievements and shortcomings of the MAP, particularly in the context of developments of environmental protection policies at the international level.

The *Convention for the Protection of the Mediterranean Sea Against Pollution* (Barcelona Convention) was adopted on 16 February 1976 by the Conference of Plenipotentiaries of the Coastal States of the Mediterranean Region for the Protection of the Mediterranean Sea. In 1995, the Contracting Parties adopted substantial amendments to the Barcelona Convention of 1976 and renamed it as *Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean*, which entered into force in 2004. Seven Protocols, addressing specific aspects of Mediterranean environmental conservation, and a number of regional plans complete the MAP legal framework:

1. The Protocol for the Prevention of Pollution in the Mediterranean Sea by Dumping from Ships and Aircraft (Dumping Protocol)
2. The Protocol Concerning Cooperation in Preventing Pollution from Ships and, in Cases of Emergency, Combating Pollution of the Mediterranean Sea (Prevention and Emergency Protocol)
3. The Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (LBS Protocol), including Regional plans under Article 15 of LBS Protocol
4. The Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA-BD Protocol)
5. The Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal (Hazardous Wastes Protocol)
6. The Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (Offshore Protocol)
7. The Protocol on Integrated Coastal Zone Management in the Mediterranean (ICZM Protocol).

The 22 Contracting Parties to the Barcelona Convention are: Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syrian Arab Republic, Tunisia, Turkey, and the European Union. UN Environment provides secretariat services to the Contracting Parties through its MAP Coordinating Unit, established in Athens in 1982, and led by the UNEP/MAP Coordinator, on the basis of a Host

Country Agreement between Greece and UN Environment. The Hellenic Republic provides financial and logistical support to MAP and accords the Secretariat diplomatic status. In addition, UNEP/MAP is supported by several thematic technical components which include:

- **Land based pollution:** The Mediterranean Pollution Assessment and Control Programme (MED POL) based in Athens, Greece;
- **Pollution from ships and in case of emergency:** The Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) based in Valletta, Malta
- **Sustainable development:** The Plan Bleu Regional Activity Centre (PB/RAC) based in Sophia-Antipolis and Marseille, France;
- **Integrated coastal zone management:** The Priority Actions Programme Regional Activity Centre (PAP/RAC) based in Split, Croatia;
- **Conservation of biodiversity and protected areas:** The Specially Protected Areas Regional Activity Centre (SPA/RAC) based in Tunis, Tunisia;
- **Sustainable consumption and production:** The Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC), based in Barcelona, Spain.
- **Information and communication:** The Regional Activity Centre for Information and Communication (INFO/RAC) based in Rome, Italy

## 2. UNEP/MAP relevant strategies and their targets

In addition to the Barcelona Convention, its Protocols and the Mediterranean Action Plan (MAP Phase II), there are numerous regional strategic documents that have been adopted as summarised in **Table 2.1** that are relevant to the SDG targets (see list in **Appendix 1**). The MAP Phase II captures the overall objectives and areas of action for the protection of the marine environment and the sustainable development of the coastal areas of the Mediterranean and is further elaborated in the UNEP/MAP Mid-Term Strategy 2016-2021 (**UNEP/MAP, 2016**) with specific objectives and outputs to be achieved over the 6-year period. Each biennium a budgeted programme of work with detailed activities is developed and agreed by the Contracting Parties. Further detailed strategies elaborate the priorities as agreed by the Contracting Parties, which include the Mediterranean Strategy for Sustainable Development (MSSD) 2016-2025 and the Roadmap for the implementation of the Ecosystem Approach (EcAp), as the guiding principle to MAP Programme of Work and all policy implementation and development with the ultimate objective of achieving the Good Environmental Status (GES) of the Mediterranean Sea and Coast. In order to coordinate the reporting of such a wide array of strategic documents, the Barcelona Convention reporting format was revised and adopted by the Contracting Parties in 2017.

**Table 2.1. Main strategic documents of UNEP/MAP**

Relevant Protocol	Strategy/Plan	Year adopted and COP	Relevant SDG target
Barcelona Convention and overarching strategic documents	The Action Plan for the Protection of the Marine Environment and the Sustainable Development of the Coastal Areas of the Mediterranean (MAP Phase II)	1995	Multiple (see Annex 1)
	UNEP/MAP Mid-Term Strategy 2016-2021	2016 - COP 19	
	Mediterranean Strategy on Sustainable Development 2016-2025		
	Implementing MAP ecosystem approach roadmap: Mediterranean ecological and operational objectives, indicators and timetable for implementing the ecosystem approach roadmap.	2012 - COP 17	
	Ecosystems Approach including adopting definitions of Good Environmental Status (GES) and targets.	2013 – COP18	14.1, 14.2, 14.4, 14.5, 15.8
	Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria	2016 – COP19	
	Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas	2016 – COP19	14.3, 13.1, 13.2, 13.3
LBS Protocol, Marine Litter and SCP	Strategic Action Programme to address pollution from land-based activities (SAP-MED) and Action plans on pollution reduction deriving from specific provisions of the LBS Protocol	1997 - COP 10	
	Regional Plan on the Reduction of BOD from Urban Wastewater;	2009 COP 16	
	Regional Plan on the Elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene;	2009 - COP 16	
	Regional Plan: Reduction of the Generation of Hazardous Waste from Industrial Installations	2003 - COP13	
	Regional Plan for the Reduction of BOD from Industrial Sources	2003 - COP13	
	Regional Plan on the Phasing Out of DDT	2009 - COP 16	
	Regional Plan on the Reduction of Inputs of Mercury	2012 - COP 17	14.1, 6.3, 6.5,
Dumping Protocol	Regional Plan on the Reduction of BOD5 in the food sector	2012 - COP 17	6.6, 6a, 12.2, 12.4
Hazardous Wastes Protocol	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	2012 - COP 17	
	Strategic Framework for Marine Litter Management	2012 - COP 17	
	Regional Plan on Marine Litter Management	2013 - COP18	
	National Action Plans to reduce pollution for 2016-2025	2016 – COP 19	
SPA-BD Protocol and MPAs	Strategic Action Plan for the conservation of marine and coastal biodiversity in the Mediterranean (SAP-BIO) and Action plans on species deriving from specific provisions of the SPA-BD Protocol	2003 - COP13	14.2, 14.5, 15.1,
	Monk Seal Action Plan	1995 - COP 9	15.5, 15.8, 15.9,
	Action Plan for the Conservation of Cetaceans in the Mediterranean Sea	2013 – COP 18	15.a
		1991 – COP 7	

Relevant Protocol	Strategy/Plan	Year adopted and COP	Relevant SDG target
		2016 – COP19	
	Action Plan for the Conservation of Marine Vegetation in the Mediterranean Sea	1999 – COP 11 2005 – COP 14	
	Action Plan for the conservation of Bird Species listed in Annex II of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean;	2003 - COP13 2013 - COP 18 2017 – COP 20	
	Action Plan for the conservation of cartilaginous fishes (Chondrichthyans) in the Mediterranean Sea;	2003 - COP13 2013 - COP 18	
	Action Plan concerning species introductions and invasive species in the Mediterranean Sea.	2003 - COP13 2016 – COP 19	
	Action Plan for the Conservation of Mediterranean Marine Turtles	2008 - COP 15 2013 - COP 18	
	Action Plan for the Protection of the Coralligenous and other Calcareous Bio-concretions in the Mediterranean	2008 - COP 15 2016 – COP 19	
	Roadmap for a Comprehensive Coherent Network of Well-Managed MPAs	2016 – COP 19	
Prevention and Emergency Protocol	Regional strategy addressing ship’s ballast water management and invasive species.	2016 - COP19	14.1, 15.8, 9.1. 9.4
	Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021)	2012 – COP 17	
Offshore Protocol	Action Plan to implement the Protocol of the Barcelona Convention concerning the protection of the Mediterranean Sea against pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil.	2012 – COP 17	14.1, 14.2, 9.4
	Mediterranean Offshore Action Plan in the Framework of the Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil	2016 – COP 19	
ICZM Protocol	Action Plan for the implementation of the ICZM Protocol for the Mediterranean (2012-2019)	2012 – COP 17	14.2 (plus all those in Annex 1)
Sustainable Consumption and Production	Regional Action Plan on Sustainable Consumption and Production in the Mediterranean	2016 – COP 19	12.2, 12.4 (plus 2.4, 6.4, 9.4)

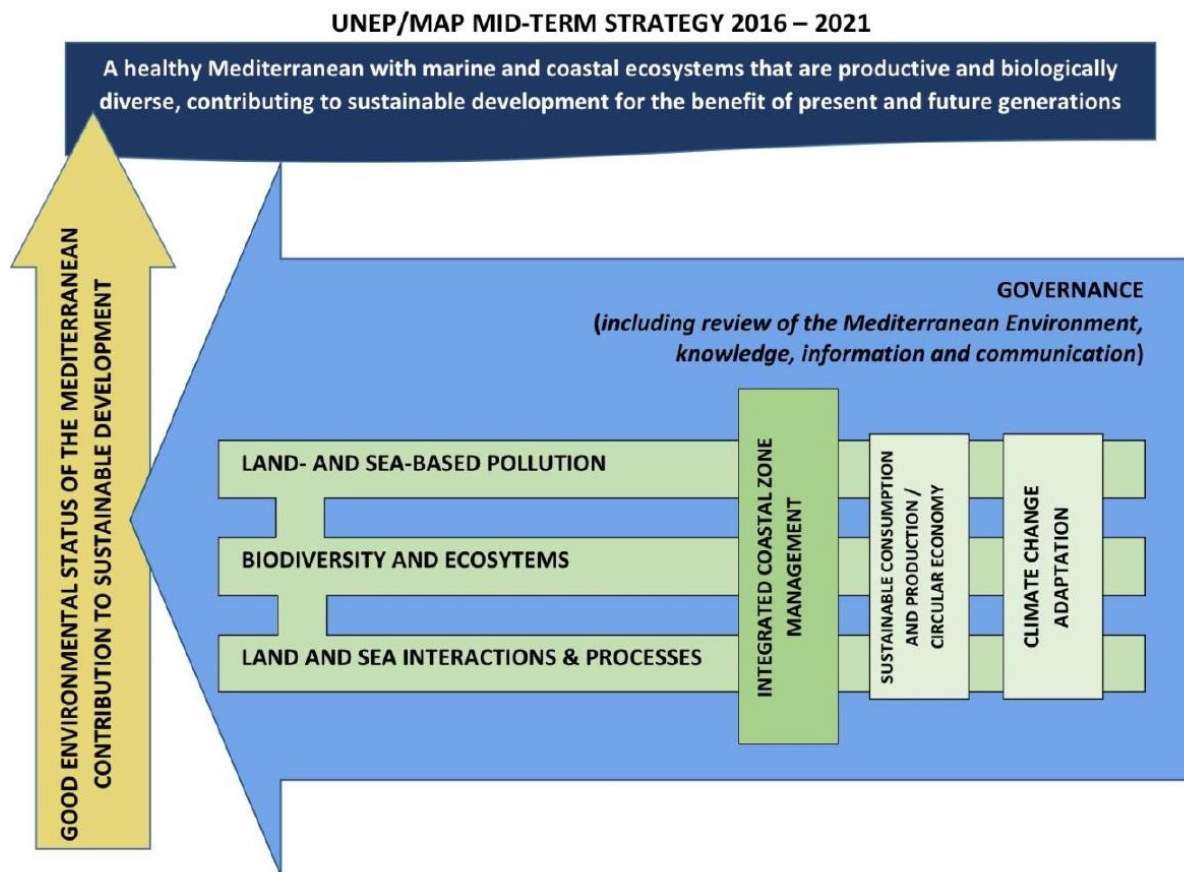
## 2.1 MAP Phase II and Mid-Term Strategy 2016-2021

MAP Phase II includes the following objectives:

- to ensure the **sustainable management of natural marine and land resources** and to integrate the environment in social and economic development, and land-use policies;
- to protect the marine environment and coastal zones, through **prevention of pollution**, and by reduction and as far as possible, elimination of pollutant inputs whether chronic or accidental;
- **to protect nature**, and protect and enhance sites and landscapes of ecological or cultural value;
- to **strengthen solidarity amongst Mediterranean coastal states**, in managing their common heritage and resources for the benefit of the present and future generations; and
- to contribute to the **improvement of the quality of life**.

These are further elaborated in the MAP Mid-Term Strategy 2016-2021 which includes strategic objectives, strategic outputs and indicative outputs for one overarching theme (Governance), three core themes and three cross cutting themes as presented in [Figure 2.1](#).

Figure 2.1. Structure of the UNEP/MAP Mid-Term Strategy 2016-2017



## 2.2 Mediterranean Strategy for Sustainable Development

The Mediterranean Strategy for Sustainable Development (MSSD) 2016-2025<sup>29</sup> was adopted by the Contracting Parties of the Barcelona Convention in 2016 (UNEP/MAP, 2016b), as the strategic guiding document for all stakeholders and partners to translate the 2030 Agenda at the regional, sub-regional and national levels. The Strategy provides an integrative policy framework for securing a sustainable future for the Mediterranean region consistent with the SDGs. The Strategy is built around the following vision: *A prosperous and peaceful Mediterranean region in which people enjoy a high quality of life and where sustainable development takes place within the carrying capacity of healthy ecosystems.*

This is achieved through agreed activities within 6 objectives:

1. Ensuring sustainable development in marine and coastal areas;
2. Promoting resource management, food production and food security through sustainable forms of rural development;
3. Planning and managing sustainable Mediterranean cities;
4. Addressing climate change as a priority issue for the Mediterranean;
5. Transition towards a green and blue economy; and
6. Improving governance in support of sustainable Development

The Mediterranean Commission on Sustainable Development (MCSD) is the advisory body that assists the Contracting Parties of the Barcelona Convention in their efforts to integrate environmental issues in their socioeconomic programmes and promote sustainable development policies in the Mediterranean region. As a forum for debate and exchange of experiences, the Commission gathers on an equal footing government representatives and experts from various stakeholders' categories: local authorities, civil society/NGOs, socio-economic actors, the scientific community, IGOs, and Parliamentarians. The implementation of the MSSD is monitored through the "Mediterranean Sustainability Dashboard" that corresponds to a list of 26 priority indicators populated through existing global and national databases. **Table 2.2** presents these indicators, approved at the 20<sup>th</sup> Ordinary Meeting of the Contracting Parties to the Barcelona Convention in Tirana, Albania, in December 2017 and their alignment with the SDG indicators discussed at the 19th Meeting of the MCSD Steering Committee in July 2018 (UNEP/MAP, 2018 and 2018b). These indicators cover a broad range of related SDGs in addition to SDG 14, including SDG 4 (quality education), SDG 6 (clean water and sanitation), 8 (decent work and economic growth), 11 (sustainable cities), 12 (consumption and production), 13 (climate action) and 15 (life on land).

In addition to the MSSD indicators and those SDG indicators recommended to include in **Table 2.2**, consideration should be given to integrate the H2020 indicators (see **Table 2.3**) and the following additional SDG indicators may be considered to include in the future when data is available:

- ✓ 14.1.1 Index of coastal eutrophication and floating plastic debris density (in line with the Mediterranean IMAP indicators)
- ✓ 14.2.1 Proportion of national exclusive economic zones managed using ecosystem-based approaches
- ✓ 14.4.1 Proportion of fish stocks within biologically sustainable levels (in line with the Mediterranean IMAP indicators)

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<sup>29</sup> [https://wedocs.unep.org/bitstream/handle/20.500.11822/7097/mssd\\_2016\\_2025\\_eng.pdf?sequence=1&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/7097/mssd_2016_2025_eng.pdf?sequence=1&isAllowed=y)

**Table 2.2. MSSD Mediterranean Sustainability Dashboard and links with SDG Indicators (adapted from UNEP/MAP, 2018b)**

No.	MSSD indicators	SDG Indicators / UNEP/MAP Comments	Authors suggestions for alignment with SDGs
1	Ecological footprint	No similar SDG Indicator. Developed by the Global Footprint Network, the Ecological footprint aims at measuring the demand on and supply of nature <a href="https://www.footprintnetwork.org/our-work/ecological-footprint/">https://www.footprintnetwork.org/our-work/ecological-footprint/</a>	Composite indicator/index that is cross cutting to all SDG's related to resource use and environment and is available for all countries to access, complementing the SDG indicators.
2	Human Development Index	No similar SDG Indicator. UNDP indicator of human development (Life expectancy at birth, Expected years of schooling, Mean years of schooling and Gross national income (GNI) per capita) <a href="http://hdr.undp.org/en/content/human-development-index-hdi">http://hdr.undp.org/en/content/human-development-index-hdi</a>	Useful composite indicator/index related to SDG 3, 4 and 8 and available for all countries.
3	Gross Domestic Product (GDP)	SDG Indicator 8.1.1 Annual growth rate of real GDP per capita.	Suggest to replace with SDG indicator 8.1.1 (Tier I, UNSD).
4	Youth literacy rate	Youth literacy rate is a component of the SDG Indicator 4.6.1 Proportion of population in a given age group achieving at a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex.	If SDG indicator 4.6.1 (Tier II, UNESCO-UIS) is reported regularly reported by all countries in the future, data can replace the MSSD indicator.
5	Girl/Boy primary and secondary school registration ratio	UNESCO Indicator School enrolment, secondary (gross), gender parity index (GPI) is a proxy of the SDG Indicator 4.1.1 Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex.	The SDG Indicator is Tier III and still under development, therefore MSSD indicator is the only indicator with available data for the time being and should be used.
<b>1. Ensuring sustainable development in marine and coastal areas</b>			
6	Number of ratifications and level of compliance as reported by BC Contracting Parties	Indicator close to the SDG Indicator 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.	Ratification and compliance to the Barcelona Convention is a key indicator for the Mediterranean in relation to SDG 14, but also touching on other indicators, and should be reported in addition to the SDG 14.c.1 indicator.
7	Percentage of protected coastal and marine areas [under national jurisdiction]	Indicator close to the SDG Indicator 14.5.1 Coverage of protected areas in relation to marine areas	The SDG Indicator is fully developed with data compiled by UNEP WCMC and can replace the similar MSSD indicator.



No.	MSSD indicators	SDG Indicators / UNEP/MAP Comments	Authors suggestions for alignment with SDGs
<b>2. Promoting resource management, food production and food security through sustainable forms of rural development</b>			
8	Water efficiency index	Indicator close to the SDG Indicator 6.4.1 Change in water-use efficiency over time (to be applied also for the watersheds)	SDG indicator is still not reported by FAO, but data compile can replace the MSSD indicator.
9	Number of protected areas participating in the Green list initiative	This indicator is inspired by the IUCN Indicator Measures the number of protected and conserved areas that are effectively and equitably managed and deliver conservation outcomes ( <a href="https://www.iucn.org/theme/protected-areas/our-work/iucn-green-list">https://www.iucn.org/theme/protected-areas/our-work/iucn-green-list</a> ). It is also close to the SDG Indicator 15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type	Effective management of MPA's is a key indicator to compliment SDG indicator 14.5.1. Green list initiative does not include all Mediterranean countries. Consideration should be given to the future development of an MPA effectiveness indicator that can be reported on by all countries in the future.
10	Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems	This is the SDG Indicator 15.a.1 Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems.	Identical indicators, with data available from OECD.
11	Global Food Security Index	No similar SDG Indicator. The Global Food Security Index is based on 28 indicators covering three dimensions: food Affordability, Availability and Quality & Safety ( <a href="http://foodsecurityindex.eiu.com/">http://foodsecurityindex.eiu.com/</a> )	Composite indicator/index related to SDG 2.1 targets, with data available for all countries. SDG Indicator 2.4.1 Proportion of agricultural area under productive and sustainable agriculture, could also be considered for inclusion in the future, although still under development.
12	Water demand, total and by sector, compared to GDP	No similar SDG Indicator. SDG Indicator 6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources should be considered as well.	Consider keeping both the MSSD and SDG 6.4.2 indicators. FAO is custodian for indicator 6.4.2 and data is available
13	Share of population with access to an improved water source (total, urban, rural)	Indicator close to SDG Indicator 6.1.1 Proportion of population using safely managed drinking water services. This SDG Indicator is also used for SEIS/H2020 but it is more difficult to populate.	Considering replacing with SDG Indicator (Tier I, WHO & UNICEF) once data is fully available and reported.
14	Share of population with access to an improved sanitation system (total, urban, rural)	Indicator close to SDG Indicator 6.2.1 Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water. This SDG Indicator is also used for SEIS/H2020 but it is more difficult to populate.	Considering replacing with SDG Indicator (Tier I, WHO & UNICEF) once data is fully available and reported.

No.	MSSD indicators	SDG Indicators / UNEP/MAP Comments	Authors suggestions for alignment with SDGs
15	Proportion of agriculture quality products and Share of the agricultural land area used by organic farming	These indicators were developed by the Research Institute of Organic Agriculture (FiBL <a href="http://www.organic-world.net/statistics/statistics-data-tables.html">http://www.organic-world.net/statistics/statistics-data-tables.html</a> ). They are linked with the SDG Indicator 2.4.1 Proportion of agricultural area under productive and sustainable agriculture.	Considering including both indicators, whilst the methodology for Indicator 2.4.1 (Tier III, FAO & UNEP) is further developed and indicator is populated with data.
16	Number of Mediterranean threatened species included in legal documents	This indicator could be replaced by the SDG Indicator 15.5.1 Red List Index (IUCN)	Consider replacing with SDG Indicator 15.5.1 Red List Index (Tier I, IUCN)
17	Proportion of urban population with access to a decent dwelling	This indicator could be replaced by the SDG Indicator 11.1.1 Proportion of urban population living in slums, informal settlements or inadequate housing.	Consider replacing with SDG Indicator 11.1.1 (Tier I, UN Habitat)
<b>3. Planning and managing sustainable Mediterranean cities</b>			
18	Status of UNESCO world heritage sites	This is an UNESCO Indicator ( <a href="http://whc.unesco.org/en/list/">http://whc.unesco.org/en/list/</a> ) This indicator is close to the SDG Indicator 11.4.1 Total expenditure (public and private) per capita spent on the preservation, protection and conservation of all cultural and natural heritage, by type of heritage (cultural, natural, mixed and World Heritage Centre designation), level of government (national, regional and local/municipal), type of expenditure (operating expenditure/investment) and type of private funding (donations in kind, private non-profit sector and sponsorship)	Consider keeping MSSD whilst the methodology and database is further developed for SDG Indicator 11.4.1 (Tier III, UNESCO-UIS)
19	Waste generated and treated by type of waste and treatment type	It is a SEIS/H2020 indicator on the waste generation and treatment. This indicator is linked to the following SDG Indicators: 11.6.1 Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities (This indicator is quite complex) 12.5.1 National recycling rate, tons of material recycled	Consider keeping MSSD indicator and including SDG Indicator 12.5.1 (Tier III, UNSD & UNEP) once the methodology is further developed.
<b>4. Addressing climate change as a priority issue for the Mediterranean</b>			
	Green House Gas emissions (related to GDP)	Indicator close to the SDG Indicator 9.4.1 CO2 emission per unit of value added	Consider keeping MSSD indicator and including SDG Indicator 9.4.1 (Tier I, UNIDO & IEA)
21	Energy consumption (related to GDP)	Indicator close to the SDG Indicator 7.3.1 Energy intensity measured in terms of primary energy and GDP	Suggest to replace with SDG Indicator 7.3.1 (Tier I, UNSD & IEA)

No.	MSSD indicators	SDG Indicators / UNEP/MAP Comments	Authors suggestions for alignment with SDGs
<b>5. Transition towards a green and blue economy</b>			
22	Material intensity of the economy	Indicator close to the following SDG Indicators: 8.4.1 - 12.2.1 Material footprint, material footprint per capita, and material footprint per GDP 8.4.2 - 12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP	Suggest to replace with indicators 8.4.1/12.2.1 and 8.4.2/12.2.2 (Tier 1, UNEP)
<b>6. Improving governance in support of sustainable Development</b>			
23	Number of National Strategies for Sustainable Development adopted or updated [and number of updates since first edition]	Indicator close to the SDG Indicator 17.14.1 Number of countries with mechanisms in place to enhance policy coherence of sustainable development	Suggest to keep MSSD indicator which is specific to the Mediterranean
24	Proportion of bank credit allocated to the private sector – Existence of alternative financing systems using bank credit	No similar SDG indicator.	Suggest to keep this indicator
25	Public and private expenses for research and development in percentage of GDP	Indicator close to the SDG Indicator 9.5.1 Research and development expenditure as a proportion of GDP.	Suggest to replace with SDG Indicator 9.5.1 (Tier I, UNESCO-UIS)
26	Existing mechanisms to ensure public participation and access to environmental publication	Indicator similar to the SDG Indicator 16.10.2 Number of countries that adopt and implement constitutional, statutory and/or policy guarantees for public access to information	Suggest to replace with SDG Indicator 16.10.2 once methodology is finalized and data available (Tier II, UNESCO-UIS)

Source: [UNEP/MAP \(2018c\)](#)

The MSSD, which was adopted for the first time in 2005 and came to its end in 2015, has been assessed in a number of reports over the years including the *State of the Mediterranean marine and coastal environment* (2012), *State of the environment and development in the Mediterranean* (2009) and *A sustainable future for the Mediterranean: The Blue Plan's environment and development outlook* (2005)<sup>30</sup>.

### 2.3 Strategic Action Programme (SAPs) and other thematic strategies and plans

In 1997, with the support of the Global Environment Facility (GEF) a Transboundary Diagnostic Analysis (TDA) was developed and adopted to identify and analyse issues of transboundary concern in the Mediterranean marine and coastal environment. A revised version, including aquifers was published in 2005<sup>31</sup>. Based on this TDA, two strategic action programmes (SAPs) were developed with all key stakeholders to define the objectives, targets and actions to address land-based sources of pollution and to conserve biological diversity.

Regarding pollution, the *Strategic action programme to address pollution from Land-based activities* (SAP-Med) is the first and unique long-term policy (2000-2025) focused on combatting pollution from land-based sources and activities and their impact on marine and coastal environment. Adopted in 1997, it has triggered the preparation of National Action Plans (NAPs) by all Contracting Parties by 2005. In 2016 these NAPS underwent revision (for 2016-2025) and also incorporate objectives and targets from the detailed regional plans listed in **Table 2.1**, including Persistent Organic (POPs)<sup>32</sup>, Biological Oxygen demand (BOD) from industry and the food sector, hazardous wastes, mercury and marine litter, as well as incorporating the Ecosystem Approach. As part of the guidelines for the NAPs, the interlinking LBS Protocol/ SAP-MED, Regional Plans and legally binding measures to pollution-related Ecological Objectives (EO5, EO9 and EO11) and GES targets were analysed and presented (**UNEP/MAP, 2015**), and the synopsis of updated NAPs presents proposed NAP indicators (**UNEP/MAP, 2016c**). The Horizon 2020 project has further supported the NAPs through the development of additional core pollution indicators (see **Table 2.3**).

Regarding biological diversity, the *Strategic Action Plan for the conservation of marine and coastal biodiversity in the Mediterranean* (SAP-BIO) was adopted in 2003 (**UNEP/MAP, 2003**). A number of thematic action plans were integrated into the SAP and as have been updated over time as appropriate (see **Table 1**) which address monk seals, cetaceans, marine vegetation, bird species, cartilaginous fishes (chondrichthyans), species introductions and invasive species, marine turtles, coralligenous and other calcareous bio-concretions.

Both SAP-Med and SAP-BIO were evaluated in terms of implementation and based on available data and information. The Strategic Action Programme to Address Pollution from Land Based Activities (SAP-MED) and related National Action Plans (NAP) Implementation Status 2000–2015 (**UNEP/MAP, 2015b**) and the SAP BIO implementation: The first decade and way forward (**UNEP/MAP, 2013**).

In addition to the core strategies and plans related to pollution and biodiversity, strategic documents have been developed and adopted regarding ship's ballast water management and invasive species, prevention of and response to marine pollution from ships, exploration and exploitation of the continental shelf and the seabed and its subsoil, integrated coastal zone management (ICZM), sustainable consumption and production and climate change adaptation. It should be noted the reporting

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<sup>30</sup> <http://planbleu.org/en/activites/report-state-environment-and-development-mediterranean>

<sup>31</sup> <https://iwlearn.net/documents/5183>

<sup>32</sup> Dichlorodiphenyltrichloroethane (DDT); Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene; and Polychlorinated biphenyls (PCB)

obligations of all these strategic documents has been captured in the revised reporting format for the implementation of the Barcelona Convention and its Protocols (UNEP/MAP, 2017) and the Ecosystem Approach and Integrated Monitoring and Assessment Programme has incorporated relevant targets and indicators for regular monitoring (with the exception of climate change and sustainable consumption and production).

**Table 2.3 List of H2020 Indicators**

Indicators	Sub-indicators
<b>IND 3. Access to Sanitation</b>	3.1 Share of total, urban and rural population with access to an improved sanitation system (ISS)
	3.2 Proportion of population using safely managed sanitation services (SMSS)
<b>IND 4. Municipal Wastewater Management</b>	4.1 Municipal wastewater collected and wastewater treated
	4.2 Direct use of treated municipal wastewater
	4.3 Release of nutrients from municipal wastewater
<b>IND 5. Coastal and Marine Water Quality</b>	5.1 Nutrient concentrations in transitional, coastal and marine waters
	5.2 Bathing water quality
<b>IND 6.1. Release of nutrients from industrial sectors</b>	6.1.1. Total BOD load discharged from industrial installations to the Mediterranean marine environment.
	6.1.2. Total Nitrogen load discharged from industrial installations to the Mediterranean marine environment
	6.1.3. Total Phosphorus load discharged from industrial installations to the Mediterranean marine environment.
<b>IND 6.2. Release of toxic substances from industrial sectors</b>	6.2.1. Total heavy metals load released from industrial installations to the Mediterranean marine environment.
	6.2.2. Furans and dioxins load released from industrial installations to the Mediterranean marine environment.
	6.2.3. Polycyclic aromatic hydrocarbons (PAH) load released from industrial installations to the Mediterranean marine environment.
	6.2.4. Volatile organic compounds (VOC) load released from industrial installations to the Mediterranean marine environment.
<b>IND 6.3. Industrial hazardous waste disposed in environmentally sound manner</b>	6.3.1. Total quantity of generated hazardous waste from industrial installations.
	6.3.2. Quantity of industrial hazardous waste disposed in environmentally sound manner relative to total quantity of generated hazardous waste from industrial installations.
<b>IND 6.4. Compliance measures aiming at the reduction and/or elimination of pollutants generated by industrial sectors</b>	6.4.1. Number of industrial installations reporting periodically loads of pollutants discharged to the marine and coastal environments relative to the total number of industrial installations.
	6.4.2. Number of environmental inspections carried out by enforcement authorities in which industrial installations were found to be in breach of laws and regulations relative to the total number of executed inspections.
	6.4.3. Number of eliminated hotspots identified in the updated NAPs relative to the 2001 and 2015 baselines
<b>IND 1. Municipal Waste Generation</b>	IND 1.A Municipal waste composition
	IND 1.B Plastic waste generation per capita
	IND 1.C % of population living in Coastal Areas
	IND 1.D % of Tourists in Coastal Areas
<b>IND 2. “Hardware” of waste management</b>	IND 2.A Waste Collection
	IND 2.A.1 Waste Collection Coverage
	IND 2.A.2 Waste Captured by the formal waste sector
	IND 2.B Environmental Control
	IND 2.B.1 % of waste to uncontrolled dumpsites
	IND 2.B.2 Uncontrolled dumpsites in Coastal Areas
IND 2.B.3 Waste going to dumpsites in Coastal Areas	

Indicators	Sub-indicators
	IND 2.C Resource Recovery IND 2.C.1 % of plastic waste generated that is recycled
<b>IND 3. “Software” of waste management</b>	<b>3.A MARINE LITTER &amp; WASTE MANAGEMENT FRAMEWORK</b>
	IND 3.A.1 Is there a National Assessment for ML and its impacts?
	IND 3.A.2 Is there a National Plan or Strategy for ML?
	IND 3.A.3 Is there a National Plan or Strategy for Waste Management?
	IND 3.A.4 Is there a National Law on Waste?
	IND 3.A.5 Is there a national plan or target to close the dumpsites before 2030?
	IND 3.A.6 Is there a National Information system for waste management in place?
	<b>3.B RESOURCE RECOVERY</b>
	IND 3.B.1 Is there a National Plan or Strategy for Waste Prevention?
	IND 3.B.2 Are there mandatory targets for recycling - recovery of packaging waste?
	IND 3.B.3 Are there EPR or Deposit- Return schemes for packaging waste?
	IND 3.B.4 Are there national policies to eliminate or reduce single-use plastics?
	IND 3.B.5 Are there financial incentives for reuse – resource recovery activities?
<b>3.C SUSTAINABLE CONSUMPTION AND PRODUCTION</b>	
IND 3.C.1 Are there Sustainable Consumption and Production plans or strategies?	
IND 3.C.2 Are there green procurement rules for the public sector in place?	
IND 3.C.3 Are there policies to support sustainable tourism?	
IND 3.C.4 Are there policies to support eco-labelling and eco-design?	

## 2.4 Ecosystem Approach and the Integrated Monitoring and Assessment Programme

The Ecosystem Approach in the Mediterranean began implementation in 2008, with the vision and the goals for the implementation of the ecosystem approach to the management of human activities adopted in decision IG. 17/6 of its 15th meeting held in Almeria, Spain (2008) providing for “A healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse for the benefit of present and future generations” and the seven-step road-map for implementing the ecosystem approach by Mediterranean Action Plan. This approach is integrated into the MAP and Barcelona Convention framework and is in line with the EU Marine Strategic Framework Directive and the decisions of the Convention on Biological Diversity (CBD) regarding the ecosystem approach and the Aichi targets.

Supported by thematic Correspondence Groups on Monitoring (CORMON) on pollution and marine litter, biodiversity and fisheries, and coast and hydrography, 11 Ecological Objectives (EOs) and related indicators, Good Environmental Status (GES) and targets were developed and adopted by the Contracting Parties to the Barcelona Convention in in 2012 and 2013 (Decisions IG.20/4 and IG.21/3 respectively).

Monitoring and assessment, based on scientific knowledge, of the sea and coast is the indispensable basis for the management of human activities, in view of promoting sustainable use of the seas and coasts and conserving marine ecosystems and their sustainable development. The 19th Meeting of Contracting Parties (COP 19) in 2016 agreed on the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP) in its Decision IG. 22/7 (UNEP/MAP, 2016d) which lays down the principles for an integrated monitoring, which will, for the first time, monitor biodiversity and non-indigenous species, pollution and marine litter, coast and

hydrography in an integrated manner. The IMAP implementation is in line with article 12 of the Barcelona Convention and several monitoring related provisions under different protocols with the main objective to assess GES. Its backbone are the 27 common indicators as presented in decision IG 22/7: Integrated Monitoring and Assessment Programme (see [Table 2.4](#)).

**Table 2.4. List of IMAP Ecological Objectives (EOs) and Indicators**

Ecological Objective (EO)	IMAP Indicators	Relevant SDG Targets
<p><b>EO 1 Biodiversity</b> Biological diversity is maintained or enhanced. The quality and occurrence of coastal and marine habitats and the distribution and abundance of coastal and marine species are in line with prevailing physiographic, hydrographic, geographic and climatic conditions.</p>	<p>Common Indicator 1: Habitat distributional range (EO1) to also consider habitat extent as a relevant attribute</p> <hr/> <p>Common Indicator 2: Condition of the habitat's typical species and communities (EO1)</p> <hr/> <p>Common Indicator 3: Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles)</p> <hr/> <p>Common Indicator 4: Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles)</p> <hr/> <p>Common indicator 5: Population demographic characteristics (EO1, e.g. body size or age class structure, sex ratio, fecundity rates, survival/mortality rates related to marine mammals, seabirds, marine reptiles)</p>	<p>14.2, 14.5, 15.5</p>
<p><b>EO 2 Non-indigenous species</b> Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystem</p>	<p>Common Indicator 6: Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species, notably in risk areas (EO2, in relation to the main vectors and pathways of spreading of such species)</p>	<p>15.8</p>
<p><b>EO 3 Harvest of commercially exploited fish and shellfish</b> Populations of selected commercially exploited fish and shellfish are within biologically safe limits, exhibiting a population age and size distribution that is indicative of a healthy stock</p>	<p>Common Indicator 7: Spawning stock Biomass (EO3);</p> <hr/> <p>Common Indicator 8: Total landings (EO3);</p> <hr/> <p>Common Indicator 9: Fishing Mortality (EO3);</p> <hr/> <p>Common Indicator 10: Fishing effort (EO3);</p> <hr/> <p>Common Indicator 11: Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy (EO3)</p> <hr/> <p>Common Indicator 12: Bycatch of vulnerable and non-target species (EO1 and EO3)</p>	<p>14.4</p>
<p><b>EO 4 Marine food webs</b> Alterations to components of marine food webs caused by resource extraction or human-induced environmental changes do not have long-term adverse effects on food web dynamics and related viability</p>	<p><i>To be further developed</i></p>	
<p><b>EO 5 Eutrophication</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.</p>	<p>Common Indicator 13: Concentration of key nutrients in water column (EO5);</p> <hr/> <p>Common Indicator 14: Chlorophyll-a concentration in water column (EO5)</p>	<p>14.1</p>
<p><b>EO 6 Sea-floor integrity</b> Sea-floor integrity is maintained, especially in priority benthic habitats</p>	<p><i>To be further developed</i></p>	

<b>Ecological Objective (EO)</b>	<b>IMAP Indicators</b>	<b>Relevant SDG Targets</b>
<b>EO7 Hydrography</b> Alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems.	Common Indicator 15: Location and extent of the habitats impacted directly by hydrographic alterations (EO7) to also feed the assessment of EO1 on habitat extent	<b>14.2</b>
<b>EO 8 Coastal ecosystems and landscapes</b> The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved	Common Indicator 16: Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8);	<b>14.2</b>
	Candidate Indicator 25: Land use change (EO8)	<b>14.2</b>
<b>EO 9 Pollution</b> Contaminants cause no significant impact on coastal and marine ecosystems and human health	Common Indicator 17: Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater)	<b>14.1, 6.3</b>
	Common Indicator 18: Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9)	
	Common Indicator 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 (EO9);	
	Common Indicator 20: Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9);	
	Common Indicator 21: Percentage of intestinal enterococci concentration measurements within established standards (EO9)	
<b>EO 10 Marine litter</b> Marine and coastal litter do not adversely affect coastal and marine environment	Common Indicator 22: Trends in the amount of litter washed ashore and/or deposited on coastlines (EO10);	<b>14.1, 6.3</b>
	Common Indicator 23: Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10);	
	Candidate Indicator 24: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, and marine turtles (EO10)	
<b>EO 11 Energy including underwater noise</b> Noise from human activities cause no significant impact on marine and coastal ecosystems	Candidate Indicator 26: Proportion of days and geographical distribution where loud, low, and mid-frequency impulsive sounds exceed levels that are likely to entail significant impact on marine animal	<b>14.1</b>
	Candidate Indicator 27: Levels of continuous low frequency sounds with the use of models as appropriate	

The implementation of IMAP requires standard guidelines and approaches in monitoring the common indicators and the revision of national monitoring programmes in all 21 Contracting Parties to the Barcelona Convention to be aligned with the IMAP indicators. Regular national data reporting will contribute to thematic and overall regional assessments. The first integrated assessment based on IMAP is the 2017 Quality Status Report. It builds upon an initial Integrated Ecosystem Assessment developed in 2011, the 2012 Mediterranean State of Environment Report, as well as several thematic assessments undertaken in recent years.



### 3. Monitoring and Reporting Mechanisms

#### 4.1 Barcelona Convention Reporting System

In 2017 a revised reporting format for the implementation of the Barcelona Convention and its Protocols was adopted (UNEP/MAP, 2017) to be completed by the Contracting Parties each biennium which includes reporting obligations of the Convention, Protocols, regional plans and IMAP, and designed to be simple to complete and accessible online. It combines qualitative as well as quantitative information (see Figure 2.3). The analysis of these national reports will provide information on the progress of implementation of all agreed measures that can be integrated into future state of environment reporting and progress in achieving relevant SDGs.

Figure 2.3. Extract from revised reporting format for the implementation of the Barcelona Convention and its Protocols (UNEP/MAP, 2017)

**PART IV IMPLEMENTATION OF NATIONAL ACTION PLANS (NAPs) AND THEIR EFFECTIVENESS**

**Table IV – IMPLEMENTATION OF NAPs AND THEIR EFFECTIVENESS**

EO	Common Operational targets in the NAPs	Status of implementation Please tick the box that applies				Difficulties/Challenges Please tick all that apply				Changes in the information provided in the previous report (please tick the box that applies)	
		Yes	No	Under development	Not applicable	Policy framework	Regulatory framework	Financial resources	Technical Guidance Capabilities	Yes	No
Common Operational targets in the NAPs under E05	Provide XX% of agglomerations in excess of 2000 inhabitants with wastewater collection and treatment					On a voluntary basis, please briefly describe difficulties/challenges and he type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
	Reduce by XX% of BOD discharged to water bodies					On a voluntary basis, please briefly describe difficulties/challenges and he type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	
Common Operational targets in the NAPs under E09	Reduce discharge of hazardous substances from industrial plants (apply BAT/BEP) by XX% or dispose in a safe manner					On a voluntary basis, please briefly describe difficulties/challenges and he type of attention or assistance that is required				If your answer is "Yes", please update accordingly If your answer is "No", please go to next question	

#### 4.1 UNEP/MAP Monitoring and Databases

With its initial focus on pollution UNEP/MAP established a pollution monitoring programme for trace metals and organics in biota and sediments, bio-effects and atmospheric data since 1999 which is still ongoing, with data reported by Contracting Parties on a yearly basis and regular activities and training on quality assurance. The database is currently only available to Contracting Parties and UNEP/MAP, although analysis of the data has been included in several reports and publications over the last 30 years. Additional data is reported on national baseline budgets (NBBs) and Pollutant Release and Transfer Register (PRTR).

Since adopted of the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP), numerous activities have been implemented to support countries to revise their national monitoring programmes accordingly, both financially and through training on best practices in monitoring along with providing indicator guidelines (UNEP/MAP,

2017b) and revised or new metadata and reporting templates. The ongoing pollution monitoring has been aligned with IMAP (see Table 2.5) which provides data for trace metals and organics in biota and sediments, as well as nutrient, oxygen, oceanographic parameters, and some atmospheric deposition data. For the other indicators, data is expected to be reported during the 2017-2018 biennium.

**Table 2.5. Comparison of IMAP Pollution Indicators with the MEDPOL Reporting formats**

IMAP Indicators	MEDPOL templates based on MEDPOL Phase IV (Annex 1)
Common Indicator 17: Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater)	Table 1. Biota / trace metals data reporting format
	Table 2. Biota / organic contaminants data reporting format
	Table 3. Sediment / trace metals data reporting format
Common Indicator 13: Concentration of key nutrients in water column (EO5);	Table 4. Sediment / organic contaminants data reporting format
	Table 6. Seawater data reporting format
Common Indicator 14: Chlorophyll-a concentration in water column (EO5)	Table 5. Bio-effects data reporting format. <i>Note needs revision to be further aligned in 2018-2019</i>
Common Indicator 18: Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9)	<i>Note: Contracting Parties report to REMPEC, and with the adoption of the Offshore Action Plan in 2016, work is currently underway to further elaborate an offshore monitoring program</i>
Common Indicator 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 (EO9);	<i>Note: Currently no reporting format and suggests to be developed in 2018-2019</i>
Common Indicator 20: Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9);	Some bathing water quality data submitted to MEDPOL based on basic template. <i>Note: Further revision and development to be developed in 2018-2019 in line with WHO guidelines</i>
Common Indicator 21: Percentage of intestinal enterococci concentration measurements within established standards (EO9)	Table 7. Atmospheric dry deposition data reporting format
Not in IMAP but to remain as integral part of MEDPOL monitoring programme	Table 8. Atmospheric wet deposition data reporting format
	Table 9. Certified reference material (CRM) / quality control data
Overall for all data	

In addition to national monitoring, there are several existing GIS and thematic sites which include:

- for Climate change and ICZM (<http://climvar.grid.unep.ch/>);
- Coastal aquifers Geographic Information Systems (GIS)<sup>33</sup>;
- Marine Pollution Risk Assessment and Response (<http://medgismar.rempec.org/>);
- MPA's (<http://medgis.medchm.net/>) and
- ICZM Platform (<http://iczmplatform.org/>).

An information system to accommodate the future monitoring database and link to all GIS and relevant databases is under development InfoMAP (<http://www.geo.info-rac.org/>).

<sup>33</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)

## 4.2 Regional and thematic assessments

With over 40 years of work since the establishment of UNEP/MAP, numerous publications on the state of the marine and coastal environment and thematic assessments have been published over the years. The MAP technical reports series published 170 reports between 1986 and 2008<sup>34</sup>, in addition to publications from each of UNEP/MAP (<http://web.unep.org/unepmap/publications>) and regional activity centres on sustainable development (<http://planbleu.org/en/publications>), biodiversity (<http://www.rac-spa.org/publications>), ICZM (<http://iczmplatform.org/library>), and sustainable consumption and production (<http://www.cprac.org/en/media/studies>). Some of the key overall assessments within the last decade include the Ecosystem Approach Integrated Assessment (UNEP/MAP, 2011), the State of the Mediterranean Marine and Coastal Environment (UNEP/MAP, 2012) and the Mediterranean 2017 Quality Status Report available online (<https://www.medqsr.org/>). The next State of the Environment and Development in the Mediterranean Report is planned for 2019 and the next Quality Status Report is planned for 2023, to be complimented by a revision of the Transboundary Diagnostic Analysis (TDA) with the support of GEF funding.

## 4 Possible contribution of UNEP/MAP to the reporting of SDG 14 Targets and Indicators

The following recommendations to strengthen the role of future UNEP/MAP in the SDG monitoring and review process are elaborated below.

1. **Review and align objectives, targets and indicators with the SDGs** within the Mediterranean region, in coordination with other partners.
2. **Contribute monitoring data to UN Environment** as part of global monitoring of targets 14.1., 14.2 and 14.5.
3. Ensure **data and information from Mediterranean countries contribute to VNR reports and SDG databases** through cooperation and agreements with other regional organizations and SDG Focal Points
4. **Develop an approach to regional assessments that can report on the SDG** implementation
5. **Prepare an SDG Outlook document** to capture the vision of how UNEP/MAP will contribute to future

### 4.1 Review and align objectives, targets and indicators with the SDGs

UNEP/MAP is currently undertaking a mapping of the Barcelona Convention system's policies and instruments (including objectives and targets) against relevant SDGs targets and indicators, in particular in relation to the IMAP, H2020 and MSSD indicators, which will be reflected in the next State of the Environment and Development in the Mediterranean (planned for 2019). The implementation of the regional plans and strategies are also an important contribution to SDGs implementation, and should therefore be aligned as appropriate with the SDG targets. **Appendix 2** provides an example template for mapping for SDG target 14.1.

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<sup>34</sup> See full list in the annex of MAP technical reports series no 170 available at <http://wedocs.unep.org/bitstream/handle/20.500.11822/520/mts170.pdf?sequence=2&isAllowed=y>

**Suggested Actions** for consideration:

- To integrate the targets of the various regional plans and strategies as outlined in **Table 2.1** into the mapping with SDG targets. This would serve as a reference document to view all obligations, objectives and targets in one document that can be used as a basis for assessing implementation and achievement of these objectives and targets in the future, in alignment with global Convention targets and the SDGs;
- To review in the future targets and indicators for regional plans/strategies, to enable quantifiable reporting on progress and towards achieving the SDG targets; and
- The list of regional plans is currently available at <http://web.unep.org/uneppmap/action-plans> and it is suggested that links are also provided to access each document and also include the document with the full mapping of targets with the SDGs.

## 4.2 Contribute monitoring data to UN Environment

UN Environment is responsible for the global level reporting of targets 14.1, 14.2 and 14.5 (see **Table 2.6**). For all Tier I indicators, 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. Meta data is available in the SDG Indicator Metadata repository (<https://unstats.un.org/sdgs/metadata/>) including 14.5.1 on marine protected areas (MPA's). Tier III indicators require work plans to be developed outlining the methodological development of the indicators for approval by the IAEG-SDGs. The current Tier III work plans are in draft form (using a standard structure), last presented at the 6<sup>th</sup> Meeting of the IAEG-SDGs (11-14 November 2017)<sup>35</sup>.

**Table 2.6. Tier Classification of SDG Indicators (as of 20 April 2017) for Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development**

Target	Indicator	Possible Custodian Agency(ies)	Partner Agency(ies)	Updated Tier Classification
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	UNEP	IOC-UNESCO, IMO, FAO	<b>Tier III</b>
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	UNEP	IOC-UNESCO, FAO	<b>Tier III</b>
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, UNEP	Ramsar	<b>Tier I</b>

<sup>35</sup> <https://unstats.un.org/sdgs/meetings/iaeg-sdgs-meeting-06/>

UNEP/MAP and its member states, through its monitoring programmes and databases can contribute directing to these three SDG 14 indicators:

- **Eutrophication (Indicator 14.1.1).** Common Indicators 13 (Chlorophyll-a) and 14 (nutrients). Chlorophyll-a, nitrates, nitrites, ammonium, phosphates and dissolved oxygen from the MEDPOL database established since 1999.
- **Marine Litter (Indicator 14.1.1).** Regular monitoring programme for Common Indicators 22 (beach litter) and 23 (litter in the water column) starting in 2018. However, ICC and national monitoring surveys on beach litter data submitted as well as data from DeFishGear Project<sup>36</sup> and EEA Marine Litter watch, as well as other projects to contribute.
- **ICZM Protocols Plans (Indicator 14.2.1).** PAP/RAC database on ICZM plans in the Mediterranean
- **Marine Protected Areas (indicator 14.5.1).** MPA data from SPA/RAC and the MedPAN association<sup>37</sup>.

For this purpose, it is essential that the methodologies used to collect and analyse the above indicators and parameters are made available, as on a global scale data will need to be comparable. The methodologies and guidelines for the IMAP indicators were developed in 2017 (**UNEP/MAP, 2017b**) and were shared with UN Environment as part of the work of the Regional Seas Indicator working group. With regards to SDG Indicator 14.1.1, UN Environment coordinated an “Experts Workshop on Marine Pollution Indicators under Sustainable Development Goal Target 14.1.1” on the 12-13 September 2018, Paris to discuss how the Regional Seas can contribute to the reporting of eutrophication and marine litter data, bringing together in-situ and satellite data as appropriate.

***Suggested Actions for consideration:***

- UNEP/MAP and UN Environment to strengthen existing mechanisms to share future data related to eutrophication, marine litter and ICZM as a contribution to the global database on SDG Indicators 14.1.1 and 14.2.1, to be discussed and agreed with Contracting Parties to the Barcelona Convention. (global and regional mechanism of SDG data bases should interact to facilitate country reporting);
  - Include support to national institutions to generate more data to fulfil SDG reporting needs;
  - Strengthen mechanism of reporting to UNEP/MAP and UN Environment on the existing data and the need for different regional institutions to exchange information and relevant data to facilitate country reporting.
- Regular assessments of the Common Indicators (13, 14, 22 and 23) to be shared with UN Environment for inclusion of global assessments of SDG targets 14.1 and 14.2.

### **3. Ensure data and information from Mediterranean countries contribute to VNR reports and SDG databases**

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 Mediterranean covers three regions with the Economic Commission for Africa (UNECA); Economic

<sup>36</sup> <http://www.defishgear.net/>

<sup>37</sup> <http://medpan.org/>

Commission for Europe (UNECE)<sup>38</sup>; Economic Commission for Western Asia (UNECWA) each of which is undertaking numerous activities on SDG implementation, including data management and assessments, knowledge sharing and capacity building. In addition, there are a number of other regional organizations that are partners to UNEP/MAP, as well as the MCSDD that can contribute to a coordinated approach to the monitoring and review of the SDG 14 and other relevant targets, in particular the General Fisheries Commission for the Mediterranean (GFCM). The cooperation in the Mediterranean between UNEP/MAP and GFCM with joint activities and reporting is a unique example of a regional sea's coordination towards reporting of SDG 14.

At the national level, as part of its follow-up and review mechanisms, the 2030 Agenda 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 the Economic and Social Council (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.<sup>39</sup>

The 2018 HLPF includes the theme "Transformation towards sustainable and resilient societies", with a focus on Goals 6 (Clean Water and Sanitation), 7 (Affordable and Clean Energy), 11 (Sustainable Cities and Communities), 12 (Responsible Consumption and Production), 15 (Life on Land), and 17 (Partnerships for the Goals). All past reports and links for 2016-2018 are provided in **Table 2.7**. Of those countries that have not as yet submitted VNR reports, it should be noted that Algeria, Bosnia and Herzegovina, Croatia, Israel and Tunisia are scheduled to submit to the 2019 HLPF, leaving Libya and Syria pending. A preliminary review of current VNR reports present a lack of common approach in many of the reports and in some cases no mention of the Barcelona Convention. It is therefore of benefit that UNEP/MAP (and its RACs) along with national experts should contribute to future VNR reports, based on the progress in implementation of its strategies and plans and also based on quality status, state of environment reports and analysis of monitoring data. This will require coordination between UNEP/MAP partners and the MCSDD as well as inclusion of national experts and the SDG Focal Points.

**Table 2.7. VNR Reports submitted to the HLPF**

Country	Year that VNR presented at HLPF	Brief comments on SDG 14 priorities and reference to the Barcelona Convention
Albania	2018	Limited information on SDG 14 and alignment with national priorities.
Cyprus	2017	Strong emphasis to Barcelona Convention (pollution, Contingency Plan for preparedness and response, marine litter).
Egypt	2016/2018	Emphasis on ICZM although no mention of the ICZM Protocol.
France	2016	Reference to Barcelona Convention and emphasis overall on marine pollution, biodiversity, fisheries, climate change, blue growth and MPAs.
Greece	2018	Reference to the Barcelona Convention and ICZM Protocol as well as the EU MSFD. Overall emphasis on pollution, sustainable tourism, fisheries and aquaculture, MPAs and MSP.
Italy	2017	Report providing general information and not structured per SDG. Overall emphasis on marine and coastal environment, soil consumption and desertification, pollution and IWRM.

<sup>38</sup> <http://www.unece.org/stats/sustainable-development.html> and <https://www.unece.org/sustainable-development/sustainable-development/home.html>

<sup>39</sup> <https://sustainabledevelopment.un.org/vnrs>

Country	Year that VNR presented at HLPF	Brief comments on SDG 14 priorities and reference to the Barcelona Convention
Lebanon	2018	Reference to Barcelona Convention and emphasis on main challenges of coastal development and urbanization, sand extraction and sea reclamation, pollution and solid waste management, as well as the ongoing impact of the 2006 oil slick
Malta	2018	Reference to the use of ecosystem-based approached and overall review on all SDG 14 targets
Monaco	2017	Details on work undertaken for MPA's, fisheries and marine litter with cooperation with regional and international organizations.
Montenegro	2016	Developed in cooperation with UNEP/MAP and the MCSD, and with overall emphasis on integrated management of marine and coastal ecosystems
Morocco	2016	Brief summary report without detailed analysis of SDG 14
Slovenia	2017	Reference to Barcelona Convention (pollution and marine litter)
Spain	2018	Reference to Barcelona Convention and OSPAR work and assessments, with emphasis on the links of pollution with other SDGs and development of advanced solutions for the sustainable management of water and fisheries resources and blue growth
Turkey	2016	No individual analysis of each SDG included and limited information on SDG 14.

***Suggested Actions for consideration:***

- Establish an SDG/MSSD coordination group (building upon the MCSD and key MAP partners) to ensure a coordinated approach to the reporting of SDG 14 and other relevant SDG targets, in coordination with UNECE, UNESCAP and UNECA and the SDG Focal Points; and
- Promote collaboration between MCSD/MAP and SDG focal points to ensure that the SDG 14 section of future VNR reports incorporates data and information from UNEP/MAP, MCSD and partners (including specifically the SIMPEER experience and pilots) and involves UNEP/MAP experts in the review and finalization, also ensuring regional harmonization between the reports.

**4. Develop an approach to regional assessments that can report on the SDG implementation**

Once the objectives, targets and indicators of the Barcelona Convention protocols, regional plans and strategies are aligned with the corresponding SDG targets, future reporting can be structured so as also to report on the progress towards achieving the SDG targets. This can be specifically done through:

- **State and Pressure:** Future QSR's and the Common Indicator Assessments can be used to report on the progress of SDG targets;
- **Pressures, drivers and socioeconomic aspects:** Reports on the implementation of the MSSD and, in particular, the agreed indicators which contribute to specific SDG targets and with many common indicators, plus State of the Environment and Development Report.
- **Pressures and response:** Progress reports on the implementation of the Convention and Protocol obligations and the objectives and targets of the regional plans and strategies.

***Suggested Actions for consideration:***

- Develops a methodology for more quantitative future state of environment regional assessments based on the agreed indicators (in particular, pressure, state and response indicators including Common Indicators, MSSD indicators and regional plan indicators where applicable), and a structure in line with UNEP/MAP objectives and targets and SDG targets;
- Ensure the next State of the Environment and Development Report (2019) is aligned with the relevant SDG targets, and also reports on the achievement of the relevant SDG targets in the Mediterranean LME;
- Consider if appropriate a separate report on the progress of SDG implementation; and
- Coordinate with the Regional Seas Programme, a common cycle for state of environment reports so that results can be compared at a global level (such as every 5-6 years).

**5. Prepare an SDG Outlook document to capture the vision of how UNEP/MAP will contribute to future SDG reporting**

Based on the work undertaken so far by UNEP/MAP and this case study, develop an SDG Outlook document to define the future contribution of UNEP/MAP to SDG follow up and review including:

- Contribution of the Barcelona Convention and associated Protocols and regional plans and strategies to the implementation of the SDGs in the Mediterranean region
- Coordination mechanism to be established with UNEP/MAP partners, Regional Economic Commissions and SDG Focal Points for future contribution to VNR and global SDG assessments
- Strategy for sharing data and results regarding SDG indicators 14.1 and 14.2 with UN Environment as part of the global monitoring of these indicators.

This should also consider discussion with Contracting Parties on a possible decision on the role of the Barcelona Convention in the follow up and review of the SDGs, to be discussed and presented at the 2019 or 2020 HLPF.



# The Nairobi Convention’s reporting in the Western Indian Ocean region towards the follow up and review of the SDGs

## 1. Introduction

### 1.1 The Nairobi Convention

**The Nairobi Convention for the Protection, Management and Development of Coastal and Marine Environment of the Western Indian Ocean (WIO) region** was signed in 1985 and came into force in 1996. The Convention was amended and adopted in April, 2010. The Nairobi Convention area extends from Somalia in the North to the Republic of South Africa in the South, covering 10 States, five of which are island States in the Western Indian Ocean and five mainland States. The Contracting Parties are Comoros, France, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, Tanzania and the Republic of South Africa.<sup>40</sup> The structure of the Nairobi Convention is composed of a Secretariat (based in Nairobi, Kenya), a set of National Focal Points, the Partners of the Convention, expert groups/task forces, and the Regional Coordinating Unit (RCU). The Secretariat serves as the central administrator for the Convention and implementation of the work program. The Conference of Parties (COP) is the main decision-making body of the Convention, composed of experts from each country. The COP is convened every two years to review the implementation of the Convention and the Protocols (a smaller group, the Bureau of Contracting Parties, meets between COP meetings to address issues related to implementation of the Convention). To address emerging issues in the region, the COP has also established expert groups and task forces, such as the Mangrove Network, the Coral Reef Task Force, Marine Turtle Task Force, the Forum for Academic and Research Institutes (FARI), and the Legal and Technical Working Group. Since the implementation of the Convention, there have been eight COP meetings, with the eighth COP held in Seychelles in 2015.

**Table 3.1 Nairobi Convention and Protocols**

Convention/Protocol Title	Year adopted	Year entered into force
Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region ( <b>UNEP, 2010</b> )	Friday, June 21, 1985	Thursday, May 30, 1996
Protocol Concerning Co-operation in Combating Marine Pollution in Cases of Emergency in the Eastern African Region	Friday, June 21, 1985	Thursday, May 30, 1996
Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region	Friday, June 21, 1985	
Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region	Friday, June 21, 1985	Thursday, May 30, 1996
Protocol for the Protection of the Marine and Coastal Environment of the Western Indian Ocean from Land-Based Sources and Activities	Wednesday, March 31, 2010	
Amended Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean	Wednesday, March 31, 2010	
The Protocol on Integrated Coastal Zone Management (in progress)		

The West Indian Ocean Region (WIO) has been supported by several GEF funded projects. These include:

<sup>40</sup> <https://www.unenvironment.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/regional-seas-programmes/eastern-africa>

- i. the UNEP/GEF project Addressing Land-based Activities in the Western Indian Ocean (WIO-LaB) which focused on land-based activities that impact on the marine and coastal environment (2002-2009)<sup>41</sup>;
- ii. the UNDP/GEF Agulhas and Somali Current Large Marine Ecosystems Project (ASCLMEs), which focused on the generation of data to support an ecosystem-based management approach of the Agulhas and Somalia current Large Marine Ecosystems (LMEs); and
- iii. the World Bank/GEF South Western Indian Ocean Fisheries Project (SWIOFP), which focused on issues related to offshore fisheries.

## 2. Nairobi Convention Strategies, Plans and their targets

### 2.1 Relevant Nairobi Convention and Protocol Articles

The Nairobi Convention addresses Pollution from ships (Article 5), Pollution caused by dumping (Article 6), Pollution from Land-Based Sources (Article 7), Pollution from Sea-Bed activities (Article 8), and Specially Protected Areas (Article 10) that are all relevant to the SDG's, in particular SDG targets 14.1, 14.2 and 14.5.

The Protocol for the Protection of the Marine and Coastal Environment of the Western Indian Ocean from Land-Based Sources and Activities (adopted in 2010), includes Article 12 on data collection, monitoring and evaluation whereby “1. *The Contracting Parties shall carry out monitoring and evaluation programmes and activities, if necessary in cooperation or consultation with competent regional and international organizations, in accordance with annex III to this Protocol. 2. The Contracting Parties shall cooperate and collaborate, if necessary with competent regional, sub-regional and international organizations, to establish comparable national monitoring and analytical quality control programmes to promote storage, retrieval and exchange of data and information. 3. Each Contracting Party shall establish or designate a national focal institution to coordinate data collection, monitoring and evaluation programmes and activities under this article and, consistent with article 15 of the Convention, to form the nucleus of a regional network of national research centres and institutes. The nucleus of the regional network of national research centres and institutes shall assist in setting standards for data collection, monitoring, evaluation and information exchange.*”

The Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region (adopted in 1985) also calls to “..encourage and develop scientific and technical research on their protected areas and on the ecosystems, wild fauna and flora..” (Article 17) and to forward information regarding the “*monitoring the biological development of the Eastern African region, inventories, publications and information of a scientific, administrative and legal nature*” (Article 18).

In 2015, the 8th COP agreed “*To request the Secretariat to take note of the outcomes of the ongoing Post 2015 Development Agenda process and the expected Sustainable Development Goals and incorporate the relevant outcomes into the new work programme for 2018-2022, especially those relating to sustainable management of marine and coastal environment.*” (CP8/1).

The following strategic documents objectives, targets and indicators will be presented below:

- East African Seas Action Plan;
- Strategic Action Programme on Land-based Activities for the Western Indian Ocean;
- Strategic Action Programme for Agulhus/Somali Current Large Marine Ecosystems; and
- 2018-2022 Work-Programme.

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<sup>41</sup> <https://iwlearn.net/iw-projects/1247>

## 2.2 East African Seas Action Plan

The Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region, adopted in 1985 (UNEP, 1983) is the strategic foundation of the Eastern African Regional Seas and provides the framework for which contributes to both the protection and continued development of the region (see Box 3.1).

Regarding activities related to assessment and evaluation, the action plan commits to the “*collaboration among regional scientists and technicians and their institutions the establishment of a co-ordinated regional marine pollution monitoring programme, based on intercomparable methods, for the assessment of the sources and levels of pollutants and their effects on marine life and human health*”, as well as the “*Compilation of an inventory of the sources and amount of pollutants reaching the coastal waters*” and the “*Collection, analysis and dissemination of data on resource potential, resource utilization and coastal habitats*”.

### Box 3.1. Eastern African Seas Action Plan objectives

The general goals and objectives of the action plan are:

- a) To **promote the sustainable development and sound management** of regional marine and coastal resources by:
  - i. Enhancing consultations and technical cooperation among the States of the region;
  - ii. Emphasizing the economic and social importance of the resources of the marine and coastal environment;
  - iii. Establishing a regional network of cooperation on concrete subjects/projects of mutual interest for the whole region;
- b) To establish general policies and objectives and to **promote appropriate legislation** for the protection and development of the marine and coastal environment on a national and regional level;
- c) To **prevent pollution** of the marine and coastal environment within the region originating from activities within the States of the region or from operations primarily subject of the jurisdiction of extra-regional States;
- d) To provide for the **protection and rational development of the living resources** of the region, which are a natural heritage with important economic and social values and potential, through the preservation of habitats, the protection of species, and the careful planning and management of human activities that affect them;
- e) To strengthen and encourage, through increased regional collaboration, the activities of institutions within the region involved in the **study of marine and coastal resources and systems**;
- f) To improve **training and assistance at all levels** and in all fields relating to the protection and development of the marine and coastal environment;
- g) To stimulate the growth of **public awareness, at all levels of society**, of the value, interest and vulnerability of the region’s marine and coastal environment.

More specifically, the activities of the action plan should result in:

- a) Assessment and evaluation of the causes, magnitude and consequences of environmental problems, in particular assessment of marine pollution and study of coastal and marine activities and social and economic factors that may influence, or be influenced by environmental degradation;
- b) Promotion of methods and practices for the management of socio-economic development activities that safeguard environmental quality and utilize resources wisely and on a sustainable basis;
- c) Adoption of regional legal agreements and strengthening of national legislation for the protection and development of the marine and coastal environment;
- d) Establishment of institutional machinery and adoption of financial arrangements required for the successful implementation of the action plan.

## 2.3 2018-2022 Work-Programme

The Ninth Conference of Parties to the Nairobi Convention (30-31 August, 2018) adopted the Work-Programme for 2018-2022 (UNEP, 2018), with a specific focus on supporting the SDGs (see Box 3.2). The Programme of Work builds on the four priority themes of the Convention namely, assessments, management, coordination and legal aspects, and information awareness. Within these themes the work programme will consolidate activities under each theme depending on funding availability. The activities will build on the 2013-2017 work programme and focus on the priorities identified in the WIOSAP, SAPPHERE, the Climate Change strategy, Marine Spatial Planning capacity training programme, Oil and Gas capacity building programme, implementation of the LBSA protocol, and the revision on the Protocol Concerning Protected Areas and wild Fauna and Flora in the Eastern Africa region.

### Box 3.2. 2018-2022 Work-Programme specific objectives

The specific objectives are as follows:

- a) To promote the Nairobi Convention as a platform for increasing collaboration with, and implementation of, the marine and coastal elements of the environmental programmes of regional organizations and partnerships;
- b) To support countries in their commitment to attainment of the 2030 Agenda and the Sustainable Development Goals, in particular through Goal 14, to conserve and sustainably use the oceans, seas and marine resources for sustainable development;**
- c) To contribute to building regional capacities for the integrated management of the coastal and marine environment;
- d) To promote integrated management of coastal areas in order to safeguard coastal habitats and combat physical alteration of the coast by building linkages with river basin and watershed management;
- e) To support initiatives addressing the reduction of marine pollution, including marine litter, microplastics and microbeads;
- f) To promote the use of ecosystems-based management approaches in the Western Indian Ocean region;
- g) To support policy harmonization and management reforms towards improved ocean governance;
- h) To promote improved coastal livelihoods and empowerment in sustainable resources management through the engagement of coastal fishing communities;
- i) To engage stakeholders in the public and private sector in greening operations and management practices for innovative ocean governance;
- j) To support countries in the development of institutional, legal and financial mechanisms and instruments necessary for the long-term implementation of the Nairobi Convention and its Protocols.

## 2.4 Other initiatives relevant to the SDGs

The Nairobi Convention is implementing a number of strategies activities which are related to the SDG targets. This includes:

- The drafting of a **Protocol on Integrated Coastal Zone Management Strategy (ICZM)**, under discussion with countries at the 9<sup>th</sup> Conference of Parties to the Nairobi Convention, August 2018. The ICZM Protocol is in line with SDGs 6, 11, 12, 14 and 15 amongst others.
- The **Africa Integrated Maritime Strategy 2050 and Agenda 2063** on ecosystem-based management approaches for marine resources in the exclusive economic zones and adjacent waters. Further decision CP8/5.2 requested the Secretariat, in collaboration with Barcelona Convention, Abidjan Convention, Jeddah Convention, with the support of the United Nations

Environment Programme, to contribute to the development of an African strategy on ocean governance in the context of the African Integrated Maritime Strategy 2050 and Agenda 2063.

- The draft **Climate Change Strategy for the Nairobi Convention Area** was developed by the Secretariat with the support of Western Indian Ocean Marine Science Association (WIOMSA) was adopted at the meeting of the Bureau held in 2015. The Nairobi Convention Regional Climate Change Strategy was published in 2016. The Climate Change Strategy guides actions under defined adaptation priorities in the WIO Region such as in policy formulation, implementation, monitoring and evaluation of various regional programs related to climate adaptation. Annex IX provides the regional climate change strategy. The Strategy is in line with the targets of SDG 13.
- The “**Western Indian Ocean Approach for Incorporating Marine Spatial Planning in the Blue Economy**” strategy was finalised in August 2016. The Secretariat in collaboration with UN Environment Programme–WCMC organized a workshop in 2016 on ocean governance frameworks in Areas Beyond National Jurisdiction (ABNJ). Further, in November 2017, the Secretariat in collaboration with Blue Solutions, UN Environment Programme-WCMC, IOC-UNESCO, WIOMSA and IUCN held a three-day training workshop to consider marine spatial planning and area-based management tools in the ABNJ and marine protected areas. Contracting Parties are urged to continue to apply blue or ocean economy approaches in the context of Sustainable Development Goal 14 as pathways for sustained incomes and economic benefits from natural blue capital including fisheries, tourism, oil and gas development, offshore renewable energy, and other maritime activities.

### 3 West-Indian Ocean Strategic Action Programmes (SAPs)

GEF and the UN Implementing Agencies have adopted the Large Marine Ecosystem approach to management of coastal and offshore waters and have supported a “programme” of three projects within the Western Indian Ocean region in order to develop an effective management and governance strategy for the Western Indian Ocean Large Marine Ecosystems, their goods and services and the welfare of the peoples and communities in the region that depend on those goods and services. These include:

‘**Addressing Land-Based Activities in the Western Indian Ocean**’ (WIO-LaB), implemented by the United Nations Environment Programme. This Project (which has already completed its TDA-SAP phase) was addressing the impacts and related issues from land-based activities on the Western Indian Ocean Large Marine Ecosystems.

‘**The Southwest Indian Ocean Fisheries Project**’ (SWIOFP), implemented by the World Bank. This Project is dealing with the offshore and nearshore commercial fisheries issues related to the Western Indian Ocean Large Marine Ecosystems.

‘**The Agulhas and Somali Current Large Marine Ecosystems Project**’ (ASCLME), implemented by the United Nations Development Programme. This Project is addressing all other coastal and oceanic activities including offshore ecosystem assessment, coastal livelihoods and community engagement, coastal artisanal and subsistence fisheries, larval transport, marine pollution, marine invasive species, etc.

#### 3.1 Strategic Action Programme on Land-based Activities for the Western Indian Ocean

The Strategic Action Programme on Land-based Activities for the Western Indian Ocean, WIO-SAP was prepared with the support of the UNEP/GEF funded project “Addressing Land-based Activities in the Western Indian Ocean” and the WIO-SAP was adopted in 2009. The overall regional vision of the WIO-SAP is “*People of the region prospering from a healthy Western Indian Ocean*”, which is line

with the SDG 14 Goal Conserve and sustainably use the oceans, seas and marine resources for sustainable development. This includes 3 long term (by 2035) Environmental Quality Objectives (EQOs), with associated targets, actions and indicators (summarized in Table 2):

- A. Critical coastal habitats will be protected, restored and managed for sustainable use;
- B. Water quality will meet international standards; and
- C. River flows will be wisely and sustainably managed.

A shorter-term but equally important objective is that by 2015,

- D. Stakeholders will collaborate effectively at the regional level in addressing transboundary challenges.

The WIO-SAP includes several detailed annexes including a detailed results-based indicator framework with overall targets along with short-term (2015), medium term (2025) and long-term (2035) targets or results, as well as an implementation plan of actions. **Table 3.2** summarized the overall targets and indicators for each EQO.

**Table 3.2. EQOs, targets and indicators of the WIO-SAP (2009)**

Management Targets	Verifiable Indicators	Relevant SDG target
<b>EQO A. Critical coastal habitats will be protected, restored and managed for sustainable use (by 2035)</b>		
1. Incentives to encourage compliance with best practice in critical habitat management established	• Critical habitats identified, assessed, documented and mapped	14.2 and 14.5
2. Coastal zoning based on integrated economic, social and environmental considerations implemented	• Conservation plans and monitoring framework for critical habitats developed, adopted and implemented at regional and national levels	
3. Critical habitat management strategies in place in all countries contributing to ecologically sustainable ecosystem services and regional protection.	• Trend in the net loss of critical habitats halted, reversed and/or offset	
4. A monitoring and evaluation plan established and implemented for critical habitats, coasts and shorelines	• At least 10% of continental shelf in each country designated as protected areas (MPA or other)	
5. ICZM legislation in place	• ICZM policies, plans and/or legislation in place in all countries	
6. National legislation to improve management of bilateral and regional issues strengthened	• Harmonized legal framework for transboundary ecosystem management in place at regional and national level	
7. Awareness of the importance of critical habitats raised significantly		
<b>EQO B. Water quality will meet international standards (by 2035)</b>		
1. Effluent discharge standards developed and regionally harmonized	• The quality of coastal and marine waters in the WIO region meet regionally agreed standards	6.3, 14.1 and 12.2
2. Marine water standards developed and regionally harmonized	• Wastewater discharges adhere to agreed national and regional effluent standards	
3. Regional best practice framework models for municipal wastewater (MWW) management developed and adopted	• Increased Government budget allocations for pollution prevention	
4. Collection, treatment and disposal of effluents undertaken in pilot sites		
5. Environmental Management Systems and Cleaner Production Technologies encouraged		
6. Stakeholders sensitized and political support harnessed in favour of pollution prevention in key sectors		

Management Targets	Verifiable Indicators	Relevant SDG target
<b>EQO C. River flows will be wisely and sustainably managed (by 2035)</b>		
<ol style="list-style-type: none"> <li>1. Awareness raised and Environmental Flow Assessment (EFA) tool promoted</li> <li>2. Capacity for applying EFA increased amongst stakeholder</li> <li>3. EFA conducted and operating rules (EQOs) integrated in river basin management in selected basins</li> <li>4. Methodologies and tools developed for coherent application of EQOs in both freshwater and coastal management</li> <li>5. Policy discussion on coastal and marine issues catalysed through collaboration between SWCI and NC Secretariat</li> <li>6. National freshwater management and coastal zone management frameworks (policies, legal, and institutional) fully integrated.</li> <li>7. Effects of impoundments and dam operations on river flow variability and sediment discharge analysed and results implemented</li> <li>8. Significance of identified wetlands on flow variability, sediment discharge and coastal and marine productivity investigated and wisely managed</li> <li>9. Catchment management impacts on coastal habitats, shorelines and water quality investigated and results adopted in river basin and coastal and marine management</li> </ol>	<ul style="list-style-type: none"> <li>• Environmental Flow Assessment (EFA) widely applied as a tool for river basin management in the main river basins of the WIO region</li> <li>• Coherence between freshwater and coastal management policies, laws and institutions</li> <li>• Dam operation and wetland and catchment management effectively applied to sustain ecosystem functioning at the river-coast interface</li> </ul>	6.3, 6.5 and 14.1
<b>EQO D. Stakeholders will collaborate effectively at the regional level in addressing transboundary challenges.</b>		
<ol style="list-style-type: none"> <li>1. Capacity for ecosystem-based management improved</li> <li>2. Appropriate legal and regulatory frameworks for LBSA management in place and implemented</li> <li>3. Awareness of importance of good marine and coastal management raised at the level of policy makers and legislators, civil society and the private sector</li> <li>4. Regional legal framework for LBSA updated and harmonized with multilateral environmental agreements</li> <li>5. Regional co-ordination and inter-sectoral governance improved</li> <li>6. Appropriate financial mechanisms developed and implemented</li> <li>7. Knowledge management undertaken effectively</li> </ol>	<ul style="list-style-type: none"> <li>• Adequate capacity for effective ecosystem-based management existing•</li> <li>• Effective national and regional policy, legal and institutional frameworks for addressing LBSA • Management in place, including supporting financial mechanisms and knowledge management systems</li> <li>• Adequate awareness of the importance of good marine and coastal management</li> </ul>	14.1, 14.2, 14.5 and 14.a 17.6, 17.16, 17.18

### 3.2 Strategic Action Programme for Agulhas/Somali Current Large Marine Ecosystems

The Strategic Action Programme for Agulhas/Somali Current Large Marine Ecosystems (ASCLME-SAP)<sup>42</sup> was prepared with the support of the UNDP/GEF “Agulhas and Somali Current Large Marine Ecosystems Project (ASCLMEs), which focused on the generation of data to support an ecosystem-based management approach of the Agulhas and Somalia current Large Marine Ecosystems (LMEs)” project and adopted in 2015. The ASCLME-SAP compliments to the WIO-SAP with a focus on all other coastal and oceanic activities including offshore ecosystem assessment, coastal livelihoods and community engagement, coastal artisanal and subsistence fisheries, larval transport, marine pollution, marine invasive species, etc.

The joint ASCLME -SWIOFP Transboundary Diagnostic Analysis (TDA) identified four main areas of transboundary concern included in the SAP:

1. Water Quality Degradation
2. Habitat and Community Modification
3. Declines in Living Marine Resources
4. Environmental Variability and Extreme Events

**Table 3.3** summarizes the specific issues and EQO’s for the main areas of concern, as well as links to the relevant SDG targets. The 23 EQO’s are further elaborated with over 120 detailed objectives, targets (5 and 20 years), proposed actions and indicators<sup>43</sup>. These were initially developed during the TDA process and it is expected that the SAP implementation will revise a more concise and measurable suite of targets and indicators, in line with a Driver-Pressure-Impact-Response (DPSIR) approach and the SDG’s

### 3.3 Current projects in support of SAP and SDG target implementation

Two key GEF funded projects in support of SAP implementation begin implementation in 2016:

- **UNEP Implementation of the Strategic Action Programme for the Protection of the Western Indian Ocean from Land-based Sources and Activities**, which begin implementation in 2016, with the objective to Project Objective: to reduce impacts from land-based sources and activities through implementation of the WIO-SAP at the national level, supported by regional partnerships at national and regional levels;<sup>44</sup>

- **UNDP/GEF Western Indian Ocean LMEs Strategic Action Programme Policy Harmonization and Institutional Reforms SAPPHERE Project**, which began implementation in 2016, with the objective to achieve effective long-term ecosystem management in the Western Indian Ocean LMEs in line with the Strategic Action Programme as endorsed by the participating countries.<sup>45</sup>

The activities of both projects will be implemented in line with the Nairobi Convention and Protocols overall objectives and targets and will focus on the implementation of the WIO-LAB and ASLME SAPs. It is understood that SAP targets will be reviewed in the process and aligned with the relevant SDG’s.

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<sup>42</sup> <https://iwlearn.net/iw-projects/1462>

<sup>43</sup> <http://asclme.org/TDA/Appendix%20IV-IssuesEQOsTargetsActionsIndicators%20v5.pdf>

<sup>44</sup> <https://iwlearn.net/iw-projects/4940>

<sup>45</sup> <https://iwlearn.net/iw-projects/5513>



**Table 3.3 ASCLME SAP Specific issues and EQO's**

Specific issues of concern	Ecosystem Quality Objectives	Relevant SDG target
<b>1. Water Quality Degradation</b>		
<p>Alteration of natural river flow and changes in freshwater input and sediment load</p> <p>Degradation of ground and surface water quality:</p> <ul style="list-style-type: none"> <li>- Microbiological contamination from land-based and marine sources</li> <li>- Solid wastes / marine debris from shipping and land-based-sources</li> <li>- Oil spills (drilling, exploitation, transport, processing, storage, shipping).</li> </ul>	<ol style="list-style-type: none"> <li>1. Environmental flow requirements are taken into account for future development planning.</li> <li>2. Restore ground and surface water quality and prevent further degradation occurring in the future</li> <li>3. Reduce microbiological contamination in coastal waters.</li> <li>4. Reduce solid waste (marine debris) from shipping and land-based sources in coastal water</li> <li>5. Develop the capacity to prevent and mitigate the effects of oil spills at regional and national level.</li> </ol>	14.1, 6.3
<b>2. Habitat and Community Modification</b>		
<p>Shoreline change, due to modification, land reclamation and coastal erosion</p> <ul style="list-style-type: none"> <li>- Disturbance, damage and loss of upland / watershed habitats (&gt;10 m elevation)</li> <li>- Disturbance, damage and loss of coastal vegetation and flood plain habitats (to 10 m elevation)</li> <li>- Disturbance, damage and loss of mangrove habitats</li> <li>- Disturbance, damage and loss of coral reef habitats</li> <li>- Disturbance, damage and loss of seagrass habitats</li> </ul> <p>Disturbance, damage and degradation of pelagic habitats (nearshore &lt;30 m, 30-200 m an oceanic &gt; 200 m depth)</p> <p>Introduction of exotic non-native species, invasive and nuisance species</p>	<ol style="list-style-type: none"> <li>1. Effective mitigation and management of shoreline change.</li> <li>2. Watershed ecosystems protected, rehabilitated, ecosystem function restored, and sustainably managed</li> <li>3. Mangrove habitats sustainably managed and their health and ecosystem services protected</li> <li>4. Corals reef health and ecosystem services protected and sustainably managed</li> <li>5. Status and ecosystem services of coastal habitats protected and effectively managed.</li> <li>6. Seagrass habitats sustainably managed and the health and ecosystem services protected</li> <li>7. Health and ecosystem services of deep water habitats protected and effectively managed</li> <li>8. Eliminate or minimize the risk of the introduction or spread of exotic non-native species, invasive and nuisance species.</li> </ol>	14.2
<b>3. Declines in Living Marine Resources</b>		
<p>Changes in the population balance of the following groups were recognised to be of particular concern:</p>	<ol style="list-style-type: none"> <li>1. Restoring the populations of sharks and rays to sustainable levels</li> </ol>	14.2, 14.4, 14.6

Specific issues of concern	Ecosystem Quality Objectives	Relevant SDG target
<ul style="list-style-type: none"> <li>- sharks and rays</li> <li>- large pelagics</li> <li>- small pelagics</li> <li>- reef and demersal fish</li> <li>- sea cucumbers</li> <li>- prawns and shrimp</li> <li>- lobster</li> <li>- focal non-target species, such as cetaceans, marine mammals and seabirds</li> </ul>	<ol style="list-style-type: none"> <li>2. Reduce fishing effort and capacity to match MSY/ESY or any other appropriate management reference points that reflect sustainable well-being in key shark and ray stocks</li> <li>3. Monitor populations of large pelagic fish and harvest rates to maintain sustainability or, where necessary, to implement management measures aiming at restoring populations to sustainable levels</li> <li>4. Monitor populations of small pelagic fish and harvest rates to maintain sustainability or, where necessary, to implement management measures aiming at restoring populations to sustainable levels</li> <li>5. Rebuilding and restoration of the populations of reef and demersal fish species to sustainable levels</li> <li>6. Rebuilding and restoration of the populations of sea cucumber species to sustainable levels</li> <li>7. Monitor populations of prawns/shrimps and harvest rates to maintain sustainability or, where necessary, to implement management measures aiming at restoring populations to sustainable levels</li> <li>8. Rebuilding and restoration of the populations of lobster species to sustainable levels</li> <li>9. Maximise the value of by-catch (where reduction is not possible) and eliminate discards</li> <li>10. Reduce habitat damage from destructive gear and methods</li> </ol>	
<b>4. Environmental variability and extreme events</b>		
<ul style="list-style-type: none"> <li>- Climate hazards and extreme weather events</li> <li>- Sea level change</li> <li>- Ocean acidification</li> <li>- Changes in seawater temperatures</li> <li>- Changes to hydrodynamics and ocean circulation</li> <li>- Changes in productivity (shifts in primary and secondary production)</li> <li>- Geohazards (tsunamis, volcanic eruptions, earthquakes)</li> </ul>	No Ecological Objectives included.	14.3, 13.1, 13.2

**Table 3.4. Summary of Part B of the Nairobi Convention Reporting Format**

<b>Section</b>	<b>Question/Information required</b>	<b>Relevant SDG target</b>
Section 1 Designated National Focal Point, Institution and Implementation Plans - Article 16	1. Details of the designated National Focal Point and the alternative for the Nairobi Convention	
	2. Details of a designated Focal National Agency/Ministry/Institution or other appropriate authority which serve as a channel of communication with the Secretariat for purposes of this Convention and its Protocols: (Article 16, paragraph 2)	
	3. Details of designated partner institutions which collaborate with the focal institution in the implementation of the objectives of this Convention and its Protocols	
	4. List all other Multilateral Environmental Agreements (MEAs) your Government is a signatory to	14.c
	5. Provide names and contact details of all national experts on the following thematic areas	
	6. List all on-going projects, programmes and activities including planned projects and activities that your country intends to do up to 2017 that directly contribute to the implementation of the Nairobi Convention and its protocols.	17.3, 17.16, 17.18
	7. List existing national plans, policies and programmes that address the general obligations of the Nairobi Convention. (Article 4)	14.1, 14.2, 14.5
	a) Land-based sources and activities b) Specially protected areas and wild fauna and flora c) Combating marine pollution in cases of emergency	
	8. Has your government budgeted for development and/or implementation of the existing plans, policies and programmes that are listed in 6 above?	14.7
9. Has your country experienced any challenges in the implementation of the above-mentioned plans, policies and programmes?		
Section 2 Measures to prevent, reduce and combat Pollution from Ships, Caused by Dumping, from Land-Based Sources, from Sea- Bed Activities and from Airborne Pollutants. (Articles 5, 6, 7, 8, 9)	10. Is there a national definition within existing pollution related to legislation or regulations for: (Articles 5, 6, 8, 9)? Article (5): Pollution from ships Article (6): Dumping of wastes and other matter at sea Article (7): Pollution from land-based sources Article (8): Pollution from sea-bed activities Article (9): Discharges into the atmosphere	
	11. Has your country taken any measures necessary to prevent, pollution in the Convention area?	14.1
Section 3 Specially Protected Areas – Article 10	12. Has your country established coastal and marine protected areas, such as parks and reserves to protect and preserve rare or fragile ecosystems as well as rare, depleted, threatened or endangered species of wild Fauna and Flora and their habitats?	14.5
Section 4 Co-operation in Combating Pollution in Cases of Emergency – Article 11	13. Has your country jointly with another country or countries developed and promoted any contingency plans for responding to incidents involving pollution or the threat thereof in the Convention area?	14.1
Section 5 Environmental Impact Assessment – Article 13	14. Does your country currently have any guidelines (e.g., EIAs) to assist the planning of major development projects in such a way as to prevent or minimize harmful impacts on the Convention Area?	14.2

Section	Question/Information required	Relevant SDG target
	15. Regarding the question above, has your country developed procedures for dissemination of information to the Secretariat and, if necessary, for consultations among the Contracting Parties on projects of transboundary significance?	
Section 6 Scientific and Technical Cooperation – Article 14	16. Does your country have technical cooperation agreements with any other Contracting Parties, regional partners or international organizations relating to the objectives of the Convention, such as in scientific research, monitoring and exchange of information?	17.6, 17.16
Annex I Protocol for the Protection of the Marine and Coastal Environment of the Western Indian Ocean from Land- Based Sources and Activities (LBSA Protocol)	17. Is there a national definition of pollution from “Land based sources and activities” (Article 1 (xiii)) in the legislation of your country?	
	18. Are there any other priority substances and activities of LBSA pollution listed in Annex II of the LBSA Protocol that require special consideration in your country?	14.1
	19. Has your country developed any plans, policies, programs, and measures to carry out the general terms and objectives of the LBSA Protocol?	14.1
Annex II Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region	20. List rare, depleted, threatened or endangered species of wild fauna and flora and their habitats in your country?	14.2, 15.1
	21. Does your country have any national policies, laws or mechanisms for management of migratory species?	14.2, 15.1
	22. Does your country have any national policies, laws or mechanisms which prohibit the intentional or accidental introduction of alien or new species of Wild Flora and Fauna?	15.8
	23. Has your country directly or with the assistance of regional or international organization carried out any training of scientific, technical or managerial personnel on selection, establishment and management of protected areas and protection of wild fauna and flora	14.2, 14.a, 17.6
	24. Does your country currently have any intentions to establish a protected area contiguous to the frontier or to the limits of the zone of national jurisdiction of another country?	14.5, 15.1
Annex III Protocol Concerning Co-operation in Combating Marine Pollution in Cases of Emergency in the Eastern African Region	25. Does your country currently have any national policies, laws, or plans for prevention, reduction and control of oil spill pollution?	14.1
	26. Has your country established any national operational measures such as establishing national oil spill contingency plans for responding to oil spill incidents?	14.1
	27. Has your country established any national procedures on reporting of information regarding marine pollution incidents?	14.1
	28. In relation to the question above, did your country consider the guidelines to be followed in preparing the report pursuant to Annex 1 of this Protocol?	14.1
	29. Has your country experienced any pollution emergencies in the Convention area (including emergencies in which the Convention area is in imminent danger of being polluted or already polluted)?	14.1
	30. In regards to the question above, did your country respond to the situation by following contingency plans developed by your country or in cooperation with any other contracting parties?	14.1

## 4. Monitoring and Reporting Mechanisms

### 4.1 National Reporting on the Nairobi Convention

In accordance to Article 23 of the Nairobi Convention, and the Terms of Reference for Focal Points, the Contracting Parties are obliged to transmit regularly to the Secretariat, information on the measures adopted to implement the Convention and its Protocols in such forms as the meetings of Contracting Parties may determine. The reporting template (to be completed every 2 years) was agreed during the seventh COP on 10 – 14 December 2012 in Maputo, Mozambique (UNEP, 2012). It is in the form of a questionnaire and consists of two parts: Part A requires the respondent to provide general information on the party submitting the report, such as the name and contact details and Part B requires the respondent to provide information on the measures taken by the party to implement relevant provisions of the Nairobi Convention and its Protocols and on the effectiveness of such measures in meeting the objectives of the Convention and its Protocols. **Table 3.4** summarizes the elements of the reporting format, with relevant SDG targets, in particular in relation to SDG 14, 15, 6 and 17.

### 4.2 Nairobi Convention Clearing House mechanism

The Nairobi Convention supports countries in terms of capacity support for the implementation of their monitoring programmes, and whilst data is not centralized, it has established a clearing house and information system<sup>46</sup> with the objective to provide accurate and relevant data and information for improved management and protection of the coastal and marine environment in the Western Indian Ocean region. The clearinghouse is designed to enable countries develop a comprehensive information base and access services needed to provide information to decision makers.

The objectives of the Clearinghouse are with respect to:

- i. Development of human resource capacities and appropriate information infrastructure to enable Western Indian Ocean countries to fully integrate local and national management activities in the coastal and marine environment,
- i. Development of an enabling environment for assessment of natural and anthropogenic activities in the coastal and marine areas through advocacy of standards necessary to acquire, process, store, distribute and improve utilization of essential data in the countries, and
- ii. Provision of ready access to scientific, technical, environmental, legal and policy level information essential for the sustainable development of the coastal and marine environment.

### 4.3 Regional State of Coast Report

The 2015 Regional State of the Coast Report for the Western Indian Ocean (UNEP- Nairobi Convention and WIOMSA, 2015) was prepared by the Nairobi Convention and Western Indian Ocean Marine Science Association (WIOMSA). The report builds upon the 2009 Transboundary Diagnostic Analysis of Land-based Sources and Activities in the Western Indian Ocean report. The report integrates the socio-economic and ecological systems of the WIO region by using a uniform methodology based on the Opportunities Framework and the DPSIR (Drivers, Pressures, Status, Impacts, Responses) approach. The approach has been adapted from the World Ocean Assessment framework, however the content and organization of the concluding chapters are based on the distinct needs of the WIO region. While the political agenda included the Contracting Parties and their National Focal Points to the Nairobi Convention, the technical process was guided by WIOMSA and involved a representative set of scientists with broad experience in the region.

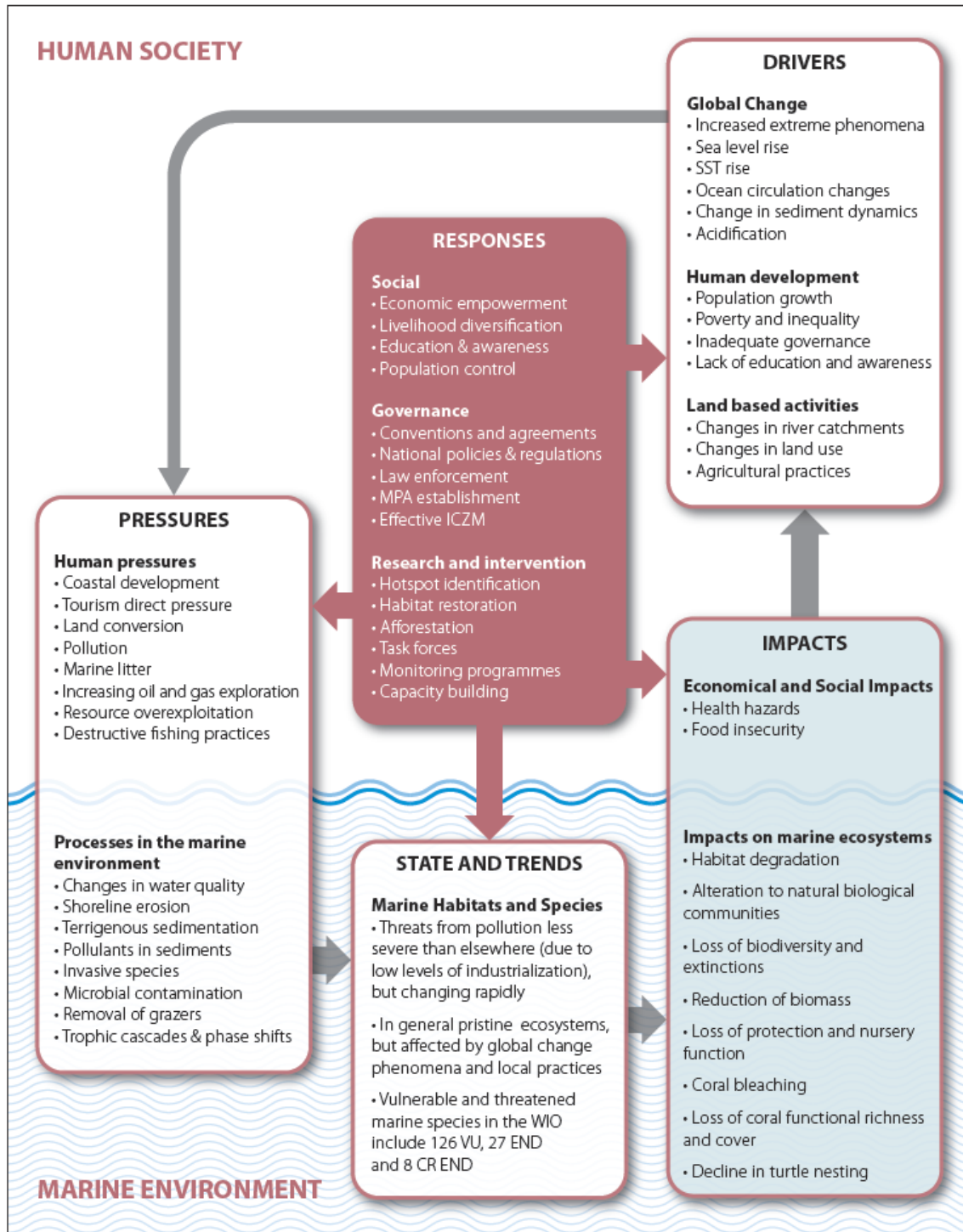
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<sup>46</sup> See <http://staging1.unep.org/emunyao/ncchm/>

The Report directly in line with SDG 14 targets, in particular 14.1, 14.2 and 14.5 and is divided into three main assessments, as well as an overall summary assessment:

- Assessment of marine biological diversity and habitats
- Assessment of major ecosystem services from the marine environment
- Assessment of food security from marine resources

**Figure 3.1. Regional State of the Coast Report Diagrammatic summary of DPSIR analysis for marine biodiversity in the WIO.**



**Figure 3.1** presents an example of the summary analysis of Drivers, Pressures, Status, Impacts and Response for marine biodiversity. At the 8<sup>th</sup> COP held in 2015 (decision CP8/11.1) Contracting Parties were urged to consider the findings of the Regional State of Coast Report for the Western Indian Ocean Region in their decision-making processes and welcomed the national reports presented by the countries and were requested to fulfil their obligations under the Article 17 and 23 of the Convention, to prepare national state of coast reports periodically, as a contribution to the Regional state of coast report. In addition, Contracting Parties requested the Secretariat to prepare a Regional State of Coast Report every five years for consideration by the Conference of the Parties.

A joint workshop of the Nairobi Convention Forum for Academic and Research Institutions (FARI) and the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects (Regular Process), covering the region of the Indian Ocean, the Arabian Sea, the Red Sea and Gulf of Aden and the ROPME/RECOFI area (Regional Organisation for Protection of the Marine Environment/Regional Commission for Fisheries) was held in 2017. The workshop urged Member States to produce periodic reports on implementation of international treaties/obligations, to assist the on-going work of the Regular Process. Significant networking was needed to ensure experts from the region were aware of the work of the Regular Process. The need to create synergies and link national and regional processes was highlighted to make optimal use of available resources. The important role of National Focal Points was also emphasized, including in the nomination of experts to the Pool of Experts.

Also, Contracting Parties were urged to engage in the production of management and decision support tools and products such as outlooks on thematic issues including marine protected areas, climate change, environmental policy, disaster planning and management, national economic performance. The Secretariat, jointly with the Contracting Parties, was urged to prepare a Regional State of Coast Report every five years for consideration by the Conference of the Parties that may contribute to the United Nations Regular Process for Global Reporting and Assessment of the State of Marine Environment Including Socio-Economic Aspects.

## **5. Existing initiatives by the Secretariat of the Nairobi Convention to align work with the SDGs**

The Nairobi Convention is undertaking activities to ensure greater alignment between its work-plan with the SDG's (including the WIOSAP, SAPPHIRE and other donor funded projects) as presented at the Ninth Conference of Parties to the Nairobi Convention (30-31 August, 2018), including the mapping of Nairobi Convention's 2018 – 2022 Work Programme to the Delivering of SDGs (see **Figure 3.2**).

In the mapping the following SDG targets were identified:

### **Goal 1. End poverty in all its forms everywhere**

- 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;

### **Goal 6. Ensure availability and sustainable management of water and sanitation for all**

- 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.B: Support and strengthen the participation of local communities in improving water and sanitation management;

**Goal 12. Ensure sustainable consumption and production patterns**

- 12.2: Achieve the sustainable management and efficient use of natural resource by 2030;
- 12.4: Achieve the environmentally sound management of chemicals and all wastes by 2020;
- 12.5: Substantially reduce waste generation through prevention, reduction, recycling and reuse by 2030;
- 12.8: By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature;

**Goal 13. Take urgent action to combat climate change and its impacts[a]**

- 13.2: Integrate climate change measures into national policies, strategies and planning;
- 13.B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities;

**Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development**

- 14.1: Prevent and significantly reduce marine pollution of all kinds by 2025;
- 14.2: Sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts by 2020;
- 14.3: Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels;
- 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.A: Increase scientific knowledge, develop research capacity and transfer marine technology in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries;
- 14.C: Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS;

**Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development**

- 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;
- 17.14: Enhance policy coherence for sustainable development;
- 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;
- 17.17: Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships;
- 17.18: By 2020, enhance capacity-building support to developing countries to increase significantly the availability of high-quality, timely and reliable data.



**Figure 3.2. Extract from the mapping of Nairobi Convention’s 2018 – 2022 Work Programme to the Delivering of SDGs**

Nairobi Convention 2018-2022 Work Programme Activities	Project Activities	Sustainable Development Goals Target
<b>1. Assessments and Capacity Development</b>		
<p>This area is designed to generate information for better understanding and adaptive management of the coastal and marine environment, with a view to strengthen linkages between ecosystems assessment and reporting mechanisms for informed planning and decision-making processes. This will also be integrated with socio-economic assessment, capacity development and assessment of the impacts of climate change on vulnerable coastal and marine ecosystems. Major assessments and Capacity Development activities include:</p> <p>a) Collecting and synthesizing data on coastal habitats and their threats;</p> <p>b) Supporting the development of decision support tools related to the Western Indian Ocean regional state-of-the-coast report;</p> <p>c) Undertaking an assessment of ecosystem goods and services and their economic values;</p> <p>d) Supporting and promoting environmental flow assessments of key river basins and the uptake of environmental flow assessment tools into policy;</p> <p>e) Supporting the development and mainstreaming of marine spatial planning at the policy level;</p> <p>f) Supporting the development of strategic environmental assessments at the regional level in relation to environmental management of oil and gas development;</p>	<p><b>WIOSAP Project</b></p> <ol style="list-style-type: none"> <li>National institutions undertake participatory spatial planning to increase the resilience of selected key coastal ecosystems to anthropogenic impacts including the impacts of climate change and variability</li> <li>Pilot actions to build capacity in ICM, demonstrating how ICM can be strengthened at the local level through the empowerment of communities and other actors at demonstration sites</li> <li>Economic valuation of at least three key critical coastal and marine habitats including integration of economic valuation to coastal management and planning</li> <li>Tools and guidelines for vulnerability assessment and spatial planning supports monitoring and management actions</li> <li>Sustainable livelihood strategies regarding extractive use activities developed and adopted for specific coastal and marine natural resources</li> <li>Reduction of at least 50% of the baseline pollution loads in three hotspots</li> </ol>	<p>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</p> <p>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</p> <p>6.B: Support and strengthen the participation of local communities in improving water and sanitation management</p> <p>12.2: Achieve the sustainable management and efficient use of natural resource by 2030</p> <p>12.4: Achieve the environmentally sound management of chemicals and all wastes by 2020</p> <p>12.5: Substantially reduce waste generation through prevention, reduction, recycling and reuse by 2030</p>

The Secretariat of the Nairobi Convention also prepared an initiative “Regional Partnership for Implementing SDG14 in the Western Indian Ocean” (from April 2017-December 2022)<sup>47</sup>. The overall aim of the partnership is to reduce marine pollution, demonstrate and enhance ocean governance and sustainably manage critical coastal and marine ecosystems for a prosperous Western Indian Ocean. The partnership will directly contribute to the implementation of specific targets of Sustainable Development Goal 14. The specific objectives are:

1. Implementation of the strategic action programme to reduce impacts from land-based sources and activities and sustainably manage critical coastal and marine ecosystems through implementation of the agreed priorities;
2. Implementation of the Western Indian Ocean strategic action programme on policy harmonization and institutional reforms towards improved ocean governance and transition to a low carbon pathway;
3. Sustainable management of shared fish resources and collaborative management of marine and coastal resources in the Northern Mozambique Channel; and
4. Improved governance of areas beyond national jurisdiction to promote the blue economy pathways in the Western Indian Ocean Region

## **6. Possible contribution to the reporting SDG 14 Targets and Indicators**

The following recommendations to strengthen the role of future Nairobi Convention in the SDG monitoring and review process are elaborated below.

- 1. Review and align objectives, targets and indicators with the SDGs within the WIO region, in coordination with GEF SAP projects and other partners.**
- 2. Develop an approach to regional assessments that can report on the SDG implementation**

<sup>47</sup> See [https://wedocs.unep.org/bitstream/handle/20.500.11822/25683/annex19\\_goal14.pdf?sequence=1&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/25683/annex19_goal14.pdf?sequence=1&isAllowed=y) and <https://oceanconference.un.org/commitments/?id=18313>

3. **Ensure regional coordination towards SDG reporting**
4. **Ensure data and information from WIO member countries contribute to VNR reports and SDG databases** through cooperation and agreements with other regional organizations and SDG Focal Points
5. **Make available on the Nairobi Convention web-site** the integrated objectives, targets and indicators and information available for reporting the progress of the SDG's
6. **Prepare an SDG Outlook document**

### 6.1 Review and align objectives, targets and indicators with the SDGs within the WIO region

The Nairobi Convention and related key strategic documents and monitoring and reporting mechanisms contribute to several SDG targets as summarized in [Table 3.5](#).

**Table 3.5. Overall contribution of Nairobi Convention and related key strategic documents and monitoring programmes to SDG 14 and other targets.**

Nairobi Convention and related Strategies and Monitoring	Target 14.1	Target 14.2	Target 14.4	Target 14.5	Target 14.6	Additional SDG targets
East African Seas Action Plan	✓	✓		✓		
2018-2022 Work-Programme	✓	✓	✓	✓	✓	SDG 6.3, 6.5, 6.6, 12.2, 12.4, 13.1, 13.2, 13.3,14.7, 14.a, 15.1, 15.2, 15.5,15.8, 15.9, 15.a, 17.16, 17.18
WIO-SAP	✓	✓		✓		SDG 6.3, 6.5, 6.6, 12.2, 12.4, 14.7, 14.a, 17.16, 17.18
ASCLME SAP	✓	✓	✓	✓	✓	SDG 6.3, 12.2, 12.4, 13.1, 13.2, 13.3,14.7, 14.a,
National Reporting to the Nairobi Convention	✓	✓		✓		SDG 14.7, 14.a, 15.1, 15.8, 15.9, 15.a, 17.6, 17.16
Regional State of Coast Report	✓	✓	✓	✓	✓	SDG 6.3, 6.5, 6.6, 12.2, 12.4, 13.1, 13.2, 13.3,14.7, 14.a, 15.1, 15.2, 15.5,15.8, 15.9, 15.a, 17.16, 17.18

[Appendix 2](#) provides a template for the mapping of objectives, targets and indicators, which has been partially completed. It also includes the Regional Seas indicators agreed at the 18th Global Meeting of the Regional Seas Conventions and Action Plans in 2016. This template (or something similar) can be used to map existing Nairobi Convention objectives, targets and indicators in relation to the SDG targets, in order to consolidate and if needed revise key targets and indicators. It should be noted that such a target and indicator framework, to be used for future reporting and incorporated into State of Coasts and other regional assessments, should include appropriate state, pressure and response indicators.

***Suggested actions for consideration:***

- Undertake a mapping exercise of current targets and indicators in line with the relevant SDG's (example in [Appendix 2](#)) and consider aligning the WIOLAB and ASCLME SAP targets and indicators with the SDG's and possible revision;
- Consideration should also be given to integrate the Regional Seas and relevant regional and Global Convention indicators, as appropriate. One major issue raised by all Regions is the over-burden of reporting on countries. By streamlining targets and indicators, a reporting mechanism can be developed that can serve multiple purposes, for Nairobi Convention, SDG's, Global Conventions etc.
- Potential information/data sources for each indicator should be identified, whether from national data or other sources. Also, a realistic reporting mechanism would need development for each indicator, considering the capacity, funds and time required to report some indicators. A phased approach to implementation may be required whilst additional funds are mobilized and capacity building activities are implemented. In this context two levels of indicators could be included: initial core indicators (where the data or information is available for the majority of countries) and additional indicators which could be reported on where data is available with the objective to increase national capacity for future reporting.
- Close cooperation with other Regional Seas on their reporting targets and indicators would assist in the development of these targets and indicators and ensure harmonization with other regions as appropriate. The Nairobi Convention and UN Environment may consider a specific activity or project in this regard.

**6.2 Develop an approach to regional assessments that can report on the SDG implementation**

The 2015 State of the Coasts report undertook a structured analysis of pressures, state and known impacts of the major issues, using the DPSIR approach and was based on a compilation of information from numerous sources. For the future, consideration should be given for assessment reports to be more indicator based and using the DPSIR approach, in line with the key Nairobi Convention and SAP objectives and the SDG's and based on the targets and indicators agreed. This would result in more quantitative assessments that can be compared with other regions and integrated into SDG and Regular Process/World Ocean Assessment global assessments. Each Pressure, State and Response indicator would need to be individually assessed for this purpose, and the information compiled into a regional assessment with a structure that is in line with the Nairobi Convention Action Plan and Programme of Work priorities, as well as the appropriate SDG targets. Indicator assessment factsheets can be completed for this purpose.

***Suggested Actions for consideration:***

- Develops a methodology for more quantitative future state of environment regional assessments based on the agreed indicators (in particular, pressure, state and response indicators), and a structure in line with SDG targets;
- Develop indicator assessments, considering the approach and templates used by other Regional Seas. This indicator assessments would provide a major source of information for the final assessments;
- In addition to publishing the final assessment report, consider publishing online the indicator assessments in relation to each relevant SDG target, in particular 14.1, 14.2, and 14.5, to assess the implementation of these targets in the region. These SDG assessments can then contribute to global SDG and World Ocean Assessment reports;

### 6.3 Ensure regional coordination towards SDG reporting

The Nairobi Convention, Contracting Parties as well as all key partners (WIOMSA, WIO-C, UNDP and GEF project partners, NGO's etc) should be engaged in the national process to report on the SDG's, in particular for SDG 14. There is therefore a need for an agreed coordination between regional organizations involved in SDG implementation and reporting. This may require discussion at the level of the member states, and also UN Environment and the HLPF, if a formal agreement on mandate is required.

The Nairobi Convention has an important role in the coordination with other organizations within the region. The Secretariat works closely with collaborating partners such as Governments, national and research institutions<sup>48</sup>, and at the regional level with WIOMSA, the South West Indian Ocean Fisheries Commission (SWIOFC), The Forum for Heads of Academic and Research Institutions (FARI) in the Western Indian Region Ocean, the Indian Ocean Tuna Commission (IOTC), the Southern Indian Ocean Fisheries Agreement (SIOFA) and the Indian Ocean Commission (IOC) and the Western Indian Ocean Consortium of NGOs (WIO-C). Regional meetings of the Nairobi Convention, as part of its programme of work and implementation of the SAPs can be used as a forum to discuss a consolidated reporting on SDG 14 and other relevant targets. For example, the meeting for “Area Based Planning Tools and Regional Cooperation in the Western Indian Ocean”, held in 2016 discussed the experiences of countries and future coordination in implementation of the SDG's with the main conclusions summarized in **Box 3.3**.

It is also suggested that the United Nations Economic Commission for Africa (UNECA), and the Africa Regional Forum on Sustainable Development, as well as national SDG Focal Points are engaged in future coordination meetings on the implementation and reporting of the SDGs. The 4th session of the *Africa Regional Forum on Sustainable Development Transformation Towards Sustainable and Resilient Societies* was held 2-4 May 2018 (Dakar, Senegal)<sup>49</sup>, with a focus on SDG 6, 7, 11, 12,15 and 17. The 5<sup>th</sup> session will be held in 2019 in Morocco under the theme “*Empowering people and ensuring inclusiveness and equality*”, with a focus on SDG 4, 8, 10, 13 and 16. This could provide an opportunity for discussion on the implementation of the Nairobi Conventions Climate Change Strategy and ICZM Protocol.

At the national level, the Nairobi Convention coordinates with focal points and numerous scientific experts. A mechanism should be agreed to ensure that these experts are also engaged in national discussions on the SDG targets, in particular SDG 14.

#### ***Suggested actions for consideration:***

- At the regional level, establish a mechanisms for coordination with member states and relevant organizations and projects regarding SDG implementation and reporting, building upon existing partnerships;
- If SDG data hubs are to be established, ensure these are coordinated with Nairobi Convention databases for overlapping indicators and parameters relevant to the SDGs, and ensure that key the Nairobi Convention reports and assessments are made available in these data hubs and knowledge platforms.

<sup>48</sup> <http://web.unep.org/nairobiconvention/about-us/our-partners-stakeholders>

<sup>49</sup> <https://www.uneca.org/arfsd2018> and <http://enb.iisd.org/uneca/arfsd2018/>

### **Box 3.3. Area based planning tools and regional cooperation in the western Indian Ocean meeting (Mahe, Seychelles, 13-14 October 2016) – Conclusions on SDG 14 implementation**

#### **What Regional Bodies can do to support SDG Implementation:**

- Creation of a platform for cooperation with other regional organizations for implementation SDGs such as with the Ministry of Fisheries and Environment in the region
- Creation of joint frameworks for data monitoring and assessment
- Facilitate regional integration
- The regional platform could define common priorities and for exchanging best practices which would be less costly and would allow for harmonisation of policies.
- The platform could also be used to transfer ideas to regional stakeholders on the New York SDG Process.

#### **What are the potential gaps in SDG Implementation?**

- Lack of capacity to interpret and measure and report on indicators at country levels.
- Limited linkages to global processes such as ABNJ (inadequate communication between the regional ministries of foreign affairs and institutions who are dealing with ABNJ in the region).
- Lack of technical expertise in the implementation of goals.
- Limited access to data.
- Difficulty in transforming indicators across sectors (e.g. fisheries, marine protection) in order to do global reporting).

#### **Possible options for closing the gaps**

- Capacity building, including provision of financial resources for capacity building.
- Need to build capacity on interpreting and measuring indicators as well as reporting on SDGs at a national level, on coordinating actions at a national level, enhance capacities in marine science.
- The Nairobi Convention could assist countries to link to global processes such as ABNJ, the New York Process.
- Enhancing the transformation/aligning of the existing national plans or strategies on MDGs into SDGs.
- Mainstream funding mechanisms across sectors.
- The Nairobi Convention can foster the development of expert coastal groups.
- The Convention can host a regional centre for data sharing on marine information (clearing house mechanism).
- Reviving of the regional centre for oil spill response.
- Use existing mechanisms/structures for joint management frameworks e.g. the Nairobi Convention's projects (WIO-SAP, SAPPHERE, JAM- all have indicators that countries could take advantage of to set common regional indicators to be assessed), SWIOFC, IOTC

## **6.4 Contribution to SDG Voluntary National Reviews (VNR) Reports**

SDG 14 is one of the least reported goals of Agenda 2030. Therefore, the Nairobi Convention and its Contracting Parties can play an important role in contributing information to ensure national VNR reports and SDG data hubs (if established). By aligning existing Nairobi Convention reporting mechanisms with the SDG's, compiled information through SAP reports, State of Coast reports, the clearing house mechanism and reporting on the Protocol can be used as a basis for VNR reports. In addition, the Nairobi Convention Focal Points and experts can undertake a role of coordination and peer review of VNR reports in the future. Also, to be considered in the future whether SDG data hubs are established at the regional or national level, as is the case for some regions globally, then there should be strong links established with the Nairobi Convention Clearing House mechanism.

At the national level, as part of its follow-up and review mechanisms, the 2030 Agenda 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 the Economic and Social Council (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.<sup>50</sup> All past reports and links for 2016-2018 are provided in **Table 3.6**, with only 2 countries having submitted reports, neither of which refer to the Nairobi Convention. Mauritius, Tanzania and the Republic of South Africa are scheduled to contribute VNR reports to the 2019 meeting of the HLPF.

**Table 3.6. VNR Reports submitted to the HLPF**

Country	Year that VNR presented at HLPF	Brief comments on SDG 14 priorities and reference to the Nairobi Convention
<a href="#">Kenya</a>	2017	Stresses need for baseline data on marine life and environment management and the increasing problem of alien species.
<a href="#">Madagascar</a>	2016	Overall summary of SDG implementation with limited breakdown per Goal and target.

***Suggested action for consideration:***

- At the national level, review the coordination mechanisms between SDG Focal Points and the Nairobi Convention national experts, and propose a mechanism so that the Nairobi Convention and its national experts can play a key role in providing information to future VNR reports, and peer review information; and
- Ensure 2019 VNR reports (Mauritius, Tanzania and the Republic of South Africa) include relevant Nairobi Convention information and assessments.

**6.5 Make available on the Nairobi Convention web-site the integrated objectives, targets and indicators and information available for reporting the progress of the SDG’s**

Information relating the linkages between the Nairobi Convention with the SDG’s should be presented and available on the Nairobi Convention web-site, with a dedicated page or other platform that presents the key objectives, targets and indications in relation to the SDG’s and updated information on implementation of the SDG reports. There should be links to all strategic documents (such as the SAPs, Action Plan, strategies etc.) for ease of access, and State of the Coasts and other regional assessments. The Nairobi Convention and Contracting Parties should consider the production of regional SDG target reports (as mentioned earlier), which could be supported by the SAP implementation projects.

***Suggested action for consideration:***

- Consider development of a detailed web-page on the Nairobi Convention web-site (or other web-site if requested by the countries) including information on all key objectives and targets and their contribution to the SDG’s and links to all strategic documents (Action Plan, SAPs etc) and upload regular information on activities and assessments towards reporting the SDGs.

**6.6 Prepare an SDG Outlook document** to capture the vision of how the Nairobi Convention will move towards more quantitative reporting that can contribute to the SDG monitoring and review

The 18th Global Meeting of the Regional Seas Conventions and Action Plans concluded that “[R]egional Seas Conventions and Action Plans will prepare outlook documents, proposing how they can support their countries with the implementation, and monitoring of the ocean-related Sustainable

<sup>50</sup> <https://sustainabledevelopment.un.org/vnrs>

*Development Goals and associated targets. The documents will be submitted to UN Environment in order to be utilized in preparation of the Preparatory Committee for the United Nations Conference to Support the Implementation of Sustainable Development Goal 14".* In 2017, UN Environment published guidance for the preparation of these outlook documents, including 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.

This case study, can be used as a basis for the drafting of a Nairobi Convention SDG Outlook document (if appropriate) including agreed targets and indicators. It should be discussed and agreed with Nairobi Convention Contracting Parties as an agreed definition of the future role of the Nairobi Convention in supporting the SDG monitoring and review process. It is suggested that this should be a coordinated approach for the region, involving all key partners (WIOMSA, WIO-C, GEF project partners, NGO's etc) as well as SDG Focal Points.

# The Northwest Pacific Region (NOWPAP) ecological objective setting towards the follow up and review of the SDGs

## 1. Introduction

### 1.2 The Northwest Pacific Region (NOWPAP)

The Northwest Pacific Region comprises semi-enclosed marginal seas situated in both the sub-polar and temperate zones and features a large variety of marine and coastal ecosystems, from cold and deep-water ecosystems in the north, to coral reefs in the south. Coastal development, industry, transport, oil production and activities such as land reclamation and intensive mariculture take an ever-greater toll on coastal ecosystems. Chemical and industrial wastes, untreated municipal sewage, agricultural pesticides and nutrients in run-off cause widespread damage and stimulate eutrophication and harmful algal blooms. Added to these are pollution from land, accidental oil spills, atmospheric pollution and marine and coastal litter.<sup>51</sup>

The Northwest Pacific Action Plan and three supporting resolutions including five priority projects were adopted in 1994 by the four Member States (the People's Republic of China, Japan, the Republic of Korea and the Russian Federation). From 1994 to 2004, UNEP Regional Seas Coordinating Office acted as Interim Secretariat for NOWPAP and the NOWPAP Regional Coordinating Unit (RCU) was established by member countries and co-hosted by Japan and the Republic of Korea, facilitating the implementation of the Action Plan. The Intergovernmental Meeting (IGM) is the high-level governing body of NOWPAP that provides policy guidance and makes decisions. Hosted annually, it is made up of senior representatives of the NOWPAP Members.

In order to support the implementation of the priority project activities of the NOWPAP region, a network of Regional Activity Centres (RACs) was established:

- CEARAC, Toyama, Japan - the Special Monitoring and Coastal Environment Assessment RAC;<sup>52</sup>
- DINRAC, Beijing, People's Republic of China - the Data and Information Network RAC;<sup>53</sup>
- MERRAC, Daejeon, Republic of Korea - the Marine Environmental Emergency Preparedness and Response RAC;<sup>54</sup> and
- POMRAC, Vladivostok, Russian Federation - the Pollution Monitoring RAC;<sup>55</sup>

NOWPAP priorities are: to set up a regional monitoring and assessment system; to develop a regional data and information network; to put in place a contingency plan for oil and chemical spills; and to prepare and implement regional action plan to deal with marine litter.

NOWPAP has also prepared the Regional Oil Spill Contingency Plan (adopted in 2003) and the Regional Action Plan on Marine Litter (adopted in 2008). More recently in order to bring this work together in the frame of an ecosystem approach to the monitoring and reporting of the Northwest Pacific Region and in line with the 2030 Agenda for Sustainable Development and SDGs, the NOWPAP Medium-term Strategy, 2018-2023, was prepared with a main focus on coordination with

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<sup>51</sup> <https://www.unenvironment.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/regional-seas-programmes/northwest>

<sup>52</sup> <http://cearac.nowpap.org/>

<sup>53</sup> <http://dinrac.nowpap.org/>

<sup>54</sup> <http://merrac.nowpap.org/>

<sup>55</sup> <http://pomrac.nowpap.org/>



the ocean related SDGs, and since 2017 work is ongoing to draft an assessment framework with Ecological Objectives, targets and indicators.

**Figure 4.1. NOWPAP Region with main marine currents.**



In addition to the NOWPAP Region, complimentary strategies have been prepared over the years for other overlapping geographical areas and regions. This includes:

- The Yellow Sea (China, Republic of Korea), Strategic Action Program (2009);
- Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)<sup>56</sup>, Sustainable Development Strategy for the Seas of East Asia (2015)

<sup>56</sup> Cambodia, PR China, Indonesia, Japan, DPR Korea, Lao PDR, Philippines, RO Korea, Singapore, Timor-Leste, Vietnam

## 2. NOWPAP relevant Strategies and their targets

### 2.1 Northwest Pacific Action Plan

The Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region (NOWPAP) was adopted in September 1994 as a part of the Regional Seas Programme of the United Nations Environment Programme (UNEP). The overall goal of the Northwest Pacific Action Plan is "*the wise use, development and management of the coastal and marine environment so as to obtain the utmost long-term benefits for the human populations of the region, while protecting human health, ecological integrity and the region's sustainability for future generations*".

The Objectives proposed for the Northwest Pacific Action Plan for the short and medium-term are:

- i. To assess regional marine environmental conditions by coordinating and integrating monitoring and data-gathering systems on a regional basis, making the best use of the expertise and facilities available within the region on a consistent and collective basis;
- ii. To collate and record environmental data and information to form a comprehensive database and information management system which will serve as a repository of all relevant available data, act as the sound basis for decision-making, and serve as a source of information and education for specialists, administrators, and other;
- iii. To develop and adopt a harmonious approach towards coastal and marine environmental planning on an integrated basis and in a pre-emptive, predictive and precautionary manner;
- iv. To develop and adopt a harmonious approach towards the integrated management of the coastal and marine environment and its resources, in a manner which combines protection, restoration, conservation and sustainable use;
- v. To develop and adopt effective measures for mutual support in emergencies, collaboration in the management of contiguous bodies of water, and cooperation in the protection of common resources as well as in the prevention of coastal and marine pollution.

The Northwest Pacific Action Plan does not include specific targets and indicators to monitor and report the progress in achieving the objectives, which have been further elaborated in the regional plans and strategies (see below).

### 2.2 Regional Action Plan on Marine Litter

The NOWPAP Regional Action Plan on Marine Litter (RAP MALI) was adopted in 2008 and is since under implementation. **Table 4.1** summarizes the objectives and main areas of action of the RAP MALI. A number of marine litter publications have been published and include an assessment of Marine Litter in the NOWPAP Region (2011)<sup>57</sup>, which was then updated as part of the 2014 State of the Marine Environment Report for the NOWPAP region (SOMER 2) report.

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<sup>57</sup> [http://114.255.99.114/sco/dinracManage/resource/NOWPAP\\_Marine\\_Litter\\_2011.pdf](http://114.255.99.114/sco/dinracManage/resource/NOWPAP_Marine_Litter_2011.pdf)

**Table 4.1. RAP MALI Objectives and areas of action**

Objectives	Main lines of actions
1. Prevention of marine litter inputs to marine and coastal environment	1.1 Legal and administrative instruments 1.2 Wise management of marine litter 1.3 Information, education, outreach and public awareness 1.4 Cooperation with civil society 1.5 Research activities
2. Monitoring of marine litter quantities and distribution	2.1 Marine litter monitoring using NOWPAP guidelines 2.2 Maintenance of marine litter database 2.3 Compilation of data from national monitoring programmes 2.4 Regular assessment of current situation and trends in marine litter quantities and distribution 2.5 Collection of marine litter-related research outcomes
3. Removing existing marine litter and its disposal	3.1 Beach Cleanups Campaigns 3.2 Removal of existing marine litter 3.3 Research activities related to marine litter

The twenty second Intergovernmental Meeting of the Northwest Pacific Action Plan (December 2017)<sup>58</sup> noted the progress achieved in implementation of the RAPMALI and adopted the activities for 2018-2019 by the Regional Coordination Unit (RCU) and Activity Centers:

- 2018 NOWPAP ICC campaign and NOWPAP-TEMM Workshop in R. Korea;
- 2018 NOWPAP ICC campaign and NOWPAP-TEMM Workshop in P.R. China;
- Enhancing NW Pacific regional node of the Global Partnership on Marine Litter (GPML);
- CEARAC: Regional overview of national efforts to address microplastics;
- DINRAC: Updating and visualizing database on marine litter;
- MERRAC: Understanding floating marine litter sources and flows;
- POMRAC: Research on micro-plastics content and migration in the Peter the Great Gulf;
- RCU supported by all RACs: Third Regional Overview of marine litter in the NOWPAP region; and
- RCU: Support for regional cooperation, travel and development of public awareness materials.

A Marine Litter monitoring program has been established and all national marine litter monitoring data and related information, including the data from the SOA (State Oceanic Administration) of China, are available at the DINRAC website. DINRAC is in the process of establishing marine litter data platform. From 2017, Ecological Objectives, targets and indicators have been developed, including for marine litter. The Ecological Objective 5 is Marine litter does not adversely affect coastal and marine environments and includes the following draft indicators:

- 5.1.1. Trends in the amount and composition of litter washed ashore;
- 5.1.2. Trends in the amount of litter in the water column and deposited on the seafloor;
- 5.1.3. Trends in the amount, distribution and composition of micro-particles; and
- 5.2.1. Trends in the amount and composition of litter ingested by marine animals.

<sup>58</sup> <http://www.nowpap.org/IGM/22/Final%20Resolution%20of%202022nd%20NOWPAP%20IGM.pdf>

**Table 4.2. NOWPAP MTS 2018-2023 Objectives, Outcomes and 2030 Impact**

2017-2023 MTS Objectives	2030 Impact	Outcomes / Expected Accomplishments
<b>1. Support ecosystem-based integrated coastal and river basin management (ICARM)</b>		
<p>1.1. NOWPAP Member States increasingly apply ecosystem-based approach to planning and management as a basis to achieve healthy and productive coastal and marine ecosystems.</p>	<p>Priority area responds directly to Objectives (3) and (4) of the Action Plan that focuses on ecosystem-based planning and management, respectively. The expected 2030 Impact is <b>SDG 14.2</b> and corresponding indicators:</p> <p><i>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, to achieve healthy and productive oceans.</i></p> <p>Implementation of activities under this priority area will also contribute to the achievement of SDGs 6, 11, 13, 14, and 15.</p>	<p>1.1.1. NOWPAP Member States are developing and applying ecosystem-based management policies, tools and practices to support sustainable development of coastal zones and the marine environment;</p> <p>1.1.2. Planning and decision-making processes for ICZM and MSP by NOWPAP Member States enhance inter-connectedness between the land and the sea and promote cross-sectoral cooperation;</p> <p>1.1.3. Planning mechanisms, including integrated water resources management, ICZM and MSP in NOWPAP Member States contribute to reduced pressures on the coastal and marine environment.</p> <p>1.1.4. “Good environmental status” of the NOWPAP is defined and provides a baseline and direction for Member States action</p>
<b>2. Assess status of the marine and coastal environment</b>		
<p>2.1 NOWPAP Member States are presented with and use reliable information and data on the state of marine and coastal environment to support evidence-based policy making process.</p>	<p>Priority area responds directly to Objectives (1) and is also related to Objective (2) of the Action Plan.</p> <p>The expected 2030 Impact is:</p> <p><i>Evidence-based policy making by NOWPAP Member States informed by robust data and assessments fully integrates the environmental dimension of sustainable development of the coastal and marine environment.</i></p> <p>Implementation of activities under this priority area will also contribute to the achievement of several targets of SDGs 6, 12, 14, 15, and 17.</p>	<p>2.1.1. NOWPAP Member States are provided with integrated periodic assessments of state of marine and coastal environment and its individual components, including (but not limited to) biodiversity, chemical and biological pollution, harmful algal blooms, marine litter, oil and HNS threats, and climate change impacts to inform and foster policy action;</p> <p>2.1.2. NOWPAP Member States, through the NOWPAP Information Portal, have free and user-friendly access to data and reliable information on coastal and marine environment collected from members, NOWPAP RACs, other institutions and projects;</p> <p>2.1.3. New and emerging environmental issues, including climate change impacts on socio-ecological systems in the NOWPAP region, are identified and addressed by Member States, as appropriate.</p>
<b>3. Prevent and reduce land- and sea-based pollution</b>		
<p>3.1 NOWPAP Member States develop and adopt effective measures for mutual support in marine</p>	<p>The priority area responds directly to Objective (4) and (5) of the Action Plan. The expected 2030 Impacts are as follows:</p>	<p>3.1.1. NOWPAP Member States have effective measures in place against marine pollution emergencies through the NOWPAP Regional Oil and HNS Spill Contingency Plan (RCP), including information sharing, improved response capacity, and the implementation of specific projects;</p>

2017-2023 MTS Objectives	2030 Impact	Outcomes / Expected Accomplishments
<p>pollution emergencies and in the prevention and mitigation of coastal and marine pollution.</p>	<p><b>SDG 14.1:</b> <i>By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.</i></p> <p>and</p> <p><i>NOWPAP EcoQO 3: Eutrophication adverse effects are absent, EcoQO 4: Contaminants cause no significant impact on coastal and marine ecosystems and human health and EcoQO 5: Marine litter does not adversely affect coastal and marine environments.</i></p> <p>Implementation of activities under this priority area will also contribute to the achievement of several targets of SDGs 6, 8, 11, 12, and 14.</p>	<p>3.1.2. NOWPAP Member States are provided with reliable information, guidelines and best practices addressing prevention and mitigation of coastal and marine pollution, including eutrophication;</p> <p>3.1.3. NOWPAP Member States address marine litter, including microplastics, through the effective implementation of the NOWPAP Regional Action Plan on Marine Litter (RAP MALI).</p>
<b>4. Conserve marine and coastal biodiversity</b>		
<p>4.1 NOWPAP Member States are provided with reliable information and analysis of the status of biodiversity and conservation measures and recommendations for action as expressed in the Regional Action Plan for Marine and Coastal Biodiversity Conservation</p>	<p>This priority area responds directly to Objectives 3, task (e), (f); Objective 4 (g) of the Action Plan that focus on biodiversity conservation measures.</p> <p>The expected 2030 Impacts are as follows:</p> <p><b>SDG 14.2:</b> <i>By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant impacts, including by strengthening their resilience, and taking action for their restoration in order to achieve healthy and productive oceans;</i></p> <p><b>SDG 14.5:</b> <i>By 2020, conserve at least 10% of coastal and marine areas, consistent with national and international law and based on the best available scientific information;</i></p> <p><i>NOWPAP EcoQO 1: Biological and habitat diversity are not changed significantly due to anthropogenic pressure;</i></p> <p>and</p> <p><i>NOWPAP EcoQO 2: Alien species are at levels that do not adversely alter the ecosystems.</i></p> <p>Implementation of activities under this priority area will also contribute to the achievement of several targets of SDGs 6, 13, 14, and 15.</p>	<p>4.1.1. NOWPAP Member States are provided with information and data, including on the status and major threats to Red List species and invasive alien species and sensitive habitat mapping in the region;</p> <p>4.1.2. NOWPAP Member States effectively address marine and coastal biodiversity conservation through planning and application of area-based management tools, including marine protected areas (MPAs) and Ecologically or Biologically Significant Marine Areas (EBSAs);</p> <p>4.1.3. NOWPAP Member States adopt Regional Action Plan for Marine and Coastal Biodiversity Conservation.</p>

### 2.3 NOWPAP Medium-term Strategy, 2018-2023

The NOWPAP Medium-Term Strategy 2018-2023 was adopted at the Twenty second Intergovernmental Meeting of the Northwest Pacific Action Plan in December 2017 (**NOWPAP, 2017**), and follows the successful implementation of the 2012-2017 Medium-Term Strategy. The MTS 2018-2023 Vision is: *A resilient Northwest Pacific marine and coastal environment, supporting sustainable development for the long-term benefit of present and future generations*. The major focus of the NOWPAP MTS 2018-2023 will be on the coordination of the regional implementation of the ocean-related SDGs using NOWPAP mechanism. NOWPAP will contribute concretely to achieving SDG 14 (particularly targets 14.1, 14.2, 14.5, and 14.c) and SDG 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development. NOWPAP activities will also support the achievement of SDGs 6, 8, 11, 12, 13, and 15.

The NOWPAP MTS 2018-2023 strategic focus and priority areas are:

1. Support integrated coastal and river basin management;
2. Assess status of the marine and coastal environment;
3. Prevent and reduce land- and sea-based pollution;
4. Conserve marine and coastal biodiversity;

For each of the priority areas, objectives, contribution to the SDG's, outcomes, budget and timeline have been developed and agreed (see **Table 4.2**). The indicators relevant to the MTS 2018-2023 are the Ecological Objective indicators and the SDG indicators.

### 2.4 NOWPAP Ecological Quality Objectives

NOWPAP is 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 (**UNEP NOWPAP, 2017b**), and presented in **Table 4.3**. Achieving Good Environmental Status along with the five EcoQOs described above will contribute to the achievement of several goals of the SDG 14 on Oceans (“Conserve and sustainably use the oceans, seas and marine resources for sustainable development”):

14.1. By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution (EcoQOs 3, 4, 5).

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 (EcoQOs 1 and 2).

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 (EcoQOs 1 and 2).

Efforts of NOWPAP member states focused on Ecological Quality Objectives, in particular on biodiversity conservation and on combatting marine litter, will also contribute to achieving SDG 12 (“Ensure sustainable consumption and production patterns”) and SDG 13 (“Take urgent action to combat climate change and its impacts”).

**Table 4.3. NOWPAP Ecological Objectives and draft criteria and indicators**

<b>Ecological Quality Objectives</b>	<b>Operational Criteria</b>	<b>Indicators</b>
1. Biological and habitat diversity are not changed significantly due to anthropogenic pressure	1.1. Species diversity of marine mammals and waterbirds	1.1.1. Abundance, distribution and population growth rates of marine mammals 1.1.2. Abundance and productivity of key waterbird species
	1.2. Species age and size structure of fish stocks	1.2.1. Catch/biomass ratio 1.2.2. Spawning Stock Biomass (SSB) 1.2.3. Proportion of large fish (for selected species at the top of food webs)
	1.3. Distribution of benthic and pelagic communities and their status	1.3.1. Distribution 1.3.2. Condition of the typical species and communities 1.3.3. Hydrological and chemical conditions
2. Alien species are at levels that do not adversely alter the ecosystems	2.1. Abundance and state characterization of alien species	2.1.1. Trends in spatial distribution and biomass of alien species
	2.2. Environmental impact of alien species	2.2.1. Ratio between alien species and native species and their interaction at the level of ecosystem, habitats and species
3. Eutrophication adverse effects (such as loss of biodiversity, ecosystem degradation, harmful algal blooms, and oxygen deficiency in bottom waters) are absent	3.1. Nutrients concentration	3.1.1. Nutrients concentration in the water column 3.1.2. Nutrient ratios (silica, nitrogen and phosphorus)
	3.2. Direct effects of nutrient enrichment	3.2.1. Chlorophyll a concentration in the water column 3.2.2. Species composition and abundance of toxic microalgae 3.2.3. Harmful algal blooms (HABs) 3.2.4. Abundance of opportunistic macroalgae
	3.3. Indirect effects of nutrient enrichment	3.3.1. Seasonal hypoxia, dissolved oxygen changes and size of the area concerned
4. Contaminants cause no significant impact on coastal and marine ecosystems and human health	4.1. Concentration of contaminants	4.1.1. Concentration of the contaminants in sediments, water and hydrobionts 4.1.2. Exceeding of Maximum Permissible Concentration (MPC) in aquatic organisms and frequency of such cases
	4.2. Effects of contaminants	4.1.1. Concentration of the contaminants in sediments, water and hydrobionts 4.1.2. Exceeding of Maximum Permissible Concentration (MPC) in aquatic organisms and frequency of such cases
5. Marine litter does not adversely affect coastal and marine environments	5.1. Characteristics of litter in the marine and coastal environment	5.1.1. Trends in the amount and composition of litter washed ashore 5.1.2. Trends in the amount of litter in the water column and deposited on the seafloor 5.1.3. Trends in the amount, distribution and composition of micro-particles
	5.2. Impacts of litter on marine life	5.2.1. Trends in the amount and composition of litter ingested by marine animals

### 3. Additional Complimentary Strategies

#### 3.1 Strategic Action Programme for the Yellow Sea Large Marine Ecosystem

The Strategic Action Programme (SAP) for the Yellow Sea Large Marine Ecosystem, was prepared with the support of the UNDP/GEF project entitled “Reducing Environmental Stress in the Yellow sea Large Marine Ecosystem” (UNDP/GEF, 2009)<sup>59</sup>, following the completion of the TDA and was adopted in 2009. In addition to the 11 SAP targets, actions and indicators developed (summarized in Table 4), the SAP also stresses the need for coordination between regional organizations for implementation, including NOWPAP, PEMSEA, and IOC/WESTPAC.

**Table 4.4. Yellow Sea SAP targets and indicators**

SAP Targets	SAP indicators of management actions
<b>Provisioning Services</b>	
Target 1: 25-30% reduction in fishing effort	<ul style="list-style-type: none"> <li>- A 1/4 - 1/3 reduction in the number of motorized fishing boats by 2020 from 2004, and a harvesting level will meet the “surplus yield”, implying that the stocks are kept at biologically safe levels to ensure sufficient reproductive capacity to maintain marine living resources in a healthy condition. Recovery of some over-exploited commercial fish stocks.</li> <li>- The release of billions of fry into the sea for stock enhancement after necessary evaluation in accordance with ecosystem stability.</li> <li>- The establishment of at least ten protected areas for fishery resources in the Yellow Sea.</li> <li>- Reduced environmental stress as a result of the widespread adoption of environment-friendly mariculture and sustainable mariculture techniques.</li> <li>- Efficient operation of a network of an early warning and diagnosis system of mariculture diseases.</li> </ul>
Target 2: Rebuilding of over-exploited marine living resource	
Target 3: Improvement of mariculture techniques to reduce environmental stress	
<b>Regulating Services</b>	
Target 4: Meeting international requirements on contaminants	<ul style="list-style-type: none"> <li>- Well-operated regional monitoring network;</li> <li>- Provision of access to reliable monitoring information on environmental quality for state governance bodies and the public;</li> <li>- Significant reduction of total loading of the pollutants;</li> <li>- Significant improvement of seawater quality with reduction of human health risk.</li> </ul>
Target 5: Reduction of total loading of nutrients from 2006 levels	
<b>Cultural Services</b>	
Target 6: Reduced standing stock of marine litter from current level	<ul style="list-style-type: none"> <li>- Regional guidelines for marine litter monitoring and assessment;</li> <li>- Establishment of operational mechanism for beach cleaning;</li> <li>- Published educational information package;</li> <li>- Improved legislation on waste and litter management.</li> </ul>
Target 7: Reduce contaminants, particularly in bathing beaches and other marine recreational waters, to nationally acceptable levels	
<b>Supporting Services</b>	

<sup>59</sup> <https://www.thegef.org/project/reducing-environmental-stress-yellow-sea-large-marine-ecosystem>



SAP Targets	SAP indicators of management actions
Target 8: Better understanding and prediction of ecosystem changes for adaptive management	<ul style="list-style-type: none"> <li>- Continuation of cross-basin monitoring of N/P/Si change, climate impacts, and HAB trends</li> <li>- Working international monitoring network for jellyfish blooms,</li> <li>- Regular status reports of N/P/Si change, climate impacts, jellyfish blooms, HAB trends</li> </ul>
Target 9: Maintenance and improvement of current populations/distributions and genetic diversity of the living organisms including endangered and endemic species	<ul style="list-style-type: none"> <li>- Scenario-based long-term projection of ecosystem changes</li> <li>- Development of adaptive management strategies using ecosystem status assessment and forecasting</li> <li>- Policy making based on adaptive management strategies</li> </ul>
Target 10: Maintenance of habitats according to standards and regulations of 2007	<ul style="list-style-type: none"> <li>- Species composition, species diversity indexes, and the density of vulnerable and endemic species at selected sites is maintained and improved compared to the 2007 situation.</li> <li>- Area of current habitats is maintained according to standards and regulations of 2007.</li> </ul>
Target 11: Reduction of the risk of introduced species	<ul style="list-style-type: none"> <li>- The incidence of disease/parasites and impacts endemic/vulnerable species caused by introduction of non-native species is reduced.</li> </ul>

### 3.2 Sustainable Development Strategy for the Seas of East Asia

The revised 2015 Sustainable Development Strategy for the Seas of East Asia (SDS-SEA), was prepared by the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), in consultation with 12 participating Governments, including Cambodia, China, DPR Korea, Indonesia, Japan, Lao PDR, Philippines, RO Korea, Singapore, Thailand, Timor-Leste and Vietnam (**PEMSEA, 2015**). The overall vision of the Strategy is to ensure “*Healthy Oceans, People and Economies*” and the mission is “*To foster and sustain healthy and resilient oceans, coasts, communities and economies across the Seas of East Asia through integrated management solutions and partnerships.*” For each of the seven strategies, objectives and actions have been defined (**Table 4.5**).

**Table 4.5. SDS-SEA Strategies and Objectives**

Strategic Areas	Objectives
<p><b>SUSTAIN</b></p> <p>The East Asian countries shall ensure sustainable use of coastal and marine resources</p>	<ol style="list-style-type: none"> <li>1. Conservation and redress of biological diversity</li> <li>2. Maintenance and enhancement of the quality of coastal waters</li> <li>3. Equitable and sustainable fisheries and conservation of fish stocks</li> </ol>
<p><b>PRESERVE</b></p> <p>The East Asian countries shall preserve species and areas of coastal and marine environment that are pristine or of ecological, social and cultural significances</p>	<ol style="list-style-type: none"> <li>1. A common management system for marine protected areas of transboundary importance</li> <li>2. Safeguarding of rare, threatened and endangered species and genetic resources</li> <li>3. Conservation of transboundary areas of social, cultural, historical and geological significance</li> </ol>
<p><b>PROTECT</b></p> <p>The East Asian countries shall protect ecosystems, human health and society from risks which occur as a consequence of human activity</p>	<ol style="list-style-type: none"> <li>1. Sub regional mechanisms to combat transboundary environmental threats in regional seas, including LMEs and sub regional sea areas</li> <li>2. Coastal and marine degradation from land-based human activities arrested</li> <li>3. Prevention of adverse impacts from sea-based human activities</li> <li>4. Recovery of clean-up costs and compensation for damages</li> </ol>

Strategic Areas	Objectives
<p><b>ADAPT</b></p> <p>The East Asian countries shall undertake steps to improve their capability to ADAPT to the adverse impacts of climate change and other man-made and natural hazards, particularly on ocean and coastal systems and coastal communities.</p>	<ol style="list-style-type: none"> <li>1. Climate change adaptation and disaster risk reduction and management incorporated into development policies, plans, and programmes at national and local levels</li> <li>2. Strengthened capacity of national and local governments, communities, and other stakeholders to adapt to the impacts of climate change and respond to natural and man-made hazards</li> <li>3. Risk-sensitive public and private investments are supported by innovative sustainable financing mechanisms</li> </ol>
<p><b>DEVELOP</b></p> <p>The East Asian countries shall develop areas and opportunities in the coastal and marine environment that contribute to economic prosperity and social well-being while safeguarding ecological values</p>	<ol style="list-style-type: none"> <li>1. Promotion of sustainable economic development towards a blue economy in coastal and marine areas</li> <li>2. ICM as an effective management framework to achieve the sustainable development of coastal and marine areas</li> <li>3. Sub regional growth areas incorporating transboundary environmental management programmes</li> <li>4. Partnerships in sustainable financing and environmental investments</li> </ol>
<p><b>IMPLEMENT</b></p> <p>The East Asian countries shall implement international instruments relevant to the management of the coastal and marine environment</p>	<ol style="list-style-type: none"> <li>1. National government accession to and compliance with relevant international conventions and agreements</li> <li>2. Regional cooperation in integrated implementation of international instruments</li> <li>3. Execution of obligations under international conventions and agreements at the local government level</li> </ol>
<p><b>COMMUNICATE</b></p> <p>The East Asian countries shall communicate with stakeholders to raise public awareness, strengthen multisectoral participation and obtain scientific support for the sustainable development of the coastal and marine environment</p>	<ol style="list-style-type: none"> <li>1. Raising public awareness and understanding of coastal and marine environmental and resource management issues and processes</li> <li>2. Utilization of science and traditional knowledge in decision-making processes</li> <li>3. Mobilization of governments, civil society and the private sector utilizing innovative communication methods</li> </ol>

A series of indicators have been developed to assess progress across the region regarding implementation of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA). The indicators provide a systematic approach for each country to track its movement toward management arrangements, systems, and processes identified in the Strategy. From a total of 160 indicators, 35 were initially identified as the basic set of indicators for evaluating changes that occur in coastal areas over time, the management responses undertaken, as well as the effectiveness and impacts of ICM implementation. The SOC reporting is an evolving process. Recently, the indicator system was expanded to include additional indicators for disaster risk reduction, climate change adaptation, biodiversity protection, livelihood and food security, river basin management, and pollution control and mitigation, also with links to SDG targets.

It should be noted that the SDS-SEA cover's a broader area and additional countries to the NOWPAP region. Also, it was prepared before the 2030 Agenda for Sustainable Development and agreements on the SDGs, targets and indicators, and whilst there is not full alignment with the SDG's, there are a number of common targets and indicators.

### 3.3 SAP and SDS-SEA implementation projects

Several regional projects are under implementation to support the SAP and SDS-SEA implementation. The GEF funded Program “EAS Reducing Pollution and Rebuilding Degraded Marine Resources in the East Asian Seas through Implementation of Intergovernmental Agreements and Catalyzed Investments”<sup>60</sup> was approved in 2013 in support of implementation of the SAP and the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) with the following projects:

- Implementation of the Yellow Sea LME Strategic Action Program for Adaptive Management<sup>61</sup>
- Sustainable Management of Highly Migratory Fish Stocks in the West Pacific and East Asian Seas
- Scaling up the Implementation of the Sustainable Development Strategy for the Seas of East Asia<sup>62</sup>

In addition, is the medium sized project LME-EA: Applying Knowledge Management to Scale up Partnership Investments for Sustainable Development of Large Marine Ecosystems of East Asia and their Coasts<sup>63</sup>.

## 4 Monitoring and Reporting Mechanisms

### 4.1 NOWPAP Monitoring and Databases

NOWPAP has developed several databases (including meta-database and bibliographical database) which are available online:

- Marine Environmental Data;
- Contaminants and Nutrients in the Coastal and Marine Environment;
- Marine Protected Areas (MPAs);
- Oil Spill Accidents;
- HNS Spill Accidents;
- Atmospheric Deposition of Contaminants and River and Direct Inputs of Contaminants into the Marine and Coastal Environment;
- Integrated Coastal and River Basin Management (ICARM);
- Coastal and Marine Environmental Geographic Information Systems (GIS) and Remote Sensing (RS) Applications;
- Monitoring Results on Marine Litter;
- Environmental Standards in the NOWPAP member states.

The **Marine Environmental Data** is the results of the Annual collection of data and information collected by DINRAC Focal Points in member states, since 2010 according to the designed Data Collection Framework and Data Collection Form. (see **Table 4.6**)<sup>64</sup>

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<sup>60</sup> <https://www.thegef.org/project/eas-reducing-pollution-and-rebuilding-degraded-marine-resources-east-asian-seas-through>

<sup>61</sup> <https://www.thegef.org/project/eas-implementation-yellow-sea-lme-strategic-action-programme-adaptive-ecosystem-based>

<sup>62</sup> <https://www.thegef.org/project/eas-scaling-implementation-sustainable-development-strategy-seas-east-asia>

<sup>63</sup> <https://www.thegef.org/project/lme-ea-applying-knowledge-management-scale-partnership-investments-sustainable-development>

<sup>64</sup> <http://114.255.99.114/sco/dinrac/medList.jsp>

**Table 4.6. Marine Environmental Data categories and parameters (UNEP NOWPAP, 2017c)**

<b>Data Category</b>	<b>Parameters measured</b>
Sea Water Quality and Major Sea Water Pollutants	pH, COD ,DIN, DIP, TN,TP, petroleum, etc.
River Inputs of Pollutants (through cooperation with POMRAC)	CODmn, Petroleum, TN, TP, etc
Direct Inputs of Pollutants (through cooperation with POMRAC)	CODcr, BOD, petroleum, TP, etc.
Waste Dumping	Overall quality, etc
Atmospheric Deposition of Pollutants	SO2, CO, NOx, Pb, DIN, etc.
Occurrence of Harmful Algal Bloom	/
Bottom Sediments Quality and Major Pollutants	Overall quality/Maj or pollutants, etc.
Other relevant data	

Beach Litter data is also available since 2007 as part of the International Coastal Cleanup (ICC) and national monitoring campaigns since 2002.

#### **4.2 State of the Marine Environment Report for the NOWPAP region (SOMER 2)**

The first State of the Marine Environment Report for the NOWPAP region was published in 2007, and the second (SOMER 2) 7 years later in 2014. SOMER-2 (**UNEP NOWPAP, 2014**) was prepared in line with the UN Regular Process and the World Ocean Assessment and identified eight major regional environmental issues:

- Fragmentation, degradation and loss of habitats and landscapes;
- Chemical contamination of waters, sediments and biota resulting from pollution from land-based sources;
- High risk of oil and Hazardous and Noxious Substances (HNS) pollution incidents on the sea;
- Eutrophication caused by the increased input of nutrients into marine waters and associated harmful algal blooms (HABs) and increased hypoxia;
- Introduction of invasive non-indigenous species; and
- Marine litter pollution.

Information for the report was compiled from a combination of NOWPAP data and publications, as well as global databases, reports and scientific publications. The report includes the following conclusions for the future of the SOMER reporting:

- In the future the application of the Ecosystem Based Management (EBM) or Ecosystem Approach (EA) or any other management approach must take into account and be based on the ecosystem features of the sea area considered;
- To apply ecosystem approach, the set of indicators connecting pressures, impacts and responses and reflecting the progress in managerial actions is needed; and
- The Ecological Quality Objectives (EQO) and corresponding indicators under development will be used as the basis for future SOMER reports.

## 5 Possible contribution of NOWPAP to SDG reporting

NOWPAP has been supporting countries in the effective management of their marine and coastal ecosystems for over 20 years and as outlined in Sections 2 and 3, there are a number of key strategic documents and reporting mechanisms in the NOWPAP region that may play a key role in the future reporting of the SDG targets (see **Table 7**) and support national obligations in SDG reporting through their Voluntary National Reviews (VNR).<sup>65</sup> These contribute in particular to the follow SDG 14 targets, as well as other targets in particular in relation to Goals 6, 8, 11, 12, 13 15 and 17 (see **Annex 1**).

The following recommendations to strengthen the role of future NOWPAP in the SDG monitoring and review process are elaborated below.

1. **Establish a coordination mechanism** with other regional organizations and SDG Focal Points;
2. **Review and align objectives, targets and indicators with the SDGs** within the NOWPAP region, in coordination with PEMSEA, GEF SAP projects and other partners;
3. **Further development of Ecological Objective indicators** as the key state indicators to be used in relation to SDG's, including methodologies in line with SDG and Regional Seas Indicators;
4. **Contribute monitoring data to UN Environment** as part of global monitoring of targets 14.1., 14.2 and 14.5;
5. **Develop an approach to regional assessments** that is based on agreed targets and indicators, uses a DPSIR approach and assesses the relevant SDG targets;
6. Ensure **data and information from NOWPAP member countries contribute to VNR reports and SDG databases** through cooperation and agreements with other regional organizations and SDG Focal Points;
7. **Make available on the NOWPAP web-site** the integrated objectives, targets and indicators and information available for reporting the progress of the SDG's; and
8. **Prepare an SDG Outlook document** to capture the vision of how NOWPAP will move towards more quantitative reporting that can contribute to the SDG monitoring and review.

### 5.1 Establish a coordination mechanism with other regional organizations and SDG Focal Points

There are several Regional Organizations engaged in 2030 Agenda and the follow up of the SDGs in the NOWPAP region. These include the Economic and Social Commission for Asia and the Pacific (UNESCAP); Partnerships in Environmental Management for the Seas of East Asia (PEMSEA); Regional Fisheries management bodies; SAP and SDS-SEA GEF project partners, Asian Development Bank, UNDP, UN Environment, Non-Governmental Organizations (NGO's) such as WWF and others.

The **Economic and Social Commission for Asia and the Pacific (UNESCAP)** has 53 members states including all NOWPAP countries. Through ESCAP Resolution (E/ESCAP/RES/72/6) on "Committing to the effective implementation of the 2030 Agenda for Sustainable Development in Asia and the Pacific" member States have requested ESCAP's support in<sup>66</sup>:

- promoting the balanced integration of the three dimensions of sustainable development and provide annual updates and recommendations to member States;
- supporting the process to define a regional road map for implementing the 2030 Agenda and to address challenges to its achievement in Asia and the Pacific,

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<sup>65</sup> <https://sustainabledevelopment.un.org/vnrs/>

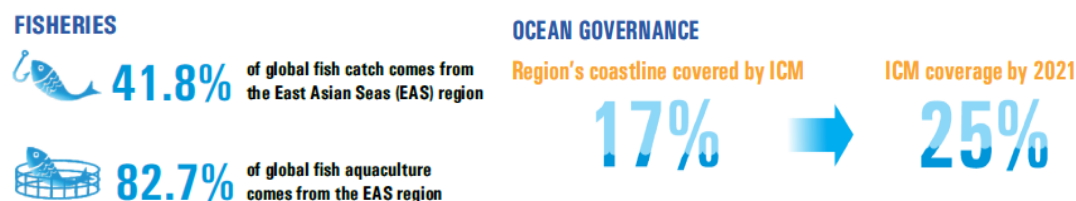
<sup>66</sup> <http://www.unescap.org/2030-agenda>

- strengthening support to member States in their efforts to implement the 2030 Agenda in an integrated approach; and
- continuing to provide capacity-building opportunities to member States, leveraging existing expertise and its intergovernmental forum to contribute to the strengthening of their capacity.

UNESCAP is supporting the monitoring, review and follow up of the SDGs through its work on statistical capacity building, knowledge products such as the Statistical Yearbook , a dedicated data portal on the SDGs (under development), close engagement of the Asia-Pacific Regional Coordination Mechanism as an inter-agency coordination mechanism for the United Nations system at the regional level, and a partnership with ADB and with UNDP (Asia-Pacific SDG Partnership) that will, over the next 15 years, produce high-quality knowledge products to support follow-up and review of the 2030 Agenda and the SDGs. In addition, two knowledge platforms<sup>67</sup>, the Sustainable Development Knowledge Platform and the Urban SDG Knowledge Platform are dedicated to advancing sustainable development, while ESCAP continues to maintain sectoral knowledge platforms in other areas—such as trade and disaster risk reduction.

**The Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)** is contributing to the SDG’s through implementation of SDS-SEA, in particular SDG 14: Life Below Water, SDG 6: Clean Water and Sanitation, SDG 11: Sustainable Cites and Communities, SDG 13: Climate Actions and SDG 17: Partnership for the Goals.

**Figure 4.2. Fisheries and ICM statistics for the East Asian Seas (EAS).**



PEMSEA is responding to SDG 14, particularly through the “Sustain and Preserve” strategies of the SDS-SEA. PEMSEA countries have put in place national ocean policy and legislation as well as policy and legislation for the conservation and management of biological diversity, sustainable fisheries, conservation and management of habitats and protected areas and safeguarding rare, threatened and endangered species. Finally, there are a number of **Fisheries management bodies** within the NOWPAP Region. These include the Asian Pacific Fisheries Commission (APFIC) excluding Russia, the North Pacific Fisheries Commission (NPRC) which also extends to the U.S and Canada, the North Pacific Marine Science Organization (PICES) amongst others.

It is essential that there is close cooperation between these organizations in terms of SDG reporting, information and data management and the need to define the role of each organization to support countries in their VNR and national reporting obligations. SDG 14 is also a unique goal in that it also needs to consider the regional as well as the national perspective, and thus needs regional coordination for reporting. Such cooperation should build upon existing NOWPAP coordination mechanisms between regional organizations and national institutions and focal points should be used to exchange and agree on SDG reporting, whereby NOWPAP can play a key role in the coordination of reporting on SDG 14 targets.

<sup>67</sup> <http://www.unescap.org/2030-agenda/sustainable-development-knowledge-platforms>

***Suggested actions for consideration:***

- Building upon existing NOWPAP and other organizations coordination mechanism, establish an SDG 14 Coordination Group for the integration of SDG 14 reporting at the national and regional level, involving UNESCAP, fisheries bodies, and SDG Focal Points;
- The SDG 14 Coordination Group should agree on a workplan and ToR, which should include the review existing reporting mechanisms, SDG data hubs established or planned, national SDG indicators; agree on joint reporting on SDG 14 targets and a core set of agreed indicators using common templates and methodologies; and
- NOWPAP Focal Points to establish a national level coordination with SDG Focal points to ensure full engagement in implementation and reporting of SDG 14 targets, and contribution of NOWPAP national experts to VNR reports.

## 5.2 Aligning Objectives, targets and indicators with the SDGs

Sections 2 and 3 and **Table 4.7** present the main strategic documents in the NOWPAP region and links with the SDG targets. However, there is currently no obligatory reporting in place to monitor to progress in implementation. The newly developed MTS 2018-2023 includes links to the relevant SDG targets and incorporates SDG and EcoQO indicators and can be used a good example for other Regional Seas. NOWPAP will develop in 2018 concrete targets and indicators to monitor the MTS, and as such also the Northwest Pacific Action Plan and Regional Action Plan on Marine Litter, to ensure countries report on progress in the future. Of the others, only the EcoQO and the Yellow Sea SAP include measurable targets and indicators.

**Table 4.7. Overall contribution of NOWPAP and related key strategic documents and monitoring programmes to SDG 14 and other targets.**

NOWPAP and related Strategies and Monitoring	Target 14.1	Target 14.2	Target 14.5	Target 14.c	Additional SDG targets
Northwest Pacific Action Plan	✓	✓	✓	✓	Also, SDG 15.1 in the coastal zone
Regional Action Plan on Marine Litter	✓				SDG 12.5
NOWPAP Medium-term Strategy, 2018-2023	✓	✓	✓	✓	SDG 6.3, 6.5, 6.6, 8.4, 8.9, 11.6, 11b, 12.2, 12.4, 12.5 and 15.1, 15.8, 17.16
NOWPAP Ecological Quality Objectives	✓	✓	✓		SDG 6.3, 15.1, 15.8
Strategic Action Programme for the Yellow Sea Large Marine Ecosystem	✓	✓	✓	✓	SDG 14.4 SDG 6.3, 6.5, 6.6 8.4, 8.9, 11.6, 11b, 12.2, 12.4, 12.5 and 15.1, 17.6
Sustainable Development Strategy for the Seas of East Asia (SDS-SEA)	✓	✓	✓	✓	SDG 14.4 SDG 6.3, 6.5, 6.6 8.4, 8.9, 11.6, 11b, 12.2, 12.4, 12.5, 13.1, 13.2, 13.3, 13.a and 15.1, 17.6

**Appendix 2** provides an example template the mapping of targets and indicators against the SDG targets and separates targets and indicators, so as to ensure alignment with the DSPiR approach for future reporting (see **Box 2**). It has been partially completed to include the Yellow SAP targets and the Ecological Objectives and their draft indicators.

This suite of targets and indicators would then be used for reporting on the progress of implementation of the MTS but would also contribute to future NOWPAP assessments and SDG reporting.

***Suggested actions for consideration:***

- NOWPAP reviews and completes **Appendix 2**, as part of the process to align targets and indicators with the relevant SDG targets, and agree on key objectives, targets and indicators for future reporting and assessments. Consideration should be given to include pressure (P), State (S) and Response (R) targets and indicators that are realistic, based on SMART criteria with a clear reporting mechanism in place. Also, to integrate the Regional Seas indicators as appropriate;
- Consideration should also be given to integrate the Yellow Sea SAP, Regional Seas and relevant Global Convention indicators as appropriate. One major issue raised by all regions is the over-burden of reporting on countries. By streamlining targets and indicators, a reporting mechanism can be developed that can serve multiple purposes, for NOWPAP, SDG's, Global Conventions etc.;
- Potential data sources for each indicator should be identified, whether from national data or other sources. Also, a realistic reporting mechanism would need development for each indicator, considering the capacity, funds and time required to report some indicators; and
- Close cooperation with other Regional Seas on their reporting targets and indicators (Mediterranean, OSPAR, HELCOM etc) would assist in the development of these targets and indicators and ensure harmonization with other regions as appropriate. NOWPAP may consider a specific activity or project in this regard.

### **5.3 Further development of Ecological Objective indicators**

NOWPAP is in the process of defining Ecological Objectives, targets and indicators for the region, as described in **2.4**. By aligning these indicators with the SDG indicators (in particular 14.1.1 and 14.2.1), future monitoring of these may also be reported to SDG databases. Once these indicators are agreed NOWPAP will need to undertake several steps that may include:

- Development of a Monitoring and Assessment Program;
- Development of indicator methodologies and reporting templates;
- Supporting countries in monitoring and reporting of these agreed indicators; and
- Establishing quality control and an online database (ideally using Spatial Data Infrastructure and Shared Environmental Information System approaches).



***Suggested actions for consideration:***

- Considers the development of a monitoring and assessment programme, which ensures common methodologies for those indicators related to SDG targets and indicators (
- Ensures close collaboration with those Regional Seas following a similar approach to the Ecological Objectives, indicator methodologies and data management, possibly through a specific activity or project;
- Develops a 5-6 costed work-program for the Ecosystem Approach and considers mobilization of funds to support implementation of the Ecosystem Approach Ecological Objectives, given the significant financial and capacity resources required;
- Coordinates with the Yellow Sea SAP project to integrate the Ecological Objectives into updated Yellow Sea SAP targets as appropriate in order to streamline future reporting;
- Considers developing an agreement (with FAO and/or fisheries bodies) for the reporting of the fisheries indicators 1.2.1. Catch/biomass ratio, 1.2.2. Spawning Stock Biomass (SSB) 1.2.3. Proportion of large fish (for selected species at the top of food webs). It is recommended that an agreement is developed for FAO and relevant fisheries body to report on this indicator;

#### **5.4 Contribute monitoring data to UN Environment as part of global monitoring of targets 14.1., 14.2 and 14.5.**

The 232 individual SDG 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. **Annex 1** presents the list of 26 SDG indicators for which UN Environment is custodian agency. As of 20 April 2017, the updated tier classification contains 82 Tier I indicators, 61 Tier II indicators and 84 Tier III indicators<sup>68</sup>. In the case of SDG 14, UN Environment is custodian of three indicators, two of which are Tier III, as presented in **Table 4.8**.

For all Tier I indicators, 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. Meta data is available in the SDG Indicator Metadata repository (<https://unstats.un.org/sdgs/metadata/>) including 14.5.1 on marine protected areas (MPA's). Tier III indicators require work plans to be developed outlining the methodological development of the indicators for approval by the IAEG-SDGs. The current Tier III work plans are in draft form (using a standard structure), last presented at the 6<sup>th</sup> Meeting of the IAEG-SDGs (11-14 November 2017)<sup>69</sup>.

<sup>68</sup> See <https://unstats.un.org/sdgs/iaeg-sdgs/tier-classification/>

<sup>69</sup> <https://unstats.un.org/sdgs/meetings/iaeg-sdgs-meeting-06/>

**Table 4.8. Tier Classification of SDG Indicators (as of 20 April 2017) for Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development**

Target	Indicator	Possible Custodian Agency(ies)	Partner Agency(ies)	Updated Tier Classification
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	UNEP	IOC-UNESCO, IMO, FAO	<b>Tier III</b>
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	UNEP	IOC-UNESCO, FAO	<b>Tier III</b>
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, UNEP	Ramsar	<b>Tier I</b>

NOWPAP and its member states, through its monitoring programmes and databases can contribute directing to these three SDG 14 indicators:

- **Eutrophication (Indicator 14.1.1).** Chlorophyll-a, nitrates, nitrites, ammonium, phosphates and dissolved oxygen from the Marine Environmental Data and Contaminants and Nutrients in the Coastal and Marine Environment databases (NOWPAP-DINRAC), with regular data submitted from China, Japan, Russia and Korea
- **Marine Litter (Indicator 14.1.1).** ICC and national monitoring surveys on beach litter data submitted as part of NOWPAP-DINRAC's Marine Litter Monitoring Program
- **ICZM Protocols Plans (Indicator 14.2.1).** NOWPAP and PEMSEA databases on ICZM and ICM plans
- **Marine Protected Areas (indicator 14.5.1).** MPA data from NOWPAP-DINRAC's MPA database can be used to compare with the global database established by UNEP-WCMC.

For this purpose, it is essential that the methodologies used to collect and analyse the above indicators and parameters are made available, as on a global scale data will need to be comparable. The methodologies and meta-data should be compiled and shared with UN Environment.

***Suggested actions for consideration:***

- As part of the Ecosystem approach and the MTS indicators NOWPAP considers inclusion of monitoring parameters which can also be reported to UN Environment as part of their global reporting on these indicators. This includes the monitoring of chlorophyll-a and nutrients, ICZM plans established, and MPAs, in line with the methodologies under development by UN Environment.

## **5.5 Develop an approach to regional assessments that is based on agreed targets and indicators, uses a DPSIR approach and assesses the relevant SDG targets.**

The SOMER 2 report undertook a structured analysis of pressures, state and known impacts of the major issues and will build upon this approach integrating further the new EcoQO's in development and with closer links to the SDGs and was based on a compilation of information from numerous sources. For the future consideration should be given for SOMER reports to be more indicator based and using the DPSIR approach, in line with the EcoQO's and SDG's and based on the targets and indicators agreed. This would result in more quantitative assessments that can be compared with other regions and integrated into SDG and Regular Process/World Ocean Assessment global assessments-Each indicator would need to be individually assessed for this purpose, and the information compiled into a regional assessment with a structure that is in line with the NOWPAP Action Plan and MTS priorities, as well as the appropriate SDG targets. Indicator assessment factsheets can be completed for this purpose.

### ***Suggested actions for consideration:***

- Develop a methodology for more quantitative future state of environment regional assessments based on the agreed indicators (in particular, pressure, state and response indicators), and a structure in line with NOWPAP objectives and targets and SDG targets;
- Develop indicator assessments, considering the approach and templates used by other Regional Seas. This indicator assessments would provide a major source of information for the final assessments;
- In addition to publishing the final assessment report, consider publishing online the indicator assessments in relation to each relevant SDG target, in particular 14.1, 14.2, and 14.5, to assess the implementation of these targets in the region. These SDG assessments can then contribute to global SDG and World Ocean Assessment reports; and
- Discuss with Member states, a regular cycle of state of environment reports (such as every 5-6 years) in line with other regional seas.

## **5.7 Ensure data and information from NOWPAP member countries into VNR reports and SDG databases**

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 the Economic and Social Council (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.<sup>70</sup>

All past reports and links for 2016-2018 are provided in **Table 4.9**. Reports are available for Japan and the Republic of Korea, and whilst stressing regional and international cooperation, do not refer to NOWPAP. The republic of China submitted a report to the 2016 HLPF, with only the summary available online and Russia has not yet submitted a VNR report to the HLPF. Regarding future meetings, the Russian Federation will present a VNR report to the 2020 HLPF.

<sup>70</sup> <https://sustainabledevelopment.un.org/vnrs>

**Table 4.9. VNR Reports submitted to the HLPF**

Country	Year that VNR presented at HLPF	Brief comments on SDG 14 priorities and cooperation with NOWPAP (if mentioned)
<a href="#">People's Republic of China</a>	2016	Only summary available online
<a href="#">Japan</a>	2017	Status of priority area for “Conservation of Environment, including biodiversity, forests and oceans” (SDG 2, 3, 14, 15) with a focus on sustainable fisheries management and engagement of private sector, marine science and technology, and international cooperation including UNEP.
<a href="#">Republic of Korea</a>	2016	No detailed breakdown per SDG Goal. Overall mention of the adoption of the Third Basic Plan for Sustainable Development 2016-2035 in 2016 to translate the SDGs into national policies and plans. Additional indicators used for the VNR assessment including environmental indicators for water, coast and sea.

In addition to the VNR reports submitted, data is also provided to SDG data platforms. Many SDG data portals are under development, some at the national level, regional level (such as through Regional Commissions) and currently at the Global level two main SDG data platforms:

- i. The **Sustainable Development Goals indicators database**<sup>71</sup> provides transparency on the data used for global reporting. 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.
- ii. **IISD data portal on indicators for the Sustainable Development Goals (SDGs)**.<sup>72</sup> This portal, 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. The data will be updated periodically as more countries submit these reports.

NOWPAP (and its RACS) along with national experts should contribute to future VNR reports, based on the progress in implementation of its strategies and plans and also based on state of NOWPAP’s environment reports and analysis of monitoring data. Each strategy and plan contributed directly to several SDG14 and other targets, as presented in **Table 4.7**. However, currently there is no systematic reporting of these strategies and plans. As part of the early implementation of the NOWPAP Medium-Term Strategy (2018-2023), a reporting mechanism will be developed, that will enable progress to be monitored and assessed over time. The national level reports on MTS implementation which will be in line with SDG’s can provide a key contribution to VNR reports. This will require coordination between NOWPAP experts and the SDG Focal Points.

<sup>71</sup> <https://unstats-undesa.opendata.arcgis.com/>

<sup>72</sup> <https://sustainable-development-goals.iisd.org/country-data>

***Suggested actions for consideration:***

- At the national level, review the coordination mechanisms between SDG Focal Points and the NOWPAP national experts, and propose a mechanism so that the NOWPAP and its national experts can play a key role in providing information to future VNR reports, and peer review information; and
- Ensure future VNR reports (i.e. Russian report planned for 2020) include relevant NOWPAP information and assessments.

## **5.8 Make available on NOWPAP web-site the integrated objectives, targets and indicators and information available for reporting the progress of the SDG's**

Finally, information relating the linkages between the NOWPAP with the SDG's should be presented and available on the NOWPAP web-site, with a dedicated page that presents the key objectives, targets and indications in relation to the SDG's and updated information on implementation of the SDG reports. There should be links to all strategic documents (such as the SAPs, EcoQO's) for ease of access, and SOMER and other regional assessments. NOWPAP and member countries should consider the production of regional SDG target reports (as mentioned earlier), which could be supported by the SAP implementation projects.<sup>73</sup>

***Suggested actions for consideration:***

- Consider development of a detailed web-page on the NOWPAP web-site including information on all key NOWPAP objectives and targets and their contribution to the SDG's and links to all strategic documents (Action Plan, SAPs etc) and upload regular information on activities and assessments towards reporting the SDGs

## **5.9 Preparation of an SDG Outlook document**

The 18th Global Meeting of the Regional Seas Conventions and Action Plans concluded that “[R]egional Seas Conventions and Action Plans will 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. The documents will be submitted to UN Environment in order to be utilized in preparation of the Preparatory Committee for the United Nations Conference to Support the Implementation of Sustainable Development Goal 14”. In 2017, UN Environment published guidance for the preparation of these outlook documents<sup>74</sup>, including the following steps:

- v. Review and alignment of the regional objectives<sup>75</sup> and targets with SDGs;
- vi. Establishment of current baseline situation;
- vii. Identification of Existing and planned programmes and partnerships that contribute to achieving the regional objectives and SDGs; and

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<sup>73</sup> It should be noted that during the preparation of this case study, NOWPAP and its RACs were in the process of reorganizing their web-sites. Links to the databases were not available.

<sup>74</sup> UN Environment (2017). Moving to Strategy and Action: Regional Seas Outlook for the implementation of the Sustainable Development Goals

<sup>75</sup> The regional objectives include: regional ecological objectives, quality objectives, objectives and targets in the Strategic Action Programme, Good Environment Status, objectives of the Conventions and Protocols and targets and objectives in the regional seas Action Plan.

viii. Possible new institutional and financial arrangements for additional effort.

This case study, can be used as a basis for the drafting of a NOWPAP SDG Outlook document, including the MTS targets and indicators to be developed. It should be discussed and agreed with NOWPAP member states as an agreed definition of the future role of NOWPAP in supporting the SDG monitoring and review process. It is suggested that this should be a coordinated approach for the region, involving NOWPAP, Member countries as well as all key partners (PEMSEA, UNDP and GEF project partners, NGO's etc) as well as SDG Focal Points.

# OSPAR's monitoring and reporting mechanisms in the North-East Atlantic towards the follow up and review of the SDGs

## 1. Introduction

### 1.1 OSPAR and the Convention for the Protection of the Marine Environment of the North-East Atlantic

OSPAR started in 1972 with the Oslo Convention against dumping and was broadened to cover land-based sources of marine pollution and the offshore industry by the Paris Convention of 1974. These two conventions were unified, up-dated and extended by the 1992 OSPAR Convention. The new annex on biodiversity and ecosystems was adopted in 1998 to cover non-polluting human activities that can adversely affect the sea. The fifteen Governments are Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom (Figure 5.1). OSPAR is so named because of the original Oslo and Paris Conventions ("OS" for Oslo and "PAR" for Paris).<sup>76</sup>

Figure 5.1. The North-East Atlantic



*Region I: Arctic Waters, Region II: Greater North Sea, Region III: Celtic Sea, Region IV: Bay of Biscay and Iberian Coast, Region V: Wider Atlantic*

<sup>76</sup> <https://www.ospar.org>

The Convention for the Protection of the Marine Environment of the North-East Atlantic (the ‘OSPAR Convention’) was open for signature at the Ministerial Meeting of the Oslo and Paris Commissions in Paris on 22 September 1992. It was adopted together with a Final Declaration and an Action Plan. The Convention has been signed and ratified by all of the Contracting Parties to the original Oslo or Paris Conventions along with Luxembourg and Switzerland. Contained within the OSPAR Convention are a series of Annexes, which deal with the following specific areas:

- Annex I: Prevention and elimination of pollution from land-based sources;
- Annex II: Prevention and elimination of pollution by dumping or incineration;
- Annex III: Prevention and elimination of pollution from offshore sources;
- Annex IV: Assessment of the quality of the marine environment;
- Annex V: On the protection and conservation of the ecosystems and biological diversity of the maritime area.

The OSPAR Convention is the legal instrument guiding international cooperation on the protection of the marine environment of the North-East Atlantic. The work under the Convention is managed by the OSPAR Commission, made up of representatives of fifteen Governments and the European Commission, on behalf of the European Union, assisted by a Secretariat based in the United Kingdom. OSPAR’s main objective is to prevent and eliminate pollution and protect the marine environment from adverse human activities, while promoting the sustainable use of goods and services.

The Ecosystem Approach is the overarching principle reflected in the current North-East Atlantic Environment Strategy for the period 2010-2020, alongside the precautionary principle and the polluter-pays principle. OSPAR’s vision is of a “clean, healthy and biologically diverse North-East Atlantic Ocean, used sustainably” and Contracting Parties apply Best Available Techniques and Best Environmental Practices in their activities. OSPAR’s guiding principles underpin the sustainable use of the marine environment, which requires a sound coordination amongst Contracting Parties, the scientific and academic community, and with other international organisations. Through the data collection on the different activities, its regular assessments and monitoring activities, OSPAR provides a comprehensive knowledge on the impacts of human activities and identifies priorities for action, reinforcing its key role as a *forum* for collective commitment and collaborative work.

With the [North-East Atlantic Environment Strategy](#), OSPAR is taking forward work related to the implementation of the Ecosystem Approach (NEAE Strategy Part I) and the suite of five thematic strategies (NEAE Strategy Part II) to address the main threats that it has identified concerning issues within its competence. Under the thematic strategies, work is undertaken in relation to the monitoring and assessment of the status of the marine environment, the results of which are used to follow up implementation of the NEAE and the resulting benefits to the marine environment. The six strategies fit together to underpin the ecosystem approach. Programmes and measures are developed by the Committees on the basis of proposals by Contracting Parties.

## **2. OSPAR Convention Strategies, Plans and their targets**

### **2.1 North-East Atlantic Environment Strategy (2010-2020)**

The Strategy of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 2010–2020 (NEAES) was adopted in 2010 (**OSPAR, 2010**).<sup>77</sup> Using the Ecosystem Approach to manage human activities affecting the maritime area, the overall goal of the OSPAR Commission is to conserve marine ecosystems and safeguard human health and, when practicable,

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<sup>77</sup> <https://www.ospar.org/convention/strategy>



restore marine areas which have been adversely affected in the North-East Atlantic by preventing and eliminating pollution and by protecting the maritime area against the adverse effects of human activities.

Under its North-East Atlantic Environment Strategy (NEAE Strategy) OSPAR is taking forward work related to the implementation of the Ecosystem Approach (NEAE Strategy Part I) and the suite of five thematic strategies (NEAE Strategy Part II) to address the main threats that it has identified concerning issues within its competence. These are:

- Biodiversity and Ecosystem Strategy;
- Eutrophication Strategy;
- Hazardous Substances Strategy;
- Offshore Industry Strategy; and
- Radioactive Substances Strategy.

The OSPAR Commission is supported by five main thematic committees, all of which are in turn supported by working groups: Hazardous Substances and Eutrophication Committee (HASEC), Offshore Industry Committee (OIC), Radioactive substances Committee (RSC), Biodiversity Committee (BDC) and Environmental Impact of Human Activities Committee (EIHA).

Under each Committee, work is undertaken in relation to the monitoring and assessment of the status of the marine environment, the results of which are used to follow up implementation of the strategies and the resulting benefits to the marine environment. The five thematic strategies fit together with OSPAR's Joint Monitoring and Assessment Programme (JAMP) to underpin the ecosystem approach (see [Box 5.1](#) and [Figure 5.2](#)). Programmes and measures are developed by the Committees, on the basis of proposals by Contracting Parties, to form OSPAR's Measures and Actions Programme (MAP).

#### Box 5.1. OSPAR Strategic Objectives

- ✓ to halt and prevent by 2020 further loss of *biodiversity* in the OSPAR maritime area, to protect and conserve ecosystems, and to restore, where practicable, marine areas which have been adversely affected;
- ✓ to combat *eutrophication* in the OSPAR maritime area, with the ultimate aim to achieve and maintain a healthy marine environment where anthropogenic eutrophication does not occur;
- ✓ to prevent pollution of the OSPAR maritime area by continuously reducing discharges, emissions and losses of *hazardous substances*, with the ultimate aim to achieve concentrations in the marine environment near background values for naturally occurring substances and close to zero for man-made synthetic substances;
- ✓ to 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* by setting environmental goals and improving management mechanisms, so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected;
- ✓ to prevent pollution of the OSPAR maritime area from *ionising radiation* through progressive and substantial reductions of discharges, emissions and losses of radioactive substances, with the ultimate aim of concentrations in the environment near background values for naturally occurring radioactive substances and close to zero for artificial radioactive substances;
- ✓ to 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;
- ✓ to facilitate and coordinate the work of relevant Contracting Parties in achieving good environmental status under the EU Marine Strategy Framework Directive by 2020.

On 17 June 2008, Directive 2008/56/EC (The Marine Strategy Framework Directive) of the European Parliament and of the Council was introduced. This established a framework for community action in

the field of marine environmental policy. With a vision of dynamic oceans and seas that are clean, healthy and productive, there is considerable synergy between the OSPAR Strategy and the MSFD. The application of the Ecosystem Approach to the management of human activities, while enabling the sustainable use of marine goods and services, is fundamental to The OSPAR Strategy and this Directive (2008/56/EC). The transboundary nature of the marine environment strengthens the need for cooperation between States bordering a specific sea area. Regional cooperation is a requirement of the MSFD and OSPAR plays a crucial role as a regional cooperation structure in providing the necessary foundation for such processes.

The reporting of progress with respect to delivery of the OSPAR Strategy is based on environmental assessments undertaken by OSPAR, mainly through the various OSPAR Committees. These assessments link human activities, their pressures, the state of the marine environment and management responses, with the inclusion of the relevant physics, chemistry and / or biology.

Figure 5.2. The OSPAR Thematic Strategies

		Objectives	Achievements
 North-East Atlantic Environment Strategy (NEAES)	 Biodiversity & Ecosystems	<ul style="list-style-type: none"> <li>&gt; Halt and prevent loss of biodiversity by 2020</li> <li>&gt; Protect and conserve ecosystems and restore adversely affected marine areas</li> </ul>	<ul style="list-style-type: none"> <li>+ Recommendations for actions and measures to improve the status of nearly 50 species and habitats of concern</li> <li>+ A developing network of Marine Protected Areas, including outside of national jurisdiction</li> <li>+ Development of &gt;20 new regional biodiversity indicators</li> <li>+ Recommendation to take account of OSPAR listed species and habitats in Environmental Impact Assessments</li> <li>+ Regional Action Plan on marine litter</li> </ul>
	 Eutrophication	<ul style="list-style-type: none"> <li>&gt; To combat eutrophication</li> <li>&gt; Ultimate aim to achieve and maintain a healthy marine environment where anthropogenic eutrophication does not occur</li> </ul>	<ul style="list-style-type: none"> <li>+ A Comprehensive Common Procedure to identify eutrophication</li> <li>+ Reduction of nutrient inputs from land</li> <li>+ Assisting Contracting Parties to meet relevant EU Directives</li> </ul>
	 Hazardous Substances	<ul style="list-style-type: none"> <li>&gt; To prevent pollution by continuously reducing discharges, emissions and losses</li> <li>&gt; To achieve concentrations in the marine environment near background values for naturally occurring substances and close to zero for synthetic substances</li> </ul>	<ul style="list-style-type: none"> <li>+ 56 measures addressing industries and diffuse sources of pollution</li> <li>+ Identified chemicals for priority action and substances of concern to the marine environment that are not covered elsewhere</li> <li>+ Helping Contracting Parties meet EU Directives</li> </ul>
	 Offshore Industry	<ul style="list-style-type: none"> <li>&gt; To reduce discharges into the sea to a level which will not harm the marine environment</li> <li>&gt; To progressively develop Best Available Practice to prevent and eliminate marine pollution</li> </ul>	<ul style="list-style-type: none"> <li>+ Measures in place to reduce discharges from the oil and gas industry</li> <li>+ Harmonised mandatory control system for offshore chemicals</li> <li>+ List of substances / preparations used and discharged offshore which are considered to 'pose little or no risk' to the environment</li> </ul>
	 Radioactive Substances	<ul style="list-style-type: none"> <li>&gt; To ensure discharges, emissions and losses of radioactive substances are reduced to levels close to zero</li> <li>&gt; To apply Best Available Techniques and Best Environmental Practice to prevent and eliminate marine pollution</li> </ul>	<ul style="list-style-type: none"> <li>+ Periodic evaluations of progress Contracting Parties have made in reducing discharges of radioactive substances</li> <li>+ Across the nuclear sub-sectors, overall evidence of reductions in discharges</li> <li>+ A complete and permanent ban on all dumping of radioactive waste and other matter</li> </ul>
	 Assessment & Monitoring	<ul style="list-style-type: none"> <li>&gt; Ecosystem approach to integrated marine environmental status assessments</li> <li>&gt; Explore new or emerging problems in the marine environment</li> <li>&gt; Assess implementation of the NEAES and the effectiveness of OSPAR measures to improve the marine environment</li> </ul>	<ul style="list-style-type: none"> <li>+ Long-term and new regionally coordinated monitoring programmes</li> <li>+ Data sharing</li> <li>+ Thematic assessments and indicator assessments at the regional scale</li> </ul>

## 2.2 Regional Action Plan for Marine Litter

The OSPAR objective with regard to marine litter is “to substantially reduce marine litter in the OSPAR maritime area to levels where properties and quantities do not cause harm to the marine environment” by 2020. To fulfil this objective OSPAR 2014 agreed a Regional Action Plan (RAP) for Marine Litter for the period 2014-2021 (**OSPAR, 2014**). The RAP contains 55 collective and national actions which aim to address both land-based and sea-based sources, as well as education and outreach and removal actions.<sup>78</sup>

The main objectives of the RAP are to:

- Prevent and reduce marine litter pollution in the North-East Atlantic and its impact on marine organisms, habitats, public health and safety and reduce the socioeconomic costs it causes;
- Remove litter from the marine environment where practical and feasible;
- Enhance knowledge and awareness on marine litter;
- Support Contracting Parties in the development, implementation and coordination of their programmes for litter reduction, including those for the implementation of the Marine Strategy Framework Directive; and
- Develop management approaches to marine litter that are consistent with accepted international approaches.

In terms of monitoring Marine litter is part of the Joint Assessment and Monitoring Programme (JAMP) and indicators are assessed as part of the 2010 Quality Status Report and 2017 Intermediate Assessment Report with regards to beach litter, plastic particles in biota, seabed litter, micro plastics. In order for OSPAR to be able to effectively monitor progress, Contracting Parties should report against their national implementation of the actions set out in this Regional Action Plan to OSPAR’s Environmental Impacts of Human Activities Committee every second year (from 2016 onwards).

## 2.3 The Ecosystem Approach in OSPAR

For the purpose of the OSPAR Convention, the ecosystem approach is defined as *“the comprehensive integrated management of human activities based on the best available scientific knowledge about the ecosystem and its dynamics, in order to identify and take action on influences which are critical to the health of marine ecosystems, thereby achieving sustainable use of ecosystem goods and services and maintenance of ecosystem integrity”*.

The application of the ecosystem approach integrates conservation and management approaches, such as marine protected areas or measures targeted on single species and habitats, as well as other approaches carried out under existing national and international policy and legal frameworks and helps to adapt the management of human activities to the complex and dynamic nature of marine ecosystems. The often limited or incomplete scientific knowledge in marine management requires the application of the precautionary principle, which is central to the ecosystem approach.

Following the North Sea States’ commitment to implement the ecosystem approach at the Fifth International Conference on the Protection of the North Sea in 2002 in Bergen (Norway), the Joint Ministerial Meeting of the HELCOM and OSPAR Commissions held in 2003 in Bremen (Germany) adopted the Statement towards an Ecosystem Approach to the Management of Human Activities<sup>79</sup>. Under the Statement, the OSPAR Commission is committed to establishing a full set of management measures that are consistent with an ecosystem approach by 2010.

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<sup>78</sup> <https://www.ospar.org/work-areas/eiha/marine-litter/regional-action-plan>

<sup>79</sup> [https://www.ospar.org/site/assets/files/1232/jmm\\_annex05\\_ecosystem\\_approach\\_statement.pdf](https://www.ospar.org/site/assets/files/1232/jmm_annex05_ecosystem_approach_statement.pdf)

The OSPAR Commission promotes the implementation of the ecosystem approach in the North-East Atlantic within the framework of the Convention on Biological Diversity by means of programmes and measures developed under its Strategies. OSPAR's work focuses on four elements in particular:

- promoting understanding and acceptance by all stakeholders of the ecosystem approach to the management of human activities, and collaboration among the various management authorities in the North-East Atlantic in implementing that approach;
- monitoring the ecosystems of the marine environment in order to understand and assess the interactions between and among the different species and populations of biota, the non-living environment and humans;
- setting objectives for environmental quality, underpinned by monitoring, in support both of the formulation of policy and of assessments;
- assessing the impact of human activities upon biota and humans, both directly and indirectly through impacts on the non-living environment, together with the effects on the non-living environment itself.

### 3. Monitoring and Reporting Mechanisms

#### 3.1 Coordinated Environmental Monitoring Programme (CEMP)

Monitoring and assessment are well-established functions of the OSPAR Commission that inform and guide efforts to protect the marine environment of the North-East Atlantic. Higher-level strategic planning of this work is set out in the OSPAR Joint Assessment and Monitoring Programme (JAMP), including the requirements for thematic and holistic assessments, such as the Intermediate Assessment 2017 and the Quality Status Reports. The Coordinated Environmental Monitoring Programme (CEMP) is the part of OSPAR's monitoring and assessment work where Contracting Parties seek to coordinate the operation of monitoring, data collection and assessment activities with the aim of facilitating the development of common and coherent assessments that address the questions identified in the JAMP (OSPAR, 2016).<sup>80</sup>

OSPAR has a long history in monitoring and assessment stretching back to the 1980s. Starting with a focus on pollution from land-based sources and its effects, OSPAR's needs for monitoring and assessment have expanded considerably to include a wide range of pressure and state indicators for marine ecosystems. The CEMP takes in all of OSPAR's existing regular monitoring and assessment work in support of the North East Atlantic Environment Strategy and its thematic strategies, as well as new monitoring and assessment that is being developed for biodiversity.

The CEMP is divided into the following themes reflecting the different issues that OSPAR is addressing under its thematic objectives, which are in line with the thematic OSPAR strategies:

- Theme A: Cross cutting Components (under CoG) - Monitoring and assessment related to ocean acidification;
- Theme B: Biodiversity and Ecosystems - Biodiversity and ecosystem monitoring and assessment (under BDC), - Human activity and pressure monitoring and assessment (under EIHA);
- Theme E: Eutrophication (under HASEC) - Eutrophication monitoring and assessment;
- Theme H: Hazardous Substances (under HASEC) - Contaminants and their biological effects monitoring and assessment;

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<sup>80</sup> OSPAR Coordinated Environmental Monitoring Programme (CEMP) (OSPAR Agreement 2016-01) <https://www.ospar.org/work-areas/cross-cutting-issues/cemp>

- Theme O: Offshore Oil and Gas Industry (under OIC) - Monitoring and assessment related to the offshore oil and gas industry, focused on produced water from offshore installations; and
- Theme R: Radioactive Substances (under RSC) - Environmental and pressure data and assessments related to radioactive substances.

Each theme is composed of a number of components and parameters (summarized in **Table 5.1**). The details of monitoring and assessment for each component are set out in the CEMP Appendices. Monitoring and assessment under the CEMP have both temporal and spatial aspects. Temporal trend monitoring programmes are programmes designed to detect long-term trends in populations, habitat states, human pressures, substance concentrations or effects in the maritime area. The optimal frequency of assessment will depend on the pressure or state characteristics being monitored and other details such as whether monitoring is in open water or sediment of contaminants or biodiversity. Spatial programmes provide information on the spatial variability of relevant pressure or state indicators across the OSPAR Convention area or its regions. In some cases, spatial programmes are used to support area-based classifications.

For coordinated monitoring and assessment of a component of the CEMP to be fully realised the following coordination tools should be in place: Monitoring and/or data collection guidelines; Coordinated arrangements for data submission and management; Quality assurance tools; and Assessment criteria and, where relevant, procedures for aggregation or integration of data prior to assessment. **Box 5.3** presents the coordination steps.

#### **Box 5.3. CEMP Monitoring and evaluation coordination steps**

Development of monitoring and assessment of a component of the CEMP, therefore, involves the following coordination steps:

- development of a strategy on how a component should be developed;
- development of the precise objectives (e.g. the statistical approach) of the monitoring and assessment and relevant assessment units;
- development of monitoring and/or data collection guidelines;
- development of quality assurance tools;
- development of assessment tools, including assessment criteria and, where needed, aggregation or integration procedures;
- planning of activities in space and time;
- identification of gaps in coverage that need to be filled;
- development of arrangements for submission and management of data;
- clarity on what are the essential elements and arrangements needed to assess any parameter and, where needed, arrangements to assess data that are not fully harmonized between Contracting Parties;
- common assessment organized by the appropriate OSPAR thematic committee, including evaluation of whether the programme met its goals and how it should be further developed.

The **Implementation of CEMP** involves the OSPAR Contracting Parties, Secretariat and thematic Committees. The Contracting Parties monitor the components (as summarized in **Annex 3**) through their national monitoring programmes, which is also in line with their requirements for monitoring the EU MSFD Common Implementation Strategy. Each meeting of the relevant OSPAR thematic Committee, the Secretariat reviews the progress of monitoring, identifies gaps and work in development and ensures assessments are progressed in accordance with JAMP. The Thematic Committees review implementation of each of the CEMP components including monitoring and data submission, quality assurance, collating data, producing assessment reports and initiating new programmes, as and when opportunities arise. They also address any need for revision for the attention of the Secretariat and the Contracting Parties.

Regarding data storage, the OSPAR Data and Information Management Strategy (ODIMS)<sup>81</sup> and Data and Information Management System ensures the efficient and cost-effective management of data. The data centres for handling CEMP data may be found at national centres (e.g. beach litter<sup>82</sup>), at ICES<sup>83</sup>, and in European/Global initiatives such as EMODnet<sup>84</sup> as well as at the OSPAR Secretariat<sup>85</sup>. These centres provide scientific support and processing of data. Linking observed changes in state and changes in pressures as well as other independent changes, for example changes in water temperature and in species, may require comparison of data held by OSPAR's data centres with data from other data centres. Data system compatibility will be fundamental in the future for a wide-range of data types.

### 3.2 Joint Assessment & Monitoring Programme (JAMP)

OSPAR's Joint Assessment & Monitoring Programme (JAMP)<sup>86</sup> describes the strategy, themes and products that OSPAR Contracting Parties are committed to deliver, through collaborative efforts in OSPAR, over the period 2014-2023, 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).

The JAMP (overall objectives are for (a) the preparation of integrated environmental assessments of the status of the marine environment of the OSPAR maritime area or its regions, including the exploration of new or emerging problems in the marine environment of the North East Atlantic; and (b) the preparation of assessments of the implementation of the North East Atlantic Environment Strategy, based on the assessment of the effects of relevant measures (including OSPAR measures) on the improvement of the quality of the marine environment. These assessments will help inform the development and implementation of further measures to protect the marine environment where required.

The main operational objectives of the JAMP (**OSPAR, 2014/2018**) for the period 2014-2023 are:

- a. the implementation and further development of existing OSPAR monitoring programmes and, where necessary, the development of additional coordinated monitoring programmes. OSPAR monitoring needs to respond to relevant assessment requirements. These requirements include the MSFD criteria, methodological standards and indicators used by Contracting Parties for the assessment of environmental status and the pressures and impacts of human activities;
- b. the development of tools and the collection of further data and information required for the delivery of integrated environmental assessments of the marine environment in the OSPAR maritime area or its regions;
- c. the development of new tools to support the understanding of emerging issues in the marine environment;
- d. the publication of an Intermediate Assessment in 2017; and
- e. the publication of a Quality Status Report in 2023.

The first OSPAR Quality Status Report (QSR) was prepared in 2010 (<http://qsr2010.ospar.org/en/>) and was a culmination of ten years of joint assessment and monitoring by OSPAR Contracting Parties.

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<sup>81</sup> <https://odims.ospar.org/>

<sup>82</sup> <http://www.mcsuk.org/ospar>

<sup>83</sup> <http://www.ices.dk/marine-data/data-portals/Pages/DOME.aspx>

<sup>84</sup> <http://www.emodnet.eu>

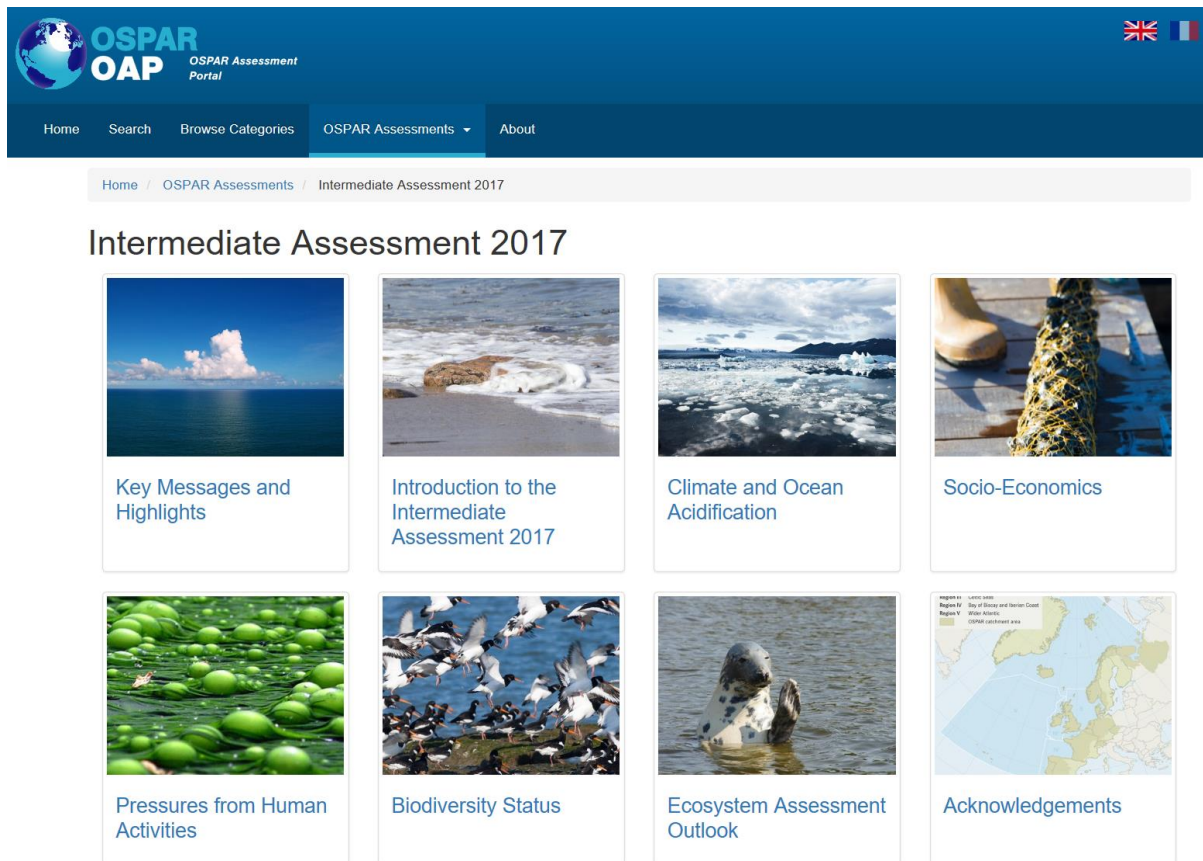
<sup>85</sup> <http://www.ospar.org/data>

<sup>86</sup> <https://www.ospar.org/work-areas/cross-cutting-issues/jamp>

Seven years later this was followed by the Intermediate Assessment (IA) in 2017<sup>87</sup>, which assesses the pressures from various human activities and their impact on the status of biodiversity, as well as new indicators to assess progress with regard to the effective implementation of the OSPAR Strategy (see **Figure 5.3**). In the IA 2017, there are three types of assessments described<sup>88</sup>:

- Indicator Assessments (also referred to as common indicator assessments);
- Thematic Assessment (those assessments which OSPAR has routinely undertaken)
- Pilot Indicator Assessment (a term defined solely for use in the IA 2017 to describe an assessment which needs further development but has been included to test its viability as an indicator of the state of the marine environment).

**Figure 5.3. OSPAR Intermediate Assessment Structure**<sup>89</sup>



The next QSR in 2023 will also include a cumulative effects assessment for the QSR integrated with the OSPAR common Indicator Assessments and their associated data.

<sup>87</sup> <https://oap.ospar.org/en/ospar-assessments/intermediate-assessment-2017/>

<sup>88</sup> <https://oap.ospar.org/en/ospar-assessments/intermediate-assessment-2017/introduction/assessment-process-and-methods/>

<sup>89</sup> <https://oap.ospar.org/en/ospar-assessments/intermediate-assessment-2017/>

**Table 5.1. CEMP Themes and Components monitored**

Extracted from the OSPAR Coordinated Environmental Monitoring Programme (CEMP) (OSPAR Agreement 2016-01).<sup>90</sup> Note that not all parameters below are mandatory. See document for full details

Theme	Components/Parameters monitored
<b>Theme A – Cross-Cutting Components</b>	Parameters related to Ocean Acidification; <ul style="list-style-type: none"> <li>• Measurements of ocean chemistry, e.g. carbonates</li> <li>• Measurements of pH</li> <li>• Measurements of impacts on biota</li> </ul>
<b>Theme B – Biodiversity and Ecosystems</b>	<p><b>Theme B components - under the management of the Biodiversity Committee</b></p> <p>BB1 Mammals – M3, Abundance and distribution of seals</p> <p>BB2 Mammals – M4, Cetacean abundance and distribution</p> <p>BB3 Mammals – M5, Grey seal pup production</p> <p>BB4 Birds – B1, Marine bird abundance</p> <p>BB5 Birds – B3, Marine bird breeding success/failure</p> <p>BB6 Fish – FC1, Fish abundance</p> <p>BB7 Fish – FC2, Proportion of large fish (LFI)</p> <p>BB8 Benthic Habitats – BH2, Condition of benthic habitat defining communities (MMI)</p> <p>BB9 Benthic Habitats – BH3, Physical damage of predominant and special habitats</p> <p>BB10 Pelagic Habitats – PH1/FW5, Plankton lifeforms</p> <p>BB11 Pelagic Habitats – PH2, Plankton biomass and/or abundance</p> <p>BB12 Pelagic Habitats – PH3, Plankton diversity index</p> <p>BB13 Non-Indigenous Species – NIS3, Trends in arrival of new non-indigenous species</p> <p>BB14 Food Webs – FW2, Production of phytoplankton</p> <p>BB15 Food Webs – FW3, Size composition in fish communities</p> <p>BB16 Food Webs – FW4, Changes in average trophic level of marine predators</p> <p>BB17 Habitat Mapping Database</p> <p><b>Theme B components - under the management of EIHA committee</b></p> <p>BE1 Marine litter on beaches</p> <p>BE2 Marine Litter on the sea floor</p> <p>BE3 Plastic Particles in fulmar stomachs</p> <p>BE4 Impulsive underwater noise</p> <p>BE5 Dumped conventional and chemical munitions</p> <p>BE6 Offshore Renewable Energy Developments</p> <p>BE7 Dumping of wastes and other matter</p>
<b>Theme E – Eutrophication</b>	<p>E1 Nutrients in seawater</p> <p>E2 Direct and indirect eutrophication effects</p> <p>E3 Riverine Inputs and Direct Discharges including: <ul style="list-style-type: none"> <li>• ammonia expressed as N</li> <li>• nitrates expressed as N</li> <li>• orthophosphates expressed as P</li> <li>• total N</li> <li>• total P</li> <li>• suspended particulate matter (SPM)</li> <li>• salinity (in saline waters)</li> </ul> </p> <p>E4 Atmospheric inputs to the Marine Environment: <ul style="list-style-type: none"> <li>• ammonium (NH<sub>4</sub><sup>+</sup>)</li> </ul> </p>

<sup>90</sup> <https://www.ospar.org/work-areas/cross-cutting-issues/cemp>



Theme	Components/Parameters monitored
	<ul style="list-style-type: none"> <li>• nitrate (NO<sub>3</sub>-)</li> <li>• in gaseous phase: NO<sub>2</sub>, HNO<sub>3</sub>, and NH<sub>3</sub></li> <li>• in aerosol phase: ammonium (NH<sub>4</sub><sup>+</sup>) and nitrate (NO<sub>3</sub>-)</li> <li>• NO</li> </ul>
<b>Theme H – Hazardous Substances</b>	<p>H1 heavy metals cadmium, mercury and lead in biota and sediment</p> <p>H2 polychlorinated biphenyl (PCB) congeners CB 28, CB 52, CB 101, CB 118, CB 138, CB 153, and CB 180 in biota and sediment</p> <p>H3 polycyclic aromatic hydrocarbons (PAHs) anthracene, benz[a]anthracene, benzo[ghi]perylene, benzo[a]pyrene, chrysene, fluoranthene, ideno[1,2,3-cd]pyrene, pyrene and phenanthrene in biota and sediment</p> <p>H4 tributyl tin (TBT)-specific biological effects and TBT in sediment or biota (Appendix H4). Monitoring of TBT concentrations in the marine environment in either sediments or biota should be carried out in parallel with monitoring of TBT-specific biological effects;</p> <p>H5 brominated flame retardants hexabromocyclododecane (HBCD) and polybrominated diphenylethers (PBDEs) BDE 28, BDE 47, BDE 66, BDE 85, BDE 99, BDE 100, BDE 153, BDE 154 and BDE 183 in biota and sediment, and BDE 209 in sediment</p> <p>H6 planar PCB congeners CB 77, CB 126 and CB 169 in biota and sediment.</p> <p>H7 alkylated PAHs C1-, C2-, and C3-naphthalenes, C1-, C2- and C3-phenanthrenes, and C1-, C2- and C3-dibenzothiophenes and the parent compound dibenzothiophene in biota and sediment</p> <p>H8 perfluorooctanesulphonic acid (PFOS) in sediment, biota and water</p> <p>H9 polychlorinated dibenzodioxins and furans in biota and sediment</p> <p>H10 PAH and metal-specific biological effects</p> <p>H11 general biological effects</p> <p>H12 Riverine Inputs and Direct Discharges to the marine environment</p> <ul style="list-style-type: none"> <li>• total mercury (Hg)</li> <li>• total cadmium (Cd)</li> <li>• total copper (Cu)</li> <li>• total zinc (Zn)</li> <li>• total lead (Pb)</li> <li>• hydrocarbons, in particular PAHs and mineral oil;</li> <li>• PCBs congeners CB 28, CB 52, CB 101, CB 118, CB 153, CB 138 and CB 180;</li> <li>• γ-HCH (lindane)</li> <li>• total organic carbon (TOC)</li> </ul> <p>H13 Atmospheric inputs to the marine environment</p> <p>The following determinands are measured on a mandatory basis in precipitation:</p> <ul style="list-style-type: none"> <li>• arsenic</li> <li>• cadmium</li> <li>• chromium</li> <li>• copper</li> <li>• lead</li> <li>• mercury</li> <li>• nickel</li> <li>• zinc</li> <li>• γ-HCH (lindane)</li> </ul> <p>The following determinands are measured on a voluntary basis in precipitation:</p> <ul style="list-style-type: none"> <li>• PCB-congeners CB 28, CB 52, CB 101, CB 118, CB 138, CB 153 and CB 180</li> <li>• the following PAHs: phenanthrene, anthracene, fluoranthene, pyrene, benz[a]anthracene, chrysene, benzo[a]pyrene, benzo[ghi]perylene, indeno[1,2,3-cd]pyrene</li> </ul> <p>The following determinands are measured on a voluntary basis in air:</p>

Theme	Components/Parameters monitored
	<ul style="list-style-type: none"> <li>• arsenic</li> <li>• cadmium</li> <li>• chromium</li> <li>• copper</li> <li>• lead</li> <li>• mercury</li> <li>• nickel</li> <li>• zinc</li> <li>• γ-HCH (lindane)</li> <li>• PCB-congeners CB 28, CB 52, CB 101, CB 118, CB 138, CB 153 and CB 180</li> <li>• the following PAHs: phenanthrene, anthracene, fluoranthene, pyrene, benz[a]anthracene, chrysene, benzo[a]pyrene, benzo[ghi]perylene, indeno[1,2,3-cd]pyrene</li> </ul> <p>H14 Annual reporting on mercury losses from the Chlor-Alkali Industry .</p> <p>H15 Discharges, emission and losses of Chemicals for Priority Action:</p>
<b>Theme O – Offshore Oil and Gas Industry</b>	<p>O1 total amount of produced water and displacement water discharges from offshore installations;</p> <p>O2 total amount of dispersed oil (aliphatic oil) discharged to the sea from produced water and displacement water;</p> <p>O3 total amount of dissolved oil content (as represented by BTEX components ) in produced water and displacement water;</p> <p>O4 offshore chemicals discharged from offshore installations; (Appendix O1)</p> <p>O5 emissions to air; (Appendix O1)</p> <p>O6 accidental spills of oil and chemicals; (Appendix O1)</p> <p>O7 discharges of Organic Phase drilling Fluids (OPF) and cuttings, and;</p> <p>O8 discharges of radioactive substances in produced water (Appendix R2).</p>
<b>Theme R Radioactive Substances</b>	<p>R1 Monitoring for indicator radionuclides associated with the nuclear sector is carried out for 3H, 137Cs, 99Tc and 239,240 Pu, where possible, in seawater and for 137Cs, 99Tc and 239,240Pu, where possible, in biota (fish, molluscs and seaweed); (Appendix R1)</p> <p>R2 Monitoring of indicator radionuclides associated with the non-nuclear sector (oil and gas) is carried out for 210Po, 210Pb, 226Ra and 228Ra, where possible, in seawater and biota (fish, molluscs and seaweed); (Appendix R2)</p> <p>R3 Liquid discharges from nuclear installations reported as total-alpha, total-beta (excluding tritium), tritium and a suite of other individual radionuclides; (Appendix R3)</p> <p>R4 Liquid discharges from non-nuclear installations reported as total-alpha, total-beta and a number of individual radionuclides. (Appendix R4)</p>

**Table 5.2. Mapping of objectives and indicators against SDG14 targets**

SDG Target	SDG Indicator	Regional Seas Indicator	OSPAR objectives/measures	OSPAR Indicators
<b>Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development</b>				
<b>14.1</b> By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	<b>14.1.1</b> Index of coastal eutrophication and floating plastic debris density	<b>Marine Litter</b> [3] Quantification and classification of beach litter items [18] Incentive to reduce marine litter at source 1) % port waste reception facilities available 2) Incentives to reduce land-based sources 3) Amount of recycled waste on land (%)	<b>EIHA</b> OSPAR Marine Litter Regional Action Plan Quantitative targets for marine litter have not yet been established.	– Beach litter – Litter on the sea floor Fulmar litter ingestion (impact and floating litter)
		<b>Eutrophication</b> [1] Chlorophyll a concentration as an indicator of phytoplankton biomass [9] Locations and frequency of algal blooms reported <b>Pollution</b> [2] Trends for selected priority chemicals including POPs and heavy metals [10] Hotspots 1) Concentration of Status of selected pollutant contamination in biota and sediments and temporal trends 2) Number of hotspots [16] % National (LBS) action plans ratified / operational [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	<b>HASEC</b> OSPAR Hazardous Substances and Eutrophication Strategies and Marine Litter Regional Action Plan Apply. Targets are related to indicators under the OSPAR Hazardous Substances Strategy and Eutrophication strategies. As yet no numerical targets for marine litter have been established.	<b>Eutrophication indicators</b> <ul style="list-style-type: none"> <li>• Inputs of nutrients via water and air</li> <li>• Winter nutrient concentrations</li> <li>• Chlorophyll concentration</li> <li>• <i>Phaeocystis</i></li> <li>• Dissolved bottom oxygen</li> </ul> <b>Contaminants indicators</b> <ul style="list-style-type: none"> <li>• Inputs of Hg, Cd and Pb via water and air</li> <li>• Metal (Hg, Cd, Pb) concentrations in biota</li> <li>• Metal (Hg, Cd, Pb) concentrations in sediment</li> <li>• PCB concentrations in biota</li> <li>• PCB concentrations in sediments</li> <li>• PAHs concentrations in biota</li> <li>• PAHs concentrations in sediments</li> <li>• Organotin concentrations in sediments</li> <li>• PBDE concentrations in biota</li> <li>• PBDE concentrations in sediments</li> </ul> Imposex/intersex
<b>14.2</b> 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	<b>14.2.1</b> Proportion of national exclusive economic zones managed using ecosystem-based approaches	[8] Population pressure / urbanization Length of coastal modification and km2 of coastal reclamation  [22] National ICZM in place National ICZM guidelines and enabling legislation adopted	<b>BDC &amp; EIHA</b> Natural habitats in the OSPAR maritime area are impacted by various activities that fall under OSPAR's themes (Human Activities, Offshore Industry, Radioactive substances, Eutrophication and Hazardous substances). Cross-cutting objectives such as those delivered by the OSPAR network of Marine Protected Areas are also relevant. OSPAR Contracting Parties apply	– M3 Seal Abundance and Distribution – M4-A1 Abundance and Distribution of Coastal Bottlenose Dolphins – M4-A Abundance and Distribution of killer whales – M4-B Abundance and distribution of cetaceans – M5 Grey seal pup production – M6 Marine mammal bycatch – B1 Marine bird abundance

SDG Target	SDG Indicator	Regional Seas Indicator	OSPAR objectives/measures	OSPAR Indicators
			<p>ecosystem-based approaches to management of human activities.</p> <p>The 54 OSPAR Recommendations on threatened and/or declining Species and Habitats and newly developed OSPAR indicators on species and habitats offer opportunities for monitoring although formal targets are not yet adopted.</p>	<ul style="list-style-type: none"> <li>– B3 Marine Bird Breeding Success / Failure</li> <li>– FC1 Recovery in the population abundance of sensitive fish species</li> <li>– FC2 Proportion of large fish (Large Fish Index)</li> <li>– BH2 Condition of Benthic Habitat Communities: the Common Conceptual Approach</li> <li>– BH2-A Condition of Benthic Habitat Communities: Assessment of Coastal Habitats in relation to Nutrient and/or Organic Enrichment</li> <li>– BH2-B Condition of Benthic Communities: Subtidal Habitats of the Southern North Sea</li> <li>– BH3 Extent of Physical Damage to Predominant and Special Habitats</li> <li>– PH1/FW5 Changes in plankton functional types (life form) index Ratio</li> <li>– PH2 Plankton biomass and/or abundance</li> <li>– PH3 Changes in biodiversity index(s)</li> <li>– NIS3 NIS Trends in New Records of Non-Indigenous Species (NIS) Introduced by Human Activities</li> <li>– FW3 Size composition in fish communities</li> <li>– FW4 Change in average trophic level of marine predators in the Bay of Biscay</li> </ul>
<b>14.3.</b> Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels	<b>4.3.1.</b> Average marine acidity (pH) measured at agreed suite of representative sampling stations	[11] Ocean Acidification 1) Aragonite saturation 2) pH 3) Alkalinity	<b>BDC, EIHA &amp; HASEC</b> OSPAR is developing a strategy for monitoring ocean acidification under the North East Atlantic Environment Strategy.	<ul style="list-style-type: none"> <li>– PH1/FW5 Changes in plankton functional types (life form) index Ratio</li> <li>– FW2 Production of phytoplankton</li> </ul>
<b>14.4</b> 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	<b>14.4.1</b> Proportion of fish stocks within biologically sustainable levels	[5] Fish landings: Fish catches within EEZs (tonnes) – total capture production [6] Aquaculture: Application of risk assessment to account for pollution and biodiversity impacts [7] Destruction of habitat due to aquaculture [12] Level of exploitation of commercial fisheries: FAO stock status: % stocks overfished compared to MSY	<b>BDC &amp; EIHA</b> Fisheries management is not covered by OSPAR, but specific ecosystems and species are monitored. OSPAR Contracting Parties all apply ecosystem-based approaches to fisheries management. Interactions of fisheries with non-fisheries stock species and the broader environment is relevant. Cross-cutting objectives such as	<ul style="list-style-type: none"> <li>– FC1 Recovery in the population abundance of sensitive fish species</li> <li>– FC2 Proportion of large fish (Large Fish Index)</li> <li>– FW3 Size composition in fish communities</li> <li>FW4 Change in average trophic level of marine predators in the Bay of Biscay</li> </ul>

SDG Target	SDG Indicator	Regional Seas Indicator	OSPAR objectives/measures	OSPAR Indicators
determined by their biological characteristics		[20] Fish harvested within safe ecological limits: Fisheries measures in place (by-catch limits, area-based closures, recovery plans, capacity reduction measures) and multilateral/bilateral fisheries management arrangements	those delivered by the OSPAR network of Marine Protected Areas, the OSPAR Recommendations on threatened and/or declining Species and Habitats and the OSPAR common indicators on species and habitats offer opportunities for monitoring.	
<b>14.5</b> 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	<b>14.5.1</b> Coverage of protected areas in relation to marine areas	[13] Species replacement as a consequence of capture fisheries: Marine trophic index [14] Endangered species: Distribution of Red List Index species [15] Loss of critical habitat: Trends in critical habitat extent and condition [21] Critical marine habitat under protection: % Marine protected areas designated	<b>BDC</b>  The OSPAR network of Marine Protected Areas aims for the relevant CBD target of 10% coverage.  OSPAR is also aiming to assess whether the OSPAR network of MPAs is ecologically coherent and that the network is well managed.	<i>% of maritime area covered by marine protected areas</i>  This is assessed in OSPAR for the 5 regions of the Convention as well as by territorial, EEZ and ABNJ categories.  Figures by end of 2017 are a network comprised of 465 MPAs covering 6.3% of the OSPAR Maritime Area.  In territorial waters the coverage is 19.1%; in Exclusive Economic Zones 2.7%. In the OSPAR maritime area beyond the limits of EEZs, 8.9% is covered.
<b>14.a.</b> 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	<b>14.a.1.</b> Proportion of total research budget allocated to research in the field of marine technology		<b>BDC, EIHA &amp; EIHA</b>  OSPAR Science Agenda published in 2015 to help guide research. Transfer of technology not explicitly covered by OSPAR	
<b>14.c</b> Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in the United Nations Convention on the Law of the	<b>14.c.1</b> Number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments		<b>BDC &amp; HASEC</b>  OSPAR aims to support its Contracting Parties in their implementation of international law as reflected in the United Nations Convention on the Law of the Sea.	All OSPAR's Contracting Parties have ratified the Convention.

SDG Target	SDG Indicator	Regional Seas Indicator	OSPAR objectives/measures	OSPAR Indicators
Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of “The future we want”	that implement international law, as reflected in UNCLOS, for the conservation and sustainable use of the oceans and their resources			
<b>Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture</b>				
2.4. By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality	2.4.1. Proportion of agricultural area under productive and sustainable agriculture		<p><b>HASEC</b></p> <p>Eutrophication related to agriculture is the marine aspect related to the sustainability aspect here.</p> <p>OSPAR Targets/objectives on Eutrophication apply (OSPAR’s North East Atlantic Environment Strategy)</p>	<p><u>Eutrophication indicators</u></p> <ul style="list-style-type: none"> <li>• Inputs of inputs nutrients in water and air</li> <li>• Winter nutrient concentrations</li> <li>• Chlorophyll concentration</li> <li>• <i>Phaeocystis</i></li> <li>• Dissolved bottom oxygen</li> </ul> <p>In addition, OSPAR’s <b>Common Procedure for the Identification of the Eutrophication Status of the OSPAR maritime area</b> provides an assessment framework for Contracting Parties to evaluate the eutrophication status of their parts of the OSPAR maritime area and for identifying those areas for which actions are needed under the Eutrophication Strategy.</p>
<b>Goal 3. Ensure healthy lives and promote well-being for all at all ages</b>				
3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Various mortality indicators		<p><b>HASEC</b></p> <p>OSPAR Hazardous Substances and Marine Litter Regional Action Plan relate to this.</p>	
<b>Goal 6. Ensure availability and sustainable management of water and sanitation for all</b>				
6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimising 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		<p><b>HASEC</b></p> <p>Covered by National and EU Targets/Objectives. OSPAR role via Hazardous Substances and Eutrophication Strategy and Marine Litter Regional Action Plan.</p> <p><b>See 14.1 for detail</b></p>	<b>See 14.1 for detail</b>
	6.3.2. Proportion of bodies of water with good ambient water quality		<p>Covered by National and EU Targets/Objectives. OSPAR role via Hazardous Substances Eutrophication Strategy and Marine Litter Regional Action Plan.</p> <p><b>See 14.1 for detail.</b></p>	<b>See 14.1 for detail</b>

SDG Target	SDG Indicator	Regional Seas Indicator	OSPAR objectives/measures	OSPAR Indicators
<b>Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</b>				
<b>8.9</b> By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	<b>8.9.1</b> Tourism direct GDP as a proportion of total GDP and in growth rate <b>8.9.2</b> Proportion of jobs in sustainable tourism industries out of total tourism jobs		<b>BDC &amp; HASEC</b>  The development of the OSPAR network of Marine Protected Areas contributes to this target.	
<b>Goal 12. Ensure sustainable consumption and production patterns</b>				
<b>12.4</b> 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 minimise their adverse impacts on human health and the environment	<b>12.4.1</b> 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		Relates to OSPAR Hazardous Substances Strategy. <b>See 14.1 for detail</b>	<b>See 14.1 for detail</b>
	<b>12.4.2</b> Hazardous waste generated per capita, proportion of hazardous waste treated and by type of treatment		Relates to OSPAR Hazardous Substances Strategy. <b>See 14.1 for detail</b>	
<b>Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development</b>				
<b>17.16</b> 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	<b>17.16.1</b> Number of countries reporting progress in multi-stakeholder development effectiveness monitoring frameworks that support the achievement of the sustainable development goals		<b>BDC &amp; HASEC</b> OSPAR cooperation with other Regional Seas Conventions relevant here, including; OSPAR and CEP voluntary commitment under SDG14 to explore opportunities for inter-regional cooperation <a href="#">#OceanAction17198</a> . OSPAR and Abidjan convention cooperation on capacity building and sharing best practices.	

## 4. Contribution to the reporting SDG 14 Targets and Indicators

OSPAR has already initiated actions towards the streamlining of its work with the SDGs. The Meeting of the OSPAR Coordination Group (CoG), held on the 15-16 May 2018, discussed and presented a report on the United Nations Sustainable Development Goals and OSPAR (OSPAR, 2018). Following discussion and proposals made by some Committees in spring 2018, examples of how OSPAR work could be related to SDGs have been mapped out in the tables of Table 5.2. This material can be used to work towards aligning QSR 2023 products with the SDGs, for example by linking common indicators to OSPAR strategic objectives, EU MSFD Descriptors and criteria as well as SDG indicators, in particular SDG targets 14.1, 14.2, 14.3, 14.4, 14.5, 14.1, 14.c, along with 2.4, 3.9, 6.3, 8.9, 12.4 and 17.16. CoG recognised that making the delivery of SDGs a visible component of OSPAR work could also support OSPAR showcasing ecosystem-based management of human activities in Areas Beyond National Jurisdiction (ABNJ) by a Regional Sea Organisation, and agreed to promote SDGs in OSPAR with the following:

- a. the task group that is leading development of OSPAR's renewed Strategy will take SDGs into consideration in the development of the NEAE Strategy 2020-2030;
- b. the Intersessional Correspondence Group to manage preparation and publication of the Intermediate Assessment 2017 and the QSR23 (ICG-QSR, formerly ICG-MAQ) will ensure that links between indicator and thematic assessments, as defined by Committees, are included in the QSR 2023 to the relevant UN SDG targets, as appropriate; and
- c. to establish an ICG on ocean acidification (ICG-OA), which will develop an OA common indicator for the QSR 2023.

### 4.1 Using existing reporting mechanisms to report on SDG targets

As previously mentioned, the North-East Atlantic Environment Strategy and thematic strategies, as well as the CEMP Monitoring Components and the JAMP indicators, thematic assessments and Quality Status (2010, 2023) and Intermediate Assessment (2017) reports are in line with several SDG targets, in particular 14.1, 14.2 and 14.5. The OSPAR Commission has developed a very advanced, rigorous and detailed monitoring and reporting mechanism with enough data and information to assess the implementation of these targets within the North-East Atlantic Region. Table 5.1 gives a detailed initial mapping between the SDG targets and OSPAR Objectives and targets.

- Regarding **Target 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*”, existing indicator and thematic assessments regarding eutrophication, contaminants and marine litter with additional information on radioactive substances, offshore oil and gas and dredged material (possibly also including impulsive/underwater noise as a form of pollution) all contribute to assess this target. Given the long history in monitoring many of these within the region, trends can be assessed over time.
- Regarding **Target 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*”, existing indicator and thematic assessments regarding the biodiversity status with regards to Marine Protected Areas (MPAs), habitats, marine mammals, fish and food webs and marine birds.



- Regarding *Target 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”* existing indicator and thematic assessments regarding MPAs

OSPAR has monitoring and reporting data regarding additional SDG targets including targets 14.3, 14.4, 14.a, 14.c, 2.4, 3.9, 6.3, 8.9, 12.4 and 17.16. Future QSRs can therefore be used to prepare SDG implementation reports for the North-East Atlantic.

## 4.2 Establishing a coordination mechanism with other regional organizations and SDG Focal Points

OSPAR has already in place coordination mechanisms for monitoring and reporting, in particular with the EU MSFD process and with other international organisations and observer organisations (see [Table 5.3](#))<sup>91</sup>

**Table 5.3. OSPAR Commission observer organisations**

<b>International organisations and observer organisations</b>	
Abidjan Convention Secretariat	International Atomic Energy Agency (IAEA)
Agreement on the conservation of small cetaceans of the Baltic and North Seas (ASCOBANS)	International Commission for the Conservation of Atlantic Tunas (ICCAT)
Arctic Monitoring and Assessment Programme (AMAP)	International Council for the Exploration of the Sea (ICES)
Baltic Marine Environment Protection Commission (Helsinki Commission)	International Maritime Organisation (IMO)
Barcelona Convention	International Seabed Authority (ISA)
Black Sea Commission	North Atlantic Marine Mammal Commission (NAMMCO)
Caribbean Environment Programme (CEP)	North Atlantic Salmon Conservation Organization (NASCO)
Cooperative Programme for Monitoring and Evaluation of Long-Range Transmission of Air Pollutants in Europe (EMEP)	North-East Atlantic Fisheries Commission (NEAFC)
European Environment Agency (EEA)	Organisation for Economic Cooperation and Development (OECD)
Intergovernmental Oceanographic Commission (IOC)	Protection of the Arctic Marine Environment (PAME)
<b>Non-governmental organisations that are observers to OSPAR Convention</b>	
BirdLife International	World Wide Fund for Nature (WWF)
OCEANA	International Association of Oil and Gas producers (OIGP)
Oil Companies' European Organisation for Environmental and Health Protection (CONCAWE)	

<sup>91</sup> For full list of observers; <https://www.ospar.org/organisation/observers>

Regional Economic Commissions play a key role in the follow-up and reporting of SDGs. The United Nations Economic Commission for Europe (UNECE), is supporting the monitoring of progress towards SDGs and targets in the UNECE region through coordination and methodological work. Work in this area includes: A road map for setting up the reporting on SDGs in the UNECE region; Guidance on measuring sustainable development and Capacity building for reporting on SDGs.<sup>92</sup> This includes a Task Force on Reporting SDG indicator's using National Reporting Platforms. Amongst OSPAR Contracting Parties national reporting platforms have been established for 8 of the 15 Contracting Parties (Belgium, Finland, France, Germany, Ireland, Portugal, Switzerland and United Kingdom). In the majority of these platforms, national indicators are presented (Figure 5.4), although a slightly different approach has been taken in many countries. Regarding SDG 14 several countries include a national indicator to monitor MPAs. Few have an indicator in relation to 14.1, pollution and marine litter although Ireland refers to OSPAR's assessments.

Given that these countries are reporting to OSPAR, relevant data regarding in particular SDG 14.1, 14.2, 14.3 and 14.5, coordination should be ensured so that relevant OSPAR data is included in national SDG monitoring. OSPAR could also provide some coordination between countries to ensure a common set of indicators are included by all the Contracting Parties associated in to SDGs in a consistent manner.

Figure 5.4. Example of United Kingdom's SDG indicator portal<sup>93</sup>

The screenshot shows the United Kingdom's SDG indicator portal for Goal 14. The page is titled "14 LIFE BELOW WATER" and "Conserve and sustainably use the oceans, seas and marine resources for sustainable development". The navigation menu includes: GOALS, REPORTING STATUS, ABOUT, PUBLICATIONS, GUIDANCE, FAQ, and accessibility icons (A and A+). A search bar is present with the text "Indicator search".

The main content area displays 10 indicators for Goal 14:

- 14.1.1** Exploring data sources: Index of coastal eutrophication and floating plastic debris density
- 14.2.1** Reported online: Proportion of national exclusive economic zones managed using ecosystem-based approaches
- 14.3.1** Exploring data sources: Average marine acidity (pH) measured at agreed suite of representative sampling stations
- 14.4.1** Reported online: Proportion of fish stocks within biologically sustainable levels
- 14.5.1** Reported online: Coverage of protected areas in relation to marine areas
- 14.6.1** Statistics in progress: Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing
- 14.7.1** Exploring data sources: Sustainable fisheries as a proportion of GDP in small island developing States, least developed countries and all countries
- 14.a.1** Exploring data sources: Proportion of total research budget allocated to research in the field of marine technology
- 14.b.1** Statistics in progress: 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
- 14.c.1** Statistics in progress: 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

<sup>92</sup> <http://www.unece.org/stats/sustainable-development.html>

<sup>93</sup> <https://sustainabledevelopment-uk.github.io/life-below-water/>

### 4.3 Contribution to SDG Voluntary National Reviews (VNR) Reports

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 the Economic and Social Council (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.<sup>94</sup>

All past reports and links for 2016-2018 are provided in **Table 5.3**. It should be noted that regarding countries that have not yet submitted VNR reports, Iceland and the United Kingdom will submit VNR reports to the 2019 HLPF.

**Table 5.4. VNR Reports submitted to the HLPF, including links to VNR reviews**

Country	Year that VNR presented at HLPF	Brief comments on SDG 14 priorities and cooperation with OSPAR (if mentioned)
<a href="#">Belgium</a>	2017	Focus on fisheries management, waste management, marine litter and plastics (with a national action plan in development). Notes 37% of waters protected under Natura 2000.
<a href="#">Denmark</a>	2017	Overall review, with limited analysis per SDG, and focus on target 14.4.
<a href="#">Finland</a>	2016	Overall review, with limited analysis per SDG.
<a href="#">France</a>	2016	Includes summary for each SDG, for SDG 14 mentions more than 20% protected areas (including overseas territories), fisheries, pollution, waste and plastics management, blue growth, the national strategy for the sea and coast.
<a href="#">Germany</a>	2016	Includes summary for each SDG and mentions cooperation with OSPAR and HELCOM on marine litter and protected areas. National challenges include reduction of nutrients, protected areas and sustainable coastal development and achieving Good Environment Status (GES) in line with the MSFD.
<a href="#">Ireland</a>	2018	Includes a detailed analysis per SDG target and refers to the MSFD and OSPAR Convention and the Northeast Atlantic Environmental Strategy.
<a href="#">Luxembourg</a>	2017	Overall review, with limited analysis per SDG.
<a href="#">Netherlands</a>	2017	Includes summary for each SDG, and specific reference to the OSPAR Convention, and the UNEP Global Partnership on Marine Litter
<a href="#">Norway</a>	2016	Includes brief summary for each SDG, regarding Goal 14 stresses research and innovation in the 'blue sectors, ocean research, and established integrated ecosystem-based management plans.
<a href="#">Portugal</a>	2017	Includes summary for each SDG and mentions commitment to the OSPAR Convention.
<a href="#">Spain</a>	2018	Includes summary for each SDG and mentions commitment to the OSPAR Convention, the OSPAR Intermediate Assessment (IA2017) and the Barcelona Convention Quality Status Report (QSR2017).
<a href="#">Sweden</a>	2017	Includes summary for each SDG, with a focus on eutrophication, pollution (i.e. mercury) and fisheries management.

<sup>94</sup> <https://sustainabledevelopment.un.org/vnrs>

Country	Year that VNR presented at HLPF	Brief comments on SDG 14 priorities and cooperation with OSPAR (if mentioned)
<a href="#">Switzerland</a>	2016, 2018	Includes brief summary for each SDG. Has no direct ocean or sea access, but links to the Mediterranean, North Sea (Atlantic), Adriatic and the Black Sea via four major rivers and use of the world's seas and oceans.

Reports present a generally variable approach to SDG 14, where some reports provide an overall analysis per SDG and others not, and several references to the OSPAR Convention and the MSFD. Given that especially SDG 14 is a goal that is beyond national boundaries, OSPAR SDG reporting can provide valuable supporting information to future VNR reports to ensure a common approach in reporting on marine and coastal SDG targets. One good example is the 2018 VNR from Ireland, which as appendix includes an analysis of each SDG 14 target in relation to national policies and key objectives.

## 5. Recommendations to strengthen reporting on the SDGs

OSPAR has undertaken several steps to identify how its monitoring and assessments could contribute to reporting on SDG targets, and will take steps to ensure greater visibility and present links to the SDGs in its future assessments. OSPAR also represents a good case study for other Regional Seas in terms of its 2010-2020 North-East Atlantic Strategy, and sub-strategies, with main objectives aligned thematically, which in turn are reflected in the JAMP that is implemented through the CEMP. The 2017 Intermediate Assessment constituted an assessment of the status of the marine environment based on these instruments. The ongoing work to renew the OSPAR North-East Atlantic Strategy for the period 2020-2030 is foreseen to make the link to UN SDGs more pronounced, and work continues to reflect the links in the upcoming Quality Status Report due in 2023.

As mentioned OSPAR has already initiated actions towards the streamlining of its work with the SDGs including.

- UN SDGs should feature in OSPAR's renewed North-East Atlantic Environment Strategy (NEAES 2020-2030)
- Assessments in the QSR 2023 will be linked to the relevant UN SDG targets, as appropriate
- There will be a new ocean acidification indicator in the QSR, that can be used for reporting to SDG 14.3

The UN Agenda 2030 and the Sustainable Development Goals offer a strong opportunity for RSC to explore how they can join efforts to reach similar objectives. There are already some examples of cooperation in that regard. The Cartagena Convention and the OSPAR Commission registered a voluntary commitment at the Ocean Conference in 2017, on the implementation of SDG 14. The commitment explores opportunities for cooperation between the Secretariats and since July 2017 we have been discussing our respective mandates and work programmes. Similar information regarding this collaboration is reflected on both websites and OSPAR and CEP have identified subjects for further cooperation on protection of marine biodiversity, marine protected areas and marine litter. Assessment and monitoring being a major part of the activity of both conventions in support of their Contracting Parties, the SDG provide a driver for regular reporting and an opportunity for comparing reporting approaches and lessons learnt.

NEAFC and OSPAR also engaged through a voluntary commitment on the promotion of their collective arrangement in respect of area-based management in areas beyond national jurisdiction. Through this arrangement both Secretariats of OSPAR and NEAFC will continue to promote the benefits of the cross-

sectoral and cross-regional work to promote such collaboration and delivering respective objectives on protection and sustainable use of the marine environment in the North East Atlantic.

The Sustainable Development Goal 14 on oceans provides further global context to share this model for cooperation and share experience and lessons learnt with other relevant organisations. The collective arrangement sets out the principles of the arrangement between OSPAR and NEAFC.<sup>95</sup>

The thematic distribution of objectives and indicators in OSPAR are fully in line with SDG targets, in particular 14.1, 14.2 and 14.3. Therefore, all the required information is in place to take the next step to present the progress of achievement of these targets in OSPAR through a regionally coordinated approach.

***Suggested Actions for consideration:***

1. Prepare a report on the regional level progress in achievement of key SDG targets, using existing thematic assessments and the 2017 Intermediate Assessment.
2. Ensure data and information from OSPAR contribute to VNR reports and SDG databases through cooperation and agreements with other regional organizations and SDG Focal Points. It should be explored if this should be done by Contracting Parties to OSPAR feeding in the information to their national VNR reports, or whether a coordinated regional input from OSPAR could be relevant.
3. Make available on the OSPAR website how the integrated objectives, targets and indicators and information link to SDG targets and indicators, as a basis identifying the available information that could be relevant for reporting progress of the SDGs
4. Develop information to be disseminated via UN Environment to other Regional Seas Conventions, and if funds and other relevant resources are available, provide support and guidance on the following:
  - a. Description of the approach used in OSPAR to prepare a strategy which includes thematic strategies and a consolidated set of objectives and targets
  - b. Describe the development of the JAMP and how the programme is implemented through the CEMP
  - c. Describe the indicator development process, including identification of candidate indicators based on monitoring programmes of the Contracting Parties, the development of assessment methods including thresholds and assessment criteria
  - d. Description of the approach to developing the 2017 Intermediate Assessment based on the above agreements in OSPAR.

<sup>95</sup> <https://www.ospar.org/documents?v=33030>.

# **Bucharest Convention, its Black Sea Strategic Action Plan, EcoQs and future use of its framework for SDG monitoring**

## **1. Introduction**

### **1.1 The Bucharest Convention**

Nowadays, the Convention on the Protection of the Black Sea Against Pollution, also known as Bucharest Convention, is one of the European Regional Sea Conventions and instruments of the International Environmental Law, which was signed and ratified in 1992 and 1994, accordingly, and provided the legal ground for combating pollution from land-based sources and maritime transport, achieving sustainable management of marine living resources and sustainable human development in the Black Sea Region. It is also the only existing legal instrument in the field of marine environment which has all the Black Sea riparian countries as signatories (Bulgaria, Georgia, Romania, Russian Federation, Republic of Turkey and Ukraine).

The basic objective of the Bucharest Convention was formulated as follows: “to substantiate the general obligation of the Contracting Parties to prevent, reduce and control the pollution in the Black Sea in order to protect and preserve the marine environment and to provide legal framework for co-operation and concerted actions to fulfil this obligation” (Bucharest Convention, 1994).

Established in implementation of the Convention on the Protection of the Black Sea Against Pollution, (as defined in Article XVII), the Commission on the Protection of the Black Sea Against Pollution (hereafter referred to as the Black Sea Commission or BSC) acts to: (a) promote the implementation of the Convention and inform the Contracting Parties of its work, (b) make recommendations on measures necessary for achieving the aims of the Convention, (c) consider questions relating to the implementation of the Convention and recommend such amendments to the Convention and to the Protocols as may be required, including amendments to Annexes of this Convention and the Protocols, (d) elaborate criteria pertaining to the prevention, reduction and control of pollution of the marine environment of the Black Sea and to the elimination of the effects of pollution, as well as recommendations on measures to this effect, (e) promote the adoption by the Contracting Parties of additional measures needed to protect the marine environment of the Black Sea, and to that end receive, process and disseminate to the Contracting Parties relevant scientific, technical and statistical information and promote scientific and technical research and (e) cooperate with competent international organizations, especially with a view to developing appropriate programmes or obtaining assistance in order to achieve the purposes of the Convention. Together with Bucharest Convention the four thematic Protocols were signed:

- Protocol on the Protection of the Black Sea Marine Environment Against Pollution from the Land Based Sources (LBS Protocol);
- Protocol on the Protection of the Black Sea Marine Environment Against Pollution by Dumping (Dumping Protocol);
- Protocol on Cooperation in Combating Pollution of the Black Sea Marine Environment by Oil and Other Harmful Substances in Emergency Situations (Emergency Protocol);
- The Black Sea Biodiversity and Landscape Conservation Protocol (CBD Protocol).

The Permanent Secretariat of the Black Sea Commission was established in 2000 to assist the Black Sea Commission on implementation of provisions of the Convention and the Black Sea Strategic Action Plan (BS SAP). The Secretariat is located in Istanbul, Republic of Turkey (Headquarters Agreement between the Government of the Republic of Turkey and the Commission on the Protection of the Black Sea Against Pollution, 2000). The areas of concern of the Black Sea Commission are, inter alia, to monitor and assess pollution, control pollution from land-based sources, ensure conservation of biological diversity, address environmental safety aspects of shipping, address environmental aspects of management of fisheries and other marine living resources and promote integrated coastal zone management and maritime policy. Being an executive body of BSC, the BSC PS coordinates activities of the Advisory Groups to the Black Sea Commission, which are its main source of expertise, information and support. There are six Advisory Groups (AGs) to the Black Sea Commission and corresponding Regional Activity Centers (RACs):

- AG on Pollution Monitoring and Assessment (PMA AG), with its RAC in Ukraine;
- AG on Control of Pollution from Land Based Sources (LBS AG), with its RAC in Turkey;
- AG on Conservation of Biological Diversity (CBD AG), with its RAC in Georgia;
- AG on Environmental Aspects of the Management of Fisheries and other Marine Living Resources (FOMLR AG), with its RAC in Romania;
- AG on Environmental Safety Aspects of Shipping (ESAS AG), with its RAC in Bulgaria;
- AG on Development of Common Methodologies for Integrated Coastal Zone Management (ICZM AG), with its RAC in the Russian Federation;

The Permanent Secretariat of the Black Sea Commission serves as a regional data center for environmental and socio-economic data and information collected by the AGs and within the Black Sea Integrated Monitoring and Assessment Programme (BSIMAP). It was the BS SAP 1996 that urged the Black Sea Commission to establish the BSIMAP comprised of obligatory national monitoring programmes, and an independent quality assurance system. This system should become a “uniform measurement technique for bathing water quality with a common quality assurance support mechanism”. Its transparency shall be encouraged “through the publication and free exchange of data from bathing water quality measurements on at least an annual basis”. The relevant Advisory Group of the BSC (LBS AG) was supposed to “compile and exchange the data regarding actual and assessed contaminant discharge measurements for point sources, rivers, and, where possible, diffuse sources ... on an annual basis” (BS SAP, 1996). BSIMAP is being implemented since 2001. It is addressed to the main transboundary environmental problems in the Black Sea region: eutrophication, water pollution and water quality, biodiversity change and decline, habitats destruction etc. The Advisory Groups and BSIMAP provide data to the BSC annually in standardized formats. The reported data are loaded into the Black Sea Information System (BSIS) and used to evaluate changes over time in the coastal and marine environment.

For the moment, the Black Sea Commission established mutual observer-ship relations with following international and public organizations: UNEP, European Commission (EU), GEF/UNDP, International Commission for the Protection of the Danube River (ICPDR), UNEP/MAP, Organization of the Black Sea Economic Cooperation (BSEC), Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), UN FAO General Fisheries Commission for Mediterranean and the Black Sea (GFCM), Black Sea Port State Control Memorandum of Understanding, Black Sea NGO Network, and International Maritime Organization (IMO) and International Atomic Energy Agency (IAEA).

## 2. BSC relevant strategies and their targets

In addition to the Bucharest Convention, its Protocols and the Black Sea Strategic Action Plan (BS SAP 2009), there are a couple of regional strategic documents that have been adopted as summarised in **Table 6.1** that are relevant to the SDG targets. The updated version of the Strategic Action Plan for the Environmental Protection and Rehabilitation of the Black Sea (BS SAP) was adopted during the Ministerial Conference in Sofia (Bulgaria) in April, 2009, and is currently in force serving as the main document reflecting the obligations of Contracting Parties of the Bucharest Convention towards preservation of the environment of the Black Sea. Each year a budgeted BSC Work Programme with detailed activities is developed and agreed by the Contracting Parties. Further detailed strategies elaborate the priorities as agreed by the Contracting Parties, which is included into the Black Sea Integrated Monitoring and Assessment Programme (BSIMAP) for 2017-2022. In order to coordinate the reporting, the BSC reporting format was revised and adopted by the Contracting Parties in 2016.

**Table 6.1. Main strategic documents of the BSC**

Relevant Protocol	Strategy/Plan	Year adopted and COP	Relevant SDG target
Bucharest Convention and overarching strategic documents	Bucharest Convention	1994	
	Strategic Action Plan for the Environmental Protection and Rehabilitation of the Black Sea (BS SAP 2009)	2009	Multiple (see Annex 1)
	Black Sea Integrated Monitoring and Assessment Programme (BSIMAP) for 2017-2022	2016 – COP32	
LBS Protocol, Marine Litter and SCP	Protocol on the Protection of the Black Sea Marine Environment Against Pollution from the Land Based Sources (version of 2007)	2007 - Pending ratification	14.1, 6.3, 6.5, 6.6, 6a, 12.2, 12.4
Dumping Protocol	Draft Regional Action Plan on Marine Litter Management	Pending adoption	
	Draft Guidelines on the monitoring of Marine Litter	Pending adoption	
CBD Protocol and MPAs	The Black Sea Biodiversity and Landscape Conservation Protocol (CBD Protocol)	2011	14.2, 14.5, 15.1, 15.5, 15.8, 15.9, 15.a
	Draft Action Plan for the Conservation of Cetaceans in the Black Sea	Pending adoption	
Prevention and Emergency Protocol	Black Sea Regional Contingency Plan	1994	14.1, 15.8, 9.1. 9.4
ICZM	Black Sea ICZM Guidelines	2017 – COP 33	14.2 (plus all those in Annex 1)

### 2.1 Strategic Action Programme (SAPs) and other thematic strategies and plans

The BS SAP 2009 captures the overall objectives and areas of action for the protection of the marine environment and the sustainable development of the coastal areas of the Black Sea and is further elaborated in its Annexes with specific objectives, outputs and to be achieved over the 5-year period. The BS SAP 2009 reflects the progress achieved after adoption of BS SAP 1996 (updated in 2002), at the same time, it reorganizes the priorities and actions, describes the policy actions required to meet arising environmental challenges by introduction of a series of management targets. The BS SAP 2009



is based on the following three key environmental management approaches: 1) Integrated Coastal Zone Management (ICZM), 2) Ecosystem Approach, and 3) Integrated River Basin Management (IRBM). The four selected for the BS SAP 2009 Ecosystem Quality Objectives (EcoQOs) are the following which have been since further developed as part of the Ecosystem Approach:

- EcoQO 1: Preserve commercial marine living resources;
- EcoQO 2: Conservation of Black Sea Biodiversity and Habitats;
- EcoQO 3: Reduce eutrophication;
- EcoQO 4: Ensure Good Water Quality for Human Health, Recreational Use and Aquatic Biota.

## **2.2 Ecosystem Approach and the Integrated Monitoring and Assessment Programme**

The Ecosystem Approach in the Black Sea was foreseen by the BS SAP 2009. This approach is integrated into the BSC and Bucharest Convention framework and is in line with the EU Marine Strategic Framework Directive (MSFD) and the decisions of the Convention on Biological Diversity (CBD) regarding the ecosystem approach and the Aichi targets. The development and implementation of the Black Sea Integrated Monitoring and Assessment Program (BSIMAP) is stipulated in Article XV of the Bucharest Convention. BSIMAP is based on national monitoring programs financed by the Black Sea states. Outside of national monitoring programs, thematic scientific surveys related to various environmental problems are carried out in the frames of different projects, financed by national authorities and/or donors (UNEP, UNDP/GEF, EC, UN FAO and others). The BSIMAP is an integral part of the monitoring and assessment programs of the Contracting Parties to the Bucharest Convention, and aims at provisioning of sound and scientific data and information flow for the contracting parties underpinning State of the Environment of the Black Sea (SoE) and Implementation of the Strategic Action Plan for Environmental Protection and Rehabilitation of the Black Sea (SAPIR). It also, contributes to, inter alia, information sharing and decision making for Contracting Parties.

BSIMAP employs the DPSIRR (Drivers, Pressures, State, Impact, Response, Recovery) approach allowing detection of negative impacts as well as the effects of measures taken, thereby enabling the necessary corrective actions to be decided on and introduced in a timely manner. The choice of parameters to monitor is related to the main environmental problems recognized in the Black Sea region and re-evaluated every 5 years based on BSC reports – State of the Environment of the Black Sea (SoE) and Implementation of the Strategic Action Plan for Environmental Protection and Rehabilitation of the Black Sea (SAPIR). The updated draft BSIMAP for years 2013-2018 has been drafted in the framework of the EU funded project “Support to the Black Sea Commission for the Implementation of the MSFD” (MSFD Project)<sup>96</sup> which was finalized in 2013 and went through the national consultations. National experts from all Black Sea countries were nominated and paid to finalize the draft.

During the open session of the 32<sup>nd</sup> BSC Regular Meeting, 12-13th October, 2016 the Black Sea Commission adopted the following resolution: “*The Commission took note of the work done by all Advisory Groups of the BSC to finalize the draft Black Sea Integrated Monitoring and Assessment Program (BSIMAP). The Commission adopted the BSIMAP for 2017-2022. The annexes to the document shall be further refined and adjusted by the BSC Advisory Groups, as appropriate*”.

The main task of the Monitoring Program for 2017-2022 is to produce quality assured data for scientifically-based and validated indicators for policy-makers of the Contracting Parties of the Bucharest Convention consistent with the environmental quality objectives (EcoQs) of the BS SAP.

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<sup>96</sup> The main approaches of the updated draft BSIMAP are harmonized with the MSFD as well as aimed to be compliant with relevant assessment processes within the Black Sea SoE Report. These includes BSIMAP 2006-2011, Guidelines and manuals (adopted or under development) supporting the implementation of the provisions of Bucharest Convention and the BS SAP 2009 and reporting templates to be filled in with the national statistical and monitoring data

The guiding document for the BSIMAP is the Strategic Action Plan for Environmental Protection and Rehabilitation of the Black Sea (BS SAP2009). The coherence with the European Marine Strategy Framework Directive (MSFD) and other international commitments/agreements dealing with the Black Sea environment protection to which the Black Sea states are Contracting Parties shall be sought in order to introduce the best available practices, accumulated knowledge and harmonize approaches. **Table 6.2** summarizes the BSIMAP 2017-2022

**Table 6.2 Summary of BSIMAP 2017-2022 Ecological Objectives, targets and parameters monitored**

EcoQO	Ultimate Target	Mandatory parameters
EcoQO 1 Preserve commercial marine living resources	EcoQO 1a Sustainable use of commercial fish stocks and other marine living resources	To reach and sustain maximum sustainable yield of all species for commercial interest, to increase stock of commercially-exploited fish and shellfish
	EcoQO 1b Restore/rehabilitate stocks of commercial marine living resources	Reach of sustainable stocks status of threatened / endangered species
EcoQO 2 Conservation of Black Sea Biodiversity and Habitats	EcoQO 2a Reduce the risk of extinction of threatened species	Stabilized or increasing trends of the populations of the threatened species
	EcoQO 2b Conserve coastal and marine habitats and landscapes	Decreasing of anthropogenic pressures on coastal zone and on marine waters
	EcoQO 2b Reduce and manage human mediated species introductions	– No new man-made introduction of non-indigenous species (including aquaculture, introduction of LMO etc.); and – Management of existing non-indigenous species (including improvement of ballast water and fouling management in accordance with IMO BWM Convention requirements, control, quotas etc.)
EcoQO 3 Reduce eutrophication	Minimize the human-induced eutrophication and mitigate adverse effects at the level that they don't affect the marine ecosystem	T°, Salinity, O2 (saturation and dissolved) TSS (filter 0.45 µm) Transparency Secchi P (PO4), P total; N (NH4), N (NO3), N (NO2), N, Total, Si (SiO4 ) Cl a, pH, BOD5
EcoQO 4 Ensure Good Water Quality for Human Health, Recreational Use and Aquatic Biota	EcoQO 4a Reduce pollutants originating from land-based sources, including atmospheric emissions	– Concentration of contaminants in marine environment is kept within acceptable limit and does not increase – Common indicators: decreasing amount of litter in the water column incl. microplastics, floating litter and deposited on the sea-floor – Decreasing amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, fish
	EcoQO 4b Reduce pollutants originating from shipping activities and offshore installations	Reduce ship-generated waste discharge at sea by introducing incentives for delivery of PRFs in the Black Sea region
		<p><u>Oil Pollution:</u> Petroleum Hydrocarbons Oil slicks <u>Heavy Metals</u> (Cd, Cu, Hg, Pb, Fe, Zn, Cr, Ni, Mn, Co, Lindane (organochlorine pesticides); Phenols volatile, Phenol chlorinated, Detergents, PAHs; <sup>137</sup>Cs, <sup>90</sup>Sr, Marine litter (specific), Noise level (specific) <u>Bathing Water:</u> Total Coliforms; Fecal Coliforms; Fecal Streptococci; Visual Observations</p> <p>Accidental spills Illegal discharges (oil and others ) Number, amounts and locations of accidental and illegal pollution / spills Actually delivered quantities to PRF (in accordance with MARPOL Annexes I, IV and V)</p>

### 3. Monitoring and Reporting Mechanisms

#### 3.1. BSC Reporting format and indicators

The reporting and tables of Annual reporting to Black Sea Commission were:

- Elaborated and agreed by the members of the all six Advisory Groups of the Black Sea Commission during their regular AGs meetings in 2015;
- Adopted by BSC during 31st BSC Regular Meeting on 8th October, 2015;
- Amended by AGs members during their regular AGs meetings in 2016;
- Adopted by BSC during 32nd BSC Regular Meeting on 13th October, 2016 as Annex 3 to the Black Sea Integrated Monitoring and Assessment Program (BSIMAP) 2017-2022; and
- Amended by AGs members during their regular AGs meetings in 2017 and 2018.

The data is based on existing AG annual reporting formats (see **Table 6.3**), and also takes into account the new environmental challenges and legislation, as well as approaches introduced by relevant global and regional organizations (i.e. provisions of EU MSFD; GFCM; ACCOBAMS etc.).

**Table 6.3 Summary of the Black Sea Convention reporting and indicators**

<b>Black Sea Convention Reporting Indicators (&amp; Tools)</b>	
<b>Pollution Monitoring and Assessment (PMA)</b>	<ul style="list-style-type: none"> <li>- Trix<sup>97</sup>;</li> <li>- Oxygen Saturation level at critical depth;</li> <li>- Inorganic N, P, Si in the surface layer ; <math>N_{inorganic}/P_{inorganic}</math>; <math>N_{inorganic}/Si</math>;</li> <li>- BEAST (Black Sea Eutrophication Assessment Tool)<sup>98</sup>;</li> <li>- Water transparency, where relevant;</li> </ul>
<b>Pollution from Land Based Sources</b>	<ul style="list-style-type: none"> <li>- Annual Flow km<sup>3</sup>/year;</li> <li>- TP Tonnes/year, TN Tonnes/year, Inorganic N (will be calculated) Tonnes/year, Inorganic P discharge Tonnes/year;</li> <li>- Trace Metal (common ones will be selected*) Tonnes/year;</li> <li>- TSS Tonnes/year; TPH Tonnes/year; BOD5 Tonnes/year</li> </ul>
<b>Conservation of Biological Diversity (CBD)</b>	<ul style="list-style-type: none"> <li>- Phytoplankton biomass (seasonal trends for the last 3 years);</li> <li>- Phytoplankton abundance (seasonal trends for the last 3 years);</li> <li>- Max concentration of blooming species;</li> <li>- Diatoms/Dinoflagellates biomass ratio (only for spring);</li> <li>- H-Shannon 95 (biomass);</li> <li>- Chl a (seasonal trends for the last 3 years);</li> <li>- Mesozooplankton biomass (for 3 years);</li> <li>- Biomass of Noctiluca (%);</li> <li>- Mesozooplankton H-Shannon (biomass, abundance);</li> <li>- Jellatinous macrozooplankton biomass and abundance;</li> <li>- Macrophytobenthos (EEIc *);</li> <li>- Macrozoobenthos (M-AMBI*);</li> <li>- Number of new introduced non-indigenous species (for each 6 years);</li> <li>- Marine protected areas (in number and in % every 5 years)</li> </ul>
<b>Management of Fisheries and other Marine</b>	<ul style="list-style-type: none"> <li>- Total Catch: Total landing; Total landing per species; Discards;</li> <li>- Fishing Effort: Fishing fleet by size (&lt; 6 m, 6-12 m, 12-18 m, 18-24 m, &gt; 24 m); Fishing fleet by gears; GT x Day, kW x Day; Number of fishing gears per type;</li> </ul>

<sup>97</sup>  $TRIX = [\log (Chl \times D\%O_2 \times N_{min} \times P_{tot}) + k] / m *$

<sup>98</sup> Core set indicators grouped as causes - inorganic nitrogen, inorganic phosphorus (phosphates), direct effects - chlorophyll a, indirect effects - bottom oxygen (where available), Secchi.

<b>Black Sea Convention Reporting Indicators (&amp; Tools)</b>	
<b>Living Resources (FOMLR)</b>	<ul style="list-style-type: none"> <li>- Stock Assessment: Total biomass; Spawning biomass;</li> <li>- Recruitment;</li> <li>- Fishing Mortality;</li> <li>- By-Catches: Vulnerable species (sturgeons etc.); Cetaceans; Catches per unit of effort (CPUE) on surveys;</li> <li>- Mariculture: Total production; Total production per species; Number of mariculture enterprises; Restocking activities;</li> <li>- Fishing Free Zones: Number and area (km<sup>2</sup>); Area for temporary restriction (prohibition)</li> <li>- Number and Name of Stocks below Biological Safety Limits (BSL);</li> <li>- Number of Bottlenose Dolphins in Captivity;</li> <li>- Additionally: Fishing ground; Legal framework; Management measures; National fisheries programs; Employment in fishery; Fish consumption; Import/export of fish; Number of landing ports;</li> </ul>
<b>Integrated Coastal Zone Management (ICZM)</b>	<ul style="list-style-type: none"> <li>- Population and geography: Administrative organization of coastal zone, no. - a) total no. of cities, b) no. of cities over 100 000 inhabitants, c) no. of cities over 1000 000 inhabitants, d) total no. of rural settlements;</li> <li>- Total inland area of reported territory, km<sup>2</sup>;</li> <li>- Number of population, thousands person;</li> <li>- Population density in coastal regions, inhabitant/km<sup>2</sup>;</li> <li>- Urbanization ratio, %;</li> <li>- Total land use, ha: a) agriculture areas; b) forest and other forest vegetation lands; c) waters and ponds; d) wetlands; e) urban area;</li> <li>- Energy: Energy production, MW; Energy consumption, MW; Number, capacity and type of Power Stations;</li> <li>- Water and waste water: Population connected to public sewage network system (PSNS), %; Discharge of sewage waters (incl. untreated), (from LBS AG reporting);</li> <li>- Biodiversity: Number and square of protected areas (land and aquatic parts);</li> <li>- Coastal erosion: Stretch of coast of vulnerable areas subject to erosion, %;</li> <li>- Economy: Regional Gross Domestic Product (GDP), thousand Euro;</li> <li>- Sectoral distribution of production, % (Agriculture; Industry; Transport; Tourism; Commerce etc.);</li> <li>- Tourism: Touristic accommodation capacities, places; Number of tourist arrivals;</li> <li>- Solid Waste Management: Industrial waste produced, tones/year; Industrial waste stored, tones/year; Municipal wastes produced, tones/year; Municipal wastes stored, tones/year; Number of landfills and amount of waste, mln tones;</li> <li>- Agriculture: Total area of agricultural lands, thousand ha; Area of irrigated lands / drainage, thousand ha;</li> <li>- Industry: Number of enterprises (please specify types); Total production of enterprises, Euro;</li> <li>- Transport: Density of public road network, km<sup>2</sup>; Number of airports; Length of rail ways, km; Number of ports (from ESAS AG reporting); Port traffic capacity (from ESAS AG reporting); Number of oil terminals (from ESAS AG reporting); Actual capacity of oil terminals (from ESAS AG reporting);</li> <li>- Climate: Precipitations, mm per year (min-max); Sea level rise*, mm; Number of floods; Average temperature (to be further elaborated)</li> </ul>
<b>Environmental Safety Aspects of Shipping (ESAS)<sup>99</sup></b>	<ul style="list-style-type: none"> <li>- Ship calls, inter alia: Tankers; Chemicals; Gas (LNG); Others;</li> <li>- Cargo turnover, mln tons, inter alia: General Cargo; Oil, th tons; Chemical goods; Gas, th tons; Others;</li> <li>- Number of ports;</li> </ul>

<sup>99</sup> Issues covered by MARPOL Annex 6 and BWM indicators to be elaborated and added in the nearest future

### Black Sea Convention Reporting Indicators (& Tools)

- Capacity of terminals, inter alia: Oil terminals, th tons per year, Gas terminals, th tons per year;
- Port reception facilities (PRF), actually delivered quantities to PRF (in accordance with MARPOL Annexes I, IV and V): Annex I, cub. M, Annex V, cub. M, Annex IV, cub. M; Number, volume, location and causes of accidental pollution/spills; Number, volume and location of illegal pollution/spills;
- Pollution fines (in USD);
- Dumping of dredged materials, volume

## 3.2 Regional and thematic assessments

With almost 20 years of work since the establishment of BSC, numerous publications on the state of the marine and coastal environment and thematic assessments have been published over the years<sup>100</sup>. Some of the key overall assessments within the last decade include the Black Sea State of Environment Report 2001-20006/7 (BSC, 20018)<sup>101</sup> and Report on the Implementation of the Black Sea Strategic Action Plan 1996 (SAPIR). The SoE report for 2009-2014 is being published and the next one is planned for 2021.

The BSIMAP 2017-2022 foresees that “the purpose of the thematic assessment is an in-depth study of a specific problem for which information and data are missing, contradictory, inaccurate or unknown. Thematic assessments are initiated by the Black Sea Commission upon well justified proposals coming from: any Contracting Party to the Bucharest Convention; BSC; BSC Advisory Groups; International organizations upon the relevance of the proposal for the Black Sea; SoE Report. Financing of the thematic assessments could be done from the BSC Budget, national budgets, specific projects or donor contributions depending upon the agreed arrangements for such assessments. The results of the thematic assessments shall contribute to the development of the indicators to assess the state of the Black Sea environment”. Annex IX to the BSIMAP 2017-2022 describes the Priority thematic studies to be implemented in 2017-2022, agreed for international and national research projects (Table 6.4).

**Table 6.4 Priority thematic studies to be implemented in 2017-2022**

General:	<ol style="list-style-type: none"> <li>1) SoE Report;</li> <li>2) Development of GES and environmental targets for EQS 1-4/Definition and descriptors of GES for Black Sea basin.</li> </ol>
For EQS 1 Preserve commercial marine living resources:	<ol style="list-style-type: none"> <li>a) coordinated stock assessments of fish species of Annex 4 Black Sea Biodiversity and landscape Conservation Protocol;</li> <li>b) biological safety limits of fish species of Annex 4 Black Sea Biodiversity and landscape Conservation Protocol.</li> </ol>
For EQS 2 Conservation of Black Sea Biodiversity and Habitats:	<ol style="list-style-type: none"> <li>a) species conservation status and update of Annex 2 of Black Sea Biodiversity and landscape Conservation Protocol;</li> <li>b) habitat mapping and classification.</li> </ol>
For EQS 3 Reduce eutrophication:	<ol style="list-style-type: none"> <li>a) discharges of nutrients to the Black Sea;</li> <li>b) BEAST tool application in the Black Sea;</li> <li>c) zoning;</li> <li>d) diffuse sources assessment, atmospheric deposition;</li> <li>e) remote sensing.</li> </ol>

<sup>100</sup> The BSC publications can be found at [www.blacksea-commission.org](http://www.blacksea-commission.org)

<sup>101</sup> <http://www.blacksea-commission.org/publ-SOE2009.asp>

For EQS 4 Ensure Good Water Quality for Human Health, Recreational Use and Aquatic Biota:

- a) 5 years socio-economic analysis of drivers-pressures;
- b) Assessment of Marine Litter from ships (management of ship-generated waste on board of ships)
- c) Comparative analysis and assessment of emissions from ships and land-based sources LBS of pollution;
- d) Guidance/Road Map on application of principles of Ballast Water Convention (IMO) in the Black Sea;
- e) Port reception facilities (PRFs) and management of waste under MARPOL Annex VI.

## 4 Possible contribution of BSC to the reporting SDG 14 Targets and Indicators

The following recommendations to strengthen the role of future BSC in the SDG monitoring and review process are elaborated below.

1. Review and align objectives, targets and indicators with the SDGs within the Black Sea region, in coordination with other partners.
2. Contribute monitoring data to UN Environment as part of global monitoring of targets 14.1., 14.2 and 14.5.
3. Ensure data and information from Black Sea countries contribute to VNR reports and SDG databases through cooperation and agreements with other regional organizations and SDG Focal Points
4. Develop an approach to regional assessments that can report on the SDG implementation
5. Prepare an SDG Outlook document to capture the vision of how BSC will contribute to future

### 4.1 Review and align objectives, targets and indicators with the SDGs

BSC is currently planning to undertake a mapping of relevant targets and indicators with the SDG's, in particular in relation to the BSIMAP indicators, which will be reflected in the next Black Sea State of Environment (SoE) report (planned for 2021). The implementation of the regional plans and strategies are also an important contribution to SDG implementation, and should therefore be aligned as appropriate with the SDG targets.

**Suggested Actions** for consideration:

- Undertake a mapping exercise of current targets and indicators in line with the relevant SDG's and integrate the targets of the various regional plans and strategies into the mapping with SDG targets. This would serve as a reference document to view all obligations, objectives and targets in one document that can be used as a basis for assessing implementation and achievement of these objectives and targets in the future, in alignment with global Convention targets and the SDGs;
- Integrate the Regional Seas and relevant regional and Global Convention indicators, as appropriate. One major issue raised by all Regions is the over-burden of reporting on countries. By streamlining targets and indicators, a reporting mechanism can be developed that can serve multiple purposes, for BSC, SDG's, Global Conventions etc.
- BSC to review and find mechanism to strengthen current indicator reporting mechanism (support to countries on monitoring, cooperation with partners, etc) and consider a core or reduced list of indicators for regular reporting through Contracting Parties and/or other databases;

## 4.2 Contribute monitoring data to UN Environment as part of global monitoring of targets 14.1., 14.2 and 14.5.

The 232 individual SDG 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. **Annex 1** presents the list of 26 SDG indicators for which UN Environment is custodian agency. As of 20 April 2017, the updated tier classification contains 82 Tier I indicators, 61 Tier II indicators and 84 Tier III indicators<sup>102</sup>. In the case of SDG 14, UN Environment is custodian of three indicators, two of which are Tier III. For all Tier I indicators, 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. Meta data is available in the SDG Indicator Metadata repository (<https://unstats.un.org/sdgs/metadata/>) including 14.5.1 on marine protected areas (MPA's). Tier III indicators require work plans to be developed outlining the methodological development of the indicators for approval by the IAEG-SDGs. The current Tier III work plans are in draft form (using a standard structure), last presented at the 6<sup>th</sup> Meeting of the IAEG-SDGs (11-14 November 2017)<sup>103</sup>.

BSC and its Contracting Parties through its monitoring programmes and databases can contribute directing to these three SDG 14 indicators:

- **Eutrophication (Indicator 14.1.1).** Chlorophyll-a, nitrates, nitrites, ammonium, phosphates and dissolved oxygen
- **ICZM Protocols Plans (Indicator 14.2.1).**
- **Marine Protected Areas (indicator 14.5.1).**

For this purpose, it is essential that the methodologies used to collect and analyse the above indicators and parameters are made available, as on a global scale data will need to be comparable. The methodologies and meta-data should be compiled and shared with UN Environment.

### *Suggested actions for consideration:*

- As part of the Ecosystem approach and the reporting indicators BSC considers inclusion of monitoring parameters which can also be reported to UN Environment as part of their global reporting on these indicators. This includes the monitoring of chlorophyll-a and nutrients, ICZM plans established, and MPAs, in line with the methodologies under development by UN Environment.

## 4.3 Ensure data and information from Black Sea countries contribute to VNR reports and SDG databases

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 the Economic and Social Council (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.<sup>104</sup> All past reports and links for

<sup>102</sup> See <https://unstats.un.org/sdgs/iaeg-sdgs/tier-classification/>

<sup>103</sup> <https://unstats.un.org/sdgs/meetings/iaeg-sdgs-meeting-06/>

<sup>104</sup> <https://sustainabledevelopment.un.org/vnrs>



2016-2018 are provided in **Table 6.5**. Regarding future meetings, Turkey will submit a VNR report at the 2019 HLPF, and the Russian Federation and Ukraine will present a VNR report to the 2020 HLPF.

**Table 6.5. VNR Reports submitted to the HLPF**

Country	Year that VNR presented at HLPF	Brief comments on SDG 14 priorities and cooperation with BSC (if mentioned)
<a href="#">Georgia</a>	2016	General summary without detailed analysis of SDG Goals and targets, or defined contribution from BSC
<a href="#">Romania</a>	2018	Analysis of SDG 6, 7, 11,12, 15 and 17 (not 14). Under Goal 15, reference to Black Sea and coastal ecosystems, Danube Delta, pollution and changes to hydrological regime.
<a href="#">Turkey</a>	2016	General summary without detailed analysis of SDG Goals and targets, or defined contribution from BSC.

In addition to the VNR reports submitted, data is also provided to SDG data platforms. Many SDG data portals are under development, some at the national level, regional level (such as through Regional Commissions) and currently at the Global level two main SDG data platforms:

- iii. The **Sustainable Development Goals indicators database**<sup>105</sup> provides transparency on the data used for global reporting. 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.
- iv. **IISD data portal on indicators for the Sustainable Development Goals (SDGs)**.<sup>106</sup> This portal, 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. The data will be updated periodically as more countries submit these reports.

The BSC along with national experts should contribute to future VNR reports, based on the progress in implementation of its strategies and plans and also based on state of BSC environment reports and analysis of monitoring data. Each strategy and plan contributed directly to several SDG14 and other targets.

***Suggested actions for consideration:***

- At the national level, review the coordination mechanisms between SDG Focal Points and the BSC national experts, and propose a mechanism so that the BSC and its national experts can play a key role in providing information to future VNR reports, and peer review information; and
- Ensure future VNR reports (i.e. Turkey in 2019 and Russian and Ukraine reports planned for 2020) include relevant BSC information and assessments.

<sup>105</sup> <https://unstats-undesa.opendata.arcgis.com/>

<sup>106</sup> <https://sustainable-development-goals.iisd.org/country-data>

#### **4.4 Develop an approach to regional assessments that can report on the SDG implementation**

The next SoE report for the Black Sea is planned for 2021. This should undertake a structured analysis of pressures, state and known impacts of the major issues and will build upon this approach integrating further the new EcoQO's in development and with closer links to the SDGs and was based on a compilation of information from numerous sources.

##### ***Suggested actions for consideration:***

- Develop a methodology for more quantitative future state of environment regional assessments based on the agreed indicators (in particular, pressure, state and response indicators), and a structure in line with BSC objectives and targets and SDG targets;
- Develop indicator assessments, considering the approach and templates used by other Regional Seas. This indicator assessments would provide a major source of information for the final assessments; and
- In addition to publishing the final assessment report, consider publishing online the indicator assessments in relation to each relevant SDG target, in particular 14.1, 14.2, and 14.5, to assess the implementation of these targets in the region. These SDG assessments can then contribute to global SDG and World Ocean Assessment reports;

#### **4.5 Prepare an SDG Outlook document to capture the vision of how BSC will contribute to future**

The 18th Global Meeting of the Regional Seas Conventions and Action Plans concluded that “[R]egional Seas Conventions and Action Plans will 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. The documents will be submitted to UN Environment in order to be utilized in preparation of the Preparatory Committee for the United Nations Conference to Support the Implementation of Sustainable Development Goal 14”. In 2017, UN Environment published guidance for the preparation of these outlook documents<sup>107</sup>, including the following steps:

- ix. Review and alignment of the regional objectives<sup>108</sup> and targets with SDGs;
- x. Establishment of current baseline situation;
- xi. Identification of Existing and planned programmes and partnerships that contribute to achieving the regional objectives and SDGs; and
- xii. Possible new institutional and financial arrangements for additional effort.

This case study, can be used as a basis for the drafting of a BSC SDG Outlook document, including the targets and indicators to be developed. It should be discussed and agreed with BSC Contracting Parties as an agreed definition of the future role of the BSC in supporting the SDG monitoring and review process. It is suggested that this should be a coordinated approach for the region, involving BSC focal points, experts as well as all key partners as well as SDG Focal Points.

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<sup>107</sup> UN Environment (2017). Moving to Strategy and Action: Regional Seas Outlook for the implementation of the Sustainable Development Goals

<sup>108</sup> The regional objectives include: regional ecological objectives, quality objectives, objectives and targets in the Strategic Action Programme, Good Environment Status, objectives of the Conventions and Protocols and targets and objectives in the regional seas Action Plan.

## References

IISD (2017). Indicator Preferences in National Reporting of Progress Toward the Sustainable Development Goals (Briefing note).<sup>109</sup>

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### Cartagena Convention and the Caribbean

UNEP (1983). Action Plan for the Caribbean environment programme. UNEP Regional Seas Reports and Studies No. 26<sup>112</sup>

UNEP-CAR (2014). Regional Action Plan for Marine Litter Management in The Wider Caribbean Region (RAPMaLi)<sup>113</sup>

UNEP CAR (2012). Template for national reporting on the Cartagena convention and its Protocols (UNEP (DEPI)/CAR WG.32/INF.9.Rev.3).<sup>114</sup>

UNEP-UCR/CEP (2010). CEP TR No. 52: “Updated CEP Technical Report No. 33 Land-based Sources and Activities in the Wider Caribbean Region”<sup>115</sup>

UNIDO (2015). Integrated Assessment and Management of the Gulf of Mexico Large Marine Ecosystem. strategic Action Programme (SAP), (revised 2015).<sup>116</sup>

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