



## **I. INTRODUCTION**

The ecosystem paradigm has emerged in recent decades as the dominant basis of the integrative approaches to management of natural resources and environment. Major shift occurred in changing the focus from the traditional management efforts organized around particular, sectoral uses resulting in separate governance regimes for each use, to the establishment of inter-sectoral linkages that has led to more coordinated and integrated management approaches. The application of the Ecosystem Approach (EcAp) has thus become a logical outcome of the evolution of environmental and development management efforts in the Mediterranean.

Decisions IG 17/6 “Implementation of the ecosystem approach to the management of human activities that may affect the Mediterranean marine and coastal environment” and IG 20/4 “Implementing MAP ecosystem approach roadmap: Mediterranean Ecological and Operational Objectives, Indicators and Timetable for implementing the ecosystem approach roadmap adopted by the Contracting parties to the Barcelona Convention” respectively in COP 15 (2008) and COP 17 (2012) articulate a systematic process for moving forward towards more effective ecosystems-based management in the Mediterranean. They also contain the agreement reached on the progress achieved and define priorities on the way forward.

While the application of EcAp involves promotion of many novel concepts and specific approaches, it should also build on existing instruments and on already agreed objectives under the relevant conventions and multilateral agreements. With that in mind, the EcAp Coordination Group recommended during its First Meeting (Athens, 29-30 May 2012) to “prepare an inventory of already identified objectives / targets existing under protocols, strategies, action plans, protected areas and other areas of ecological significance, biennial implementation plans, other treaties, etc. to serve as a foundation for discussion of targets and GES. Priority should be given to what has been agreed under the Barcelona Convention”.

In this document, the international and regional legal instruments and the existing targets at international and different regional levels are provided under the three clustered structure followed in the Correspondence Group on GES and Targets meetings, i.e. sections on Pollution and Litter, Biodiversity and Fisheries, and Coast and Hydrography. The detailed explanations and lists of legal instruments and targets are also provided in Annexes.

## **II. EXISTING TARGETS AND REFERENCES**

### **1. Existing instruments of relevance for Pollution and Litter**

This section presents the environmental quality standards (EQS), pressure reduction target, operational and management targets adopted by the Meetings of the Contracting parties since 1989 with the aim to further specify their commitments and obligations of the parties as well as to facilitate their efforts for the implementation of the Barcelona Convention and the Protocols addressing pollution reduction/elimination and prevention in the Mediterranean.

There is no previous work with regard to targets with regard to noise that is a new field and challenge to address marine pollution in the MAP system.

The MAP obligations and commitments taken in the form of targets and EQS are set at 3 major levels, which the detailed lists are provided in Annexes 1 and 2:

### **1.1. Global/International Legal Instruments**

In the scope of the EcAp ecological objectives on Pollution and Litter, the Barcelona Convention and the four Protocols that contain major legally binding obligations to eliminate and phase out marine pollution from different sources and substances provide for:

#### LBS Protocol

- The parties undertake to eliminate pollution deriving from land-based sources and activities, in particular to phase out inputs of the substances that are toxic, persistent and liable to bioaccumulation listed in annex I (POPs, Organo-P, Organo-tin, PAH, Metals, Lub oil, radioactive, biocides, pathogenic M/O, oil and petroleum HC, CN- and F-, non-biodegradable detergents, nutrients (N and P), litter, thermal discharge, acid or alkaline, non-toxic compounds leading to DO depletion, non-toxic substances interfering with legitimate use of the sea, non-toxic that affect physical or chemical characteristics of the sea).

#### Offshore Protocol

- The disposal of harmful or noxious substances and material released from the activities related to Protocol against pollution resulting from exploration and exploitation of the continental shelf and the seabed and its subsoil and listed in Annex I is prohibited (Mercury, Cadmium, Organotin, Organo-P, Organohalogen compounds, crude oil and oily sludge, persistent synthetic wastes – plastics, carcinogenic and mutagenic substances, radioactive subst.). Other substances can be released into marine environment subject to special permit.
- the incineration at sea is prohibited

#### Dumping Protocol

- the dumping of materials is prohibited with the exception of and subject prior special permit of dredged material, fish waste or organic materials resulting from the processing of fish and other marine organisms, vessels, until 31 December 2000; ) platforms and other man-made structures at sea, provided that material capable of creating floating debris or otherwise contributing to pollution of the marine environment has been removed to the maximum extent, without prejudice to the provisions of the Protocol concerning Pollution Resulting from Exploration and Exploitation of the Continental Shelf, the Seabed and its Subsoil; inert uncontaminated geological materials the chemical constituents of which are unlikely to be released into the marine environment.

#### Hazardous Wastes Protocol

- The Parties shall take all appropriate measures to reduce to a minimum, and where possible eliminate, the generation of hazardous wastes. The Parties shall also take all appropriate measures to reduce to a minimum the transboundary movement of hazardous wastes, and if possible to eliminate such movement in the Mediterranean. To achieve this goal, Parties have the right individually or collectively to ban the import of hazardous wastes.

## Prevention and Emergency Protocol

- The Parties shall cooperate:
  - a) to implement international regulations to prevent, reduce and control pollution of the marine environment from ships; and,
  - b) to take all necessary measures in cases of pollution incidences.

### **1.2. At strategic level**

- The Strategies adopted by the parties to lead and facilitate:
  - a) the implementation of the LBS Protocol :Strategic Action Programme to Combat Pollution from Land Based Sources (SAP-MED) adopted in 1997 and covers the period of implementation 2000-2025
  - b) the implementation of the Prevention and Emergency Protocol adopted in 2002 and in force since 2004: The regional strategy to prevent, abate The Regional Strategy for the. Prevention of and Response to. Marine Pollution from Ships adopted by the 14th Contracting parties meeting, 2005, Portoroz, Slovenia.
- Mediterranean Strategy for Sustainable Development adopted by the 14th meeting of the Contracting parties, Portoroz, Slovenia, 2005
- Five year strategic programme of work of MAP adopted by the 16th meeting of the Contracting Parties, Marrakesh, 2009 to lead the overall implementation of Barcelona Convention and its Protocols

### **1.3. At operational level through common measures adopted by COP decisions**

- The common measures on concrete sectors and contaminants adopted since 1987 by the meetings of the Contracting Parties in the framework of Articles 5 and 7 of the LBS Protocol
- The legally binding measures, programmes and timeframes for specific sectors and contaminants referred to as the Regional Plans adopted by the Meetings of the Contracting Parties in the framework of Articles 5 and 15 of the LBS protocol adopted in 2009 and 2012

The following decisions and strategic documents were reviewed for the purpose of the work on Pollution and Litter related EOs:

- Interim environmental quality criteria for bathing waters (1985)
- Interim environmental quality criteria for mercury (1985)
- Measures to prevent mercury pollution (1987)
- Environmental quality criteria for shellfish waters (1987)

- Measures for the control of pollution by used lubricating oils (1989)
- Measures for the control of pollution by cadmium and cadmium compounds (1989)
- Measures for the control of pollution by organotin compounds (1989)
- Measures for the control of pollution by organohalogen compounds (1989)
- Measures for the control of pollution by organophosphorus compounds (1991)
- Measures for the control of pollution by persistent synthetic materials (1991)
- Measures for the control of radioactive pollution (1991)
- Measures for the control of pollution by pathogenic microorganisms (1991)
- Measures for the control of pollution by carcinogenic, teratogenic and mutagenic substances (1993)
- Strategic Action Programme (SAP) to Address Pollution from Land-Based Activities (SAP MED) (1997)
- Mediterranean Strategy for Sustainable Development, 2005
- Regional Strategy for the Prevention of and Response to Marine Pollution from Ships, 2005
- Regional Plan on the reduction of BOD5 from urban waste water in the framework of the implementation of Article 15 of the LBS Protocol (2009)
- Regional Plan on the elimination of Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene in the framework of the implementation of Article 15 of the LBS Protocol (2009)
- Regional Plan on the phasing out of DDT in the framework of the implementation of Article 15 of the LBS Protocol (2009)
- Regional Plan on the elimination of Alpha hexachlorocyclohexane; Beta exachlorocyclohexane; Hexabromobiphenyl; Chlordecone; Pentachlorobenzene; Tetrabromodiphenyl ether and Pentabromodiphenyl ether; Hexabromodiphenyl ether and Heptabromodiphenyl ether; Lindane; Endosulfan, Perfluorooctane sulfonic acid, its salts and perfluorooactane sulfonyl fluoride, in the framework of the implementation of Article 15 of the LBS Protocol (2012)
- Regional Plan on the reduction of inputs of Mercury in the framework of the implementation of Article 15 of the LBS Protocol (2012)
- Regional Plan on the reduction of BOD5 in the food sector in the framework of the implementation of Article 15 of the LBS Protocol (2012)
- Criteria and Standards for bathing waters quality in the framework of the implementation of Article 7 of the LBS Protocol (2012)
- International Convention for the Prevention of Pollution from Ships (MARPOL)

- Annex I - Regulations for the Prevention of Pollution by Oil (entered into force 2 October 1983)
  - Annex II - Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk (entered into force 2 October 1983)
  - Annex III - Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form (entered into force 1 July 1992)
  - Annex IV - Prevention of Pollution by Sewage from Ships (entered into force 27 September 2003)
  - Annex V - Prevention of Pollution by Garbage from Ships (entered into force 31 December 1988)
  - Annex VI - Prevention of Air Pollution from Ships (entered into force 19 May 2005)
- International Convention on the Control of Harmful Anti-fouling Systems on Ships

## 2. Existing instruments of relevance for Biodiversity and Fisheries

This section presents the targets regarding Biodiversity and Fisheries adopted within the framework of Global, Regional and other Multilateral Agreements applicable to the Mediterranean Sea.

### 2.1. Global/International Legal Instruments

The **United Nations Convention on the Law of the Sea (UNCLOS, 1982)**: Its main objective is to establish a legal order for the seas and oceans that promotes their peaceful uses, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment. Part VII of UNCLOS is dedicated to the protection and preservation of the marine environment. It includes provisions related to pollution prevention, wise use of living resources and the control of introduction of alien species.

The **Convention on Biological Diversity (CBD, 1992)**: its objectives are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. Its Strategic Plan for Biodiversity for the 2011-2020 period includes twenty targets grouped in five strategic goals. Many of these targets are of relevance for the marine biodiversity.

The **Convention on Wetlands of International Importance especially as Waterfowl Habitat. (Ramsar Convention, 1971)**. Its mission is "the conservation and wise use of all wetlands through local, regional and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world". Some of its provisions are relevant to the marine biodiversity since marine areas whose water depth at low tide does not exceed six metres are considered wetlands by the Ramsar Convention. The Ramsar Convention has a Strategic Plan covering the period 2009-2015, it is built around five goals with targets to achieve by 2015.

The **International Convention for the Control and Management of Ships Ballast Water & Sediments (2004)**. It is aimed at preventing and eliminating the transfer of harmful aquatic organisms and pathogens through the control and management of ships' ballast water and sediments.

The **Code of Conduct for Responsible Fisheries**: To promote long-term sustainable fisheries, the Twenty-eighth Session of the FAO Conference (October, 1995) adopted the

Code of Conduct for Responsible Fisheries. The Code provides principles and standards applicable to the conservation, management and development of all fisheries. Among its objectives, the code aims at promoting the protection of living aquatic resources and their environments and coastal areas.

The **Convention on the Conservation of Migratory Species of Wild Animals (CMS)** aims to conserve terrestrial, aquatic and avian migratory species throughout their range. It was adopted in 1979. The CMS acts as framework Convention under the umbrella of which regional Agreements may be concluded to address the conservation of a species or a group of species in a particular region. In this context two Agreements of relevance to Mediterranean marine species were adopted:

- Agreement for the conservation of Cetaceans of the Mediterranean Sea, Black Sea and Contiguous Atlantic Area (ACCOBAMS)
- The Agreement for the conservation of African-Eurasian Migratory Waterbirds (AEWA)

## **2.2. Regional Conventions/Agreements**

The **Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention, 1976)**. Ensuring the sustainable management of natural marine resources and protecting natural heritage are among the main objective of the Barcelona Convention. One of its protocols is the Protocol Concerning Specially Protected Areas and Biological diversity in the Mediterranean (1995). The Protocol invites Parties to:

- protect, preserve and manage in a sustainable and environmentally sound way areas of particular natural or cultural value, notably by the establishment of specially protected areas;
- protect, preserve and manage threatened or endangered species of flora and fauna.

Within the framework of the implementation of the Barcelona Convention and its SPA/BD Protocol, the Contracting Parties adopted a series of Action Plans for the conservation of species and habitats. They also adopted an action plan to address the issue of non-indigenous species. The adopted Action Plans are:

- Action Plan for the management of the Mediterranean Monk Seal (1985)
- Action Plan for the conservation of Mediterranean Marine Turtles (1989)
- Action Plan for the conservation of cetaceans in the Mediterranean Sea (1991)
- Action Plan for the conservation of marine vegetation in the Mediterranean Sea (1999)
- Action Plan for the conservation of bird species listed in Annex II of SPA/BD Protocol (2003)
- Action Plan for the Conservation of cartilaginous fishes (Chondrichthyans) in the Mediterranean (2003)
- Action Plan concerning Species Introductions and Invasive Species in the Mediterranean Sea (2003)
- Action Plan for the Conservation of the Coralligenous and other Calcareous Bio-Concretions in the Mediterranean Sea (2008)

In 2003, the Contracting Parties adopted the Strategic Action Plan for the conservation of marine and coastal biodiversity in the Mediterranean (SAP BIO). Its main objective was to provide a logical base for implementing the SPA/BD. SAP BIO included a series of objectives and targets to address the main issues identified as a major hindrance to the conservation of marine and coastal biodiversity.

The **General Fisheries Commission for the Mediterranean (GFCM)** is one of the Regional Fisheries Management Organizations (RFMOs). It was established in 1949 by an Agreement under the provisions of Article XIV of the FAO constitution. The Agreement was amended in 1963 and 1976 and 1997. The GFCM has an area covering the entire Mediterranean Sea and the Black Sea. A total of 23 countries are Members to GFCM (22 Mediterranean countries, 2 Black Sea countries and Japan) along with the European Union.

The **International Convention for the Conservation of Atlantic Tunas (ICCAT)** was signed 1966 with the objective of ensuring the conservation of tunas and tuna-like species in the Atlantic Ocean and adjacent seas, including the Mediterranean. For certain species, ICCAT sets catch limits (TACs: Total Allowed Catches) based on stock assessments. ICCAT addresses also fishery environmental issues such as bycatch in endangered species (Turtles, Birds, cetaceans, etc.)

The **Agreement on the Conservation of Cetaceans in the Black Sea Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS)** was adopted in 1996 with the main objective of reducing threats to cetaceans in Mediterranean and Black Sea waters and improving the knowledge of these species. The Agreement includes a Plan of Action covering activities aimed achieving and maintaining a favourable conservation status for cetaceans.

The **Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)** is an intergovernmental treaty dedicated to the conservation of migratory waterbirds and their habitats across Africa, Europe, the Middle East, Central Asia, Greenland and the Canadian Archipelago. The Mediterranean Sea is fully covered by the AEWA Agreement area. The Agreement has an Action Plan made of actions for the protection of species and their habitats and for the management of human activities having the potential to threaten the species covered by the Agreement.

### 2.3. European framework

The EU Biodiversity Strategy to 2020: In May 2011, the European Commission adopted a new strategy aimed at stopping the loss of biodiversity and improving the state of Europe's species, habitats and ecosystems. The strategy was built towards the following vision: "By 2050, European Union biodiversity and the ecosystem services it provides – its natural capital – are protected, valued and appropriately restored for biodiversity's intrinsic value and for their essential contribution to human well-being and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided". The Strategy has the following headline target for 2020: "Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss". The achievement of this headline target being based on six main targets:

- Fully implement the **Birds and Habitats Directives**
- Maintain and restore ecosystems and their services
- Increase the contribution of agriculture and forestry to biodiversity
- Ensure the sustainable use of fisheries resources
- Combat Invasive Alien Species
- Step-up action to tackle the global biodiversity crisis

The elaboration of the Strategy benefited from the lessons learned from the implementation of the 2006 EU Biodiversity Action Plan and the related Commission's Communication.

Communication from the Commission - Halting the loss of biodiversity by 2010 - and beyond - Sustaining ecosystem services for human well-being: The Communication was issued in 2006 and had the following ten objectives:

- To safeguard the EU's most important habitats and species.
- To conserve and restore biodiversity and ecosystem services in the wider EU countryside.
- To conserve and restore biodiversity and ecosystem services in the wider EU marine environment.
- To reinforce compatibility of regional and territorial development with biodiversity in the EU.
- To substantially reduce the impact on EU biodiversity of invasive alien species and alien genotypes.
- To substantially strengthen effectiveness of international governance for biodiversity and ecosystem services.
- To substantially strengthen support for biodiversity and ecosystem services in EU external assistance.
- To substantially reduce the impact of international trade on global biodiversity and ecosystem services.
- To support biodiversity adaptation to climate change.
- To substantially strengthen the knowledge base for conservation and sustainable use of biodiversity, in the EU and globally.

### **3. Existing instruments of relevance for Coast and Hydrography**

This section presents the targets regarding hydrography (Ecological Objective 7) and coastal ecosystem and landscape (Ecological Objective 8) adopted within the global, regional, European and other multilateral agreements, and other relevant documents as well as results of some projects that have dealt with the issues relevant for this objective. Introduction of this objective is rather novel in the history of efforts to introduce the ecosystem approach in the Mediterranean. However, the complexity of the Mediterranean coastal ecosystem, and interconnected nature of the processes that have influenced the dynamics creating main features of the coastal ecosystem, makes it deserving of the introduction of these EOs. In the case of hydrography, most of these “targets” are generally broad, partly written as objectives and partly subject to interpretation by the implementing institutions.

#### **3.1. Global/International/Regional Legal Instruments**

The Ecological Objective (EO) Coastal Ecosystems and Landscape has not been a specific subject of international agreements and/or other legal documents. For that reason, and in order to give as wide perspective on this EO as well as to provide a solid basis for the definition of the Good Environmental Status and setting of the targets, the scope of instruments/potential sources will be somehow expanded and will also include relevant guidelines, strategies, reports and similar, wherever the issue of natural coastal dynamics and coastal landscape has been substantively treated.

No global convention mentions specifically, or deals with the subject of this EC. However, while the **Convention on Wetlands of International Importance especially as Waterfowl Habitat. (Ramsar Convention, 1971)** does not mention the two central issue relevant to this EO (natural dynamics/coastal erosion and coastal landscapes), its COP8 Resolution on Wetland issues in Integrated Coastal Zone Management (2002), mentions widely the coastal

erosion, both in terms of impacts causing the coastal erosion, as well as impacts of coastal erosion on natural habitats. It approaches the issue of coastal erosion primarily from the perspective of human actions, and less so as a natural phenomenon. The importance of ICZM and coast related phenomena, including coastal erosion, for the Ramsar Convention stems out of its definition of wetland which includes areas “with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres” (Article 1.1 of the Convention).

Revised **Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention, 1995)**, introduced the promotion of sustainable development as one of its major objectives, and extended the territorial scope of its application to coastal regions and, more specifically, to coastal areas. While it does not mention specifically the issues relevant to this EO, implicitly it is concerned with them if we make reference to its territorial scope. Furthermore, one could say that the revised Convention has led to the development and adoption of the seventh Protocol to the Barcelona Convention - the ICZM Protocol.

The **Protocol on Integrated Coastal Zone Management in the Mediterranean** (entered into force in 2011) invites the Parties to work towards, *inter alia*, the following objectives:

- facilitate, through the rational planning of activities, the sustainable development of coastal zones by ensuring that the environment and landscapes are taken into account in harmony with economic, social and cultural development;
- preserve coastal zones for the benefit of current and future generations;
- ensure preservation of the integrity of coastal ecosystems, landscapes and geomorphology; and
- prevent and/or reduce the effects of natural hazards and in particular of climate change, which can be induced by natural or human activities.

Implementation of the Protocol should follow, *inter alia*, the following principles:

- the biological wealth and the natural dynamics and functioning of the intertidal area and the complementary and interdependent nature of the marine part and the land part forming a single entity shall be taken particularly into account;
- all elements relating to hydrological, geomorphological, climatic, ecological, socio-economic and cultural systems shall be taken into account in an integrated manner, so as not to exceed the carrying capacity of the coastal zone and to prevent the negative effects of natural disasters and of development; and
- preliminary assessments shall be made of the risks associated with the various human activities and infrastructure so as to prevent and reduce their negative impact on coastal zones.

It is important to mention that the Protocol has special articles on coastal landscapes (11) and on coastal erosion (23). The **Action Plan for the implementation of the ICZM Protocol** was adopted at the Seventeenth Meeting of the Contracting Parties to the Barcelona Convention in Paris in 2012. Its overall aim is to strengthen implementation of ICZM policies and projects through priority interventions. The objectives of the Action Plan are to: support the effective implementation of the ICZM Protocol at regional, national and local levels in particular through national strategies and local programmes for ICZM; strengthen the capacities of Contracting Parties to implement the Protocol and use in an effective manner ICZM policies, instruments, tools and processes; and, promoting visibility and implementation of the ICZM Protocol within the region. As such, the Action Plan provides a context to implement the specific actions, including those related to this EO.

### 3.2. European framework

Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)

The Marine Strategy Framework Directive aims at the protection, conservation, preservation, and, where possible, the rehabilitation of the marine environment. The general goal is the sustainable utilization of the seas and the protection of the marine environment. The directive provides the legal framework for this goal. Within this framework, the member states should carry out the necessary actions to achieve and maintain a good status of the marine environment by 2020. The directive explicitly also includes the marine habitats within the term “marine environment”.

<p>ANNEX I</p> <p>Qualitative descriptors for determining good environmental status (which can be interpreted as a target)</p>	<p>(6) Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected.</p> <p>(7) Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems.</p>
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#### EU Water Framework Directive, 2000

The EU Water Framework Directive (Directive 2000/60/EC) is a European Union directive which commits European Union member states to achieve good qualitative and quantitative status of all water bodies (including marine waters up to one nautical mile from shore) by 2015. The directive is very general, mainly focuses on water quality, but touches on hydromorphological quality aspects such as river bank structure, river continuity or substrate of the river bed, though not in target related aspects.

<p>§ 1.3. Monitoring and reporting</p>	<p>Member States shall establish surveillance monitoring programmes and provide information. In this regard, “parameters indicative of all hydromorphological quality elements” are particularly mentioned</p>
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Majority of international legal documents, dealing with the issue relevant for this EO in the European context, were promoted by the Council of Europe. Also, most of them are dealing with the issue of landscape, and indirectly, with the coastal landscapes.

The **Pan-European Biological and Landscape Diversity Strategy (PEBLDS)** was adopted by the Council of Europe in 1992. It presents an innovative and proactive approach to stop and reverse the degradation of biological and landscape diversity values in Europe. It is innovative, because it addresses all biological and landscape initiatives under one European approach. It is proactive, because it promotes the integration of biological and landscape diversity considerations into social and economic sectors. The Strategy reinforces the implementation of existing measures and identifies additional actions that need to be taken over the next two decades. The Strategy also provides a framework to promote a consistent

approach and common objectives for national and regional action to implement the Convention on Biological Diversity. PEBLDS defines Landscape Diversity as "the formal expression of the numerous relations existing in a given period between the individual or a society and a topographically defined territory, the appearance of which is the result of the action, over time, of natural and human factors and a combination of both.

The **European Landscape Convention** - also known as the Florence Convention, - promotes the protection, management and planning of European landscapes and organizes European co-operation on landscape issues. The convention was adopted in 2000 in Florence by the Council of Europe member states. It is the first international treaty to be exclusively concerned with all dimensions of European landscape.

European Conference of Ministers responsible for Regional Planning (CEMAT), established under the aegis of the Council of Europe, adopted in 2000 the **Guiding Principles for Sustainable Spatial Development of the European Continent**. The document puts landscape in the focus of spatial development and respective planning approaches. It considers landscapes as "...significant part of European heritage and a witness of the past and present relationships between man and his natural and built environments (...) This not only concerns valuable natural landscapes, but applies generally to all types of cultural landscape, especially those that are an essential component of the urban environment."

The European Parliament and the Council adopted in 2002 a **Recommendation on Integrated Coastal Zone Management**, which defines the principles of sound coastal planning and management. These include the need to base planning on sound and shared knowledge, the need to take a long-term and cross-sector perspective, to pro-actively involve stakeholders and the need to take into account both the terrestrial and the marine components of the coastal zone. The text of the Recommendation states "Community coastal zones are further threatened by the effects of climate change, in particular rising sea levels, changes in storm frequency and strength, and increased coastal erosion and flooding." While the Recommendation makes only a scant reference to the coastal erosion, its adoption was important because it opened the way for several projects that have dealt with the issue of the European (and Mediterranean) coastal erosion in much greater detail.

### 3.3. Other sources

In addition to the above instruments, various organisations prepared a number of documents, which, although having no legal power, could be considered as valuable source of information for defining this EO's targets.

In 1995, the Priority Actions Programme Regional Activity Centre (PAP/RAC) prepared the **Guidelines for Integrated Management of the Marine and Coastal Areas**. While developing a comprehensive coastal management approach based on considering coastal ecosystems in their entirety, which essentially led to the development and adoption of the ICZM Protocol, the document is very thorough in putting the coastal landscape and coastal erosion in the centre of coastal zone and the relevant management approach. Following the implementation of the ICZM approach in the Mediterranean, PAP/RAC prepared a document **Coastal Erosion Management in the Mediterranean: An Overview** (2002), which is the only known presentation of the issue covering the entire Mediterranean region. Similarly, in 2011 PAP/RAC published the document **Landscape Management Methodologies: Synthesis Report of Thematic Studies**, which gives an overview of management efforts in the region to protect and develop coastal landscapes.

Two Mediterranean-specific reports, published in recent years, have paid specific attention to the issue of coastal erosion and coastal landscape: **A Sustainable Future for the**

**Mediterranean: The Blue Plan's Environment and Development Outlook** (2005), and **State of the Mediterranean Marine and Coastal Environment** (2012). At the European level, the European Environment Agency (EEA) has in recent years published 2 coastal zone related reports. The report **Priority issues in the Mediterranean environment** (2005) analysed the habitat construction and physical alteration of the coastline, which may cause coastal erosion. The report **The changing faces of Europe's coastal areas** (2006) offers the pan European perspective with a special snapshot on the coastal dynamics and risk based on the results of the **EUROSION** project.

**Annex I**  
**Targets related to land based sources of pollution**

### Annex I. Targets related to land based sources of pollution

Existing targets and EQO regarding pollution in the framework of UNEP/MAP MEDPOL Programme

Target type Sector/substance	Environment Quality /State		Pressure		Operational/programmes and measures/management		
			2005-2010	2025	2005 SAP MED target(s)	2010- 2019	2025 SAP MED target(s)
Disposal of Municipal waste water (sewage)					Disposal in conformity with the LBS Protocol for cities Exceeding 100.000 inhabitants and in areas of concern	<p><b>By 2015 or 2019</b></p> <p>- National BOD<sub>5</sub> ELVs<sup>1</sup> for urban waste waters after treatment in the</p> <p>a) <i>LBS Protocol Area less than 50 mg/l</i> , assuming a performance of reduction of the influent load of 70-90 % (secondary treatment)</p> <p>b) <i>LBS Protocol Area – marine outfalls</i> (ref. Art. 7 LBS Protocol) less than 200 mg/l, assuming a performance of reduction of the influent load of 20 % (primary treatment).</p> <p>- These ELVs should only be adopted taking into account local conditions, and provided that total</p>	Disposal in in conformity with the LBS Protocol for all cities and agglomerations

<sup>1</sup> ELV: Emmission limit values mean maximum allowable pollutant concentration to be finally discharged to the receiving water environment

Target type	Environment Quality /State		Pressure		Operational/programmes and measures/management		
Sector/substance			2005-2010	2025	2005 SAP MED target(s)	2010- 2019	2025 SAP MED target(s)
						loads do not affect the receiving marine environment.	
Environment sound disposal of urban solid waste management					Disposal in conformity with the LBS Protocol for cities exceeding 100.000 inhabitants and areas of concern ( SAP MED 1997)		Disposal in conformity with the LBS Protocol in all agglomerations system
Access to sanitation						By 2015 Halve the number of inhabitants without access to sanitation ( MSSD, 2005)	
Levels of Air pollution and air emissions	<b>By 2005:</b> Levels of air pollutants in cities Exceeding 100.000 inhabitants and areas of concern are in conformity with the LBS Protocol, (SAP MED, 1997)	<b>By 2025</b> Levels of air pollutants in cities to be in conformity with the LBS Protocol and other agreed international and national provisions (SAP MED, 1997)					<b>By 2025:</b> Air emissions from industrial point sources in the Protocol area to be in conformity with the LBS Protocol and other agreed international and national provisions

Target type Sector/substance	Environment Quality /State		Pressure		Operational/programmes and measures/management		
			2005-2010	2025	2005 SAP MED target(s)	2010- 2019	2025 SAP MED target(s)
<b>Industrial pollution</b> (point source discharges and emissions)							
a) TPB substances (toxic, persistent and able to bio-accumulate)			<b>by 2007</b> a) 50% reduction of discharges, emissions and losses of TPB and polluting substances in areas of concern and hot spots <b>(SAP MED, 1997)</b>				<b>By 2025</b> Industrial pollution from point sources in conformity with LBS & standards and other international and national
b) BOD from industrial sources and specifically from food sector			<b>By 2010</b> 50% reduction of BOD from industrial sources <b>(COP 12, Catania, Italy, 2003)</b>			<b>By 2014</b> <b>Food sector as outlined below<sup>2</sup></b> that discharge more than 4,000 p.e into water bodies shall meet the following requirements (24-hour values): -Chemical Oxygen Demand (COD) less than 160 mg/l or -Total Organic Carbon (TOC)less than 55 mg/l -BOD5 (or BOD7) less than 30 mg/l	

<sup>2</sup> Dairy industry, Fruit and vegetable processing, Breweries, Winery and Distilleries, Fish processing industry, Sugar manufacturing, Vegetable oil processing Canning and preserving, Meat processing and slaughtering

Target type Sector/substance	Environment Quality /State	Pressure		Operational/programmes and measures/management		
		2005-2010	2025	2005 SAP MED target(s)	2010- 2019	2025 SAP MED target(s)
c)POPs	The Contracting Parties agree as follows from 1 January 1991: (a) To adopt an environmental quality objective in coastal waters of <b>25 µg 1-1 for total DDT</b> in terms of Article 5 and Annex I of the LBS Protocol	<p><b>By 2005</b></p> <p>- 50% reduction of priority 12 POPs inputs to marine environment</p> <p><b>By 2010</b></p> <p>- Phase out inputs of 9 pesticides and PCBs and reduce to the fullest possible extent hexachloro benzene, dioxins and furans (SAP MED, 1997)</p>		<p><b>By 2005</b></p> <p>To collect and dispose all PCBs in a sound environmental manner</p>	<p><b>By 2013</b></p> <p>1. Eliminate the production and import export of 10 POPs/ chemical compounds under the Stockholm convention<sup>3</sup></p> <p>2. The chemical compounds are (a) handled, collected, transported and stored in an environmentally sound manner; (b) disposed of in such a way that the persistent organic pollutant content is destroyed or irreversibly transformed so that they do not exhibit the characteristics of persistent organic pollutants.</p> <p>(Exemptions are foreseen) <b>COP 17, 2012, Paris: Decision IG 20/8.3</b></p>	

<sup>3</sup> Alpha hexachlorocyclohexane; Beta exachlorocyclohexane; Hexabromobiphenyl; Chlordecone; Pentachlorobenzene; Tetrabromodiphenyl ether and Pentabromodiphenyl ether; Hexabromodiphenyl ether and Heptabromodiphenyl ether; Lindane; Endosulfan, Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride

Target type	Environment Quality /State	Pressure		Operational/programmes and measures/management		
Sector/substance		2005-2010	2025	2005 SAP MED target(s)	2010- 2019	2025 SAP MED target(s)
-Organohalogen compounds	COMMON MEASURES ON POLLUTION BY ORGANOHALOGEN COMPOUNDS, 1989	<u>Organohalogen</u> By 2010: Reduce discharges	<u>Organo halogen</u> BY 2025 Eliminate to the fullest extent possible pollution caused by emissions, discharges and losses		<p><b>By 2013</b> The Parties shall prohibit and/or take legal and administrative measures necessary to eliminate:</p> <p>(a) the production and use of DDT, subject to the provisions of Appendix A; and (b) the import and export of DDT and its waste in accordance with paragraph 2 of this Article</p> <p>The Parties shall ensure that this chemical as an active substance or as a waste is imported or exported only: (a) for the purpose of environmentally sound disposal according to the (international law) (b) for a use or purpose which is permitted for that Party under Appendix A.</p> <p>Exemptions: use in emergency circumstances for disease vector control <b>COP 16, Marrakesh, 2009; Decision IG 19.9</b></p>	

Target type	Environment Quality /State	Pressure		Operational/programmes and measures/management		
Sector/substance		2005-2010	2025	2005 SAP MED target(s)	2010- 2019	2025 SAP MED target(s)
					<p>The Parties shall prohibit and/or take legal and administrative measures necessary to eliminate:</p> <p>(a) the production and use of the chemicals (Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Mirex and Toxaphene), and</p> <p>(b) their import and export of the chemicals and their wastes.</p> <p>A chemical as active substance and or as a waste is imported or exported only:</p> <p>(a) for the purpose of environmentally sound disposal according to (international law)</p> <p><b><u>COP 16, Marrakesh, 2009, Decision IG 19.8</u></b></p>	

Target type	Environment Quality /State		Pressure		Operational/programmes and measures/management		
Sector/substance			2005-2010	2025	2005 SAP MED target(s)	2010- 2019	2025 SAP MED target(s)
d) PAH				25% reduction of PAH inputs (SAP MED), 1997	To phase out to the fullest possible extent the PAH inputs (SAP MED 1997)		
e) Heavy metals (Hg, Cd, Pb)	<p><b><u>Cadmium</u></b></p> <p>The contracting parties as of <b>January first 1991 adopt</b>, in principle, <b>an eventual water quality objective of a maximum of 0.5 µg cadmium per litre in marine water</b></p> <p>(IG 1: COMMON MEASURES ON POLLUTION BY CADMIUM AND CADMIUM COMPOUNDS 1989), UNEP(OCA)/MED IG.1/5 ANNEX V page 7-10</p>		<p><b><u>Heavy metals input</u></b></p> <p><u>By 2000</u> 25% reduction</p> <p><u>by 2005</u> 50% reduction</p> <p>(SAP MED, 1997)</p> <p><u>By 2010 to</u> -phase out to the fullest possible extent organo-mercuric compounds, - reduce to the fullest possible extent the organo-lead and organo-tin compounds</p> <p>By 2010 -50% reduction of organometalic compunds</p>	Phase out discharges, emissions and losses	Reduce discharges	<p><b><u>Cadmium</u></b></p> <p>the Contracting Parties as from 1 January 1991: (a) Adopt a limit value of 0.2 mg cadmium per litre discharged (monthly flow-weighted average concentration of total cadmium) for effluent discharges from industrial plants into the Mediterranean Sea before dilution. The above limit value does not apply to the phosphate fertilizer industry, but each Mediterranean country should fix its own national value pending a new decision by the Contracting Parties</p>	
	<p>Hg and Cd concentration increase at a radius of 5 km from the outfall in biota and sediments to be no more than 50% than background values</p>				Guidelines for BAT and BEP in industries sources of Hg, Cd, Pb	<p>Relevant outfall structures shall be adjusted in such a way as to achieve maximum dilution in the mixing zone adjacent to the outfall and monitoring sediments and biota to ensure an increase of not more than 50% above background levels in the case of new plants, and achieve a progressive decrease towards the same objective in areas affected by existing plants. (UNEP(OCA)/MED IG.1/5 ANNEX V page 7-10) COP 1989.</p> <p><b><u>Mercury</u></b></p>	

Target type	Environment Quality /State	Pressure		Operational/programmes and measures/management		
Sector/substance		2005-2010	2025	2005 SAP MED target(s)	2010- 2019	2025 SAP MED target(s)
						<p>-Prohibition of installation of new Chlor alkali plants using mercury cells;                      -Prohibition of installation of vinyl chloride monomer production plants using mercury as a catalyst;                      -Releases of mercury from the activity of Chlor alkali plants shall cease by <b>2020 at the latest</b>;                      -Total releases of mercury (to the air, the water and to the products) from existing Chlor alkali plants are progressively reduced until their final cessation with the view not to exceed 1.0g per metric tons of installed chlorine production capacity in each plant. In doing so, the air emissions should not exceed 0.9g per metric tons of installed chlorine production capacity in each plant.</p> <p>The Parties shall adopt by 2015 and 2019 National ELVs for Mercury emissions from other than Chlor Alkali industry as follows (for chemical industries using Hg catalyst, manufacturing of batteries and non-ferrous metal industries):</p> <p>ELV 2015: 50 mg/l effluent</p> <p>ELV 2019: 5 mg/l effluent (target values, which will be considered for revision by 2015, with a view to establishing new ELVs)</p> <p>National ELVs for Mercury emissions from incineration plants: Waste gas 0.05 mg/ Nm<sup>3</sup>                      Reduce the inputs of Mercury emissions from other sectors and use alternatives as appropriate</p> <p>Isolate and contain the mercury containing wastes to avoid potential contamination of air, soil or water</p> <p><b>COP 17, Paris; Decision IG 20/8</b></p>

Target type	Environment Quality /State		Pressure		Operational/programmes and measures/management			
Sector/substance			2005-2010	2025	2005 SAP MED target(s)	2010- 2019		2025 SAP MED target(s)
f) Other Heavy metals (Zn, Cu, Cr)				By 2010 - Reduce discharges, emissions and losses - Eliminate to the fullest possible extent pollution in the Mediterranean caused by Zn, Cu and Cr	Eliminate discharge			
Radioactive substances				Eliminate inputs				
Nutrients and suspended solids, including municipal sewage, industrial wastewater				50% reduction from industry				to dispose all waste water from industrial installations in conformity with the provisions of the LBS Protocol.

Target type	Environment Quality /State		Pressure		Operational/programmes and measures/management		
Sector/substance			2005-2010	2025	2005 SAP MED target(s)	2010- 2019	2025 SAP MED target(s)
Impact from agriculture				To reduce nutrient inputs, from agriculture and aquaculture practices into areas where these inputs are likely to cause pollution			
Hazardous waste			By 2010  20% reduction of HW generation  (Regional Plan on HW, 13th CP meeting in Catania, Italy, 2003)			By 2010 to dispose 50 % of the hazardous waste generated, in a safe and environmentally sound manner and in conformity with the provisions of the LBS Protocol and other internationally agreed provisions (SAP MED, 1997)	to dispose all hazardous wastes in a safe and environmentally sound manner and in conformity with the provisions of the LBS Protocol and other international agreed provisions
Obsolete chemicals					to collect and dispose all obsolete chemicals in a safe and environmentally sound manner		
Lube-oil					to collect and dispose 50 % of used lubricating oil in a safe and environmentally sound manner		To collect and dispose all lube oils in a environmentally sound manner

Target type	Environment Quality /State				Pressure		Operational/programmes and measures/management																	
Sector/substance					2005-2010	2025	2005 SAP MED target(s)	2010- 2019	2025 SAP MED target(s)															
Batteries						By 2007-2010  20% reduction of generation of batteries		By 2010  To dispose 50% of used batteries in an environmentally sound manner	to dispose all used batteries in a safe and environmentally sound manner and in conformity with the provisions of the Protocol and other internationally agreed provisions															
Bathing water	<table border="1"> <thead> <tr> <th>Category</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>Limit values</td> <td>&lt;100*</td> <td>101-200*</td> <td>185**</td> <td>&gt;18 ** (1)</td> </tr> <tr> <td>Water quality</td> <td>Excellent quality</td> <td>Good quality</td> <td>Sufficient</td> <td>Poor quality/ Immediate Action</td> </tr> </tbody> </table> <p>* 95th percentile intestinal enterococci/100 mL (applying the formula 95th Percentile = antilog (<math>\mu + 1,65 \sigma</math>))  ** 90th percentile intestinal enterococci/100 mL (90th Percentile=antilog (<math>\mu + 1,282 \sigma</math>), <math>\mu</math>=calculated arithmetic mean of the log10 values; <math>\sigma</math>= calculated standard deviation of the log10 values.</p>				Category	A	B	C	D	Limit values	<100*	101-200*	185**	>18 ** (1)	Water quality	Excellent quality	Good quality	Sufficient	Poor quality/ Immediate Action					
Category	A	B	C	D																				
Limit values	<100*	101-200*	185**	>18 ** (1)																				
Water quality	Excellent quality	Good quality	Sufficient	Poor quality/ Immediate Action																				

**Annex II**  
**Obligations related to sea based sources of pollution**

**Annex II. Obligations related to sea based sources of pollution**

**Appendix I.**

**MARPOL Annex I – Oil (Mediterranean Sea a Special Area)**

Ship type and size	Oil originating from.....	Discharge criteria
All ships of 400 gross tonnage and above	Machinery Spaces	<p><b>To be retained on board</b></p> <p>OR</p> <p><b>No Discharge</b> except when:</p> <ul style="list-style-type: none"> <li>*the ship is <i>en route</i>;</li> <li>*the oily mixture is processed through an oil filtering equipment as required in the applicable parts of regulation 14 of Annex I (for ships between 400 and 10.000 GT regulation 14.6; for ships ≥10.000 GT regulation 14.7);</li> <li>* the oil content of the effluent without dilution does not exceed 15 ppm;</li> <li>* on oil tankers, the oily mixture does not originate from cargo pump-room bilges and is not mixed with oil cargo residues</li> </ul> <p>AND</p> <p>the oil filtering equipment should be provided with alarm arrangements and arrangements that the discharge is automatically stopped when the content of the effluent exceeds 15 ppm.</p>
Ships of less than 400 gross tonnage		<p><b>To be retained on board</b></p> <p>OR</p> <p><b>No Discharge</b> except when:</p> <p>Oil or oily mixtures is discharged into the sea under the following conditions:</p> <ul style="list-style-type: none"> <li>*the ship is <i>en route</i>;</li> <li>* equipment approved by the Administration to ensure that the effluent does not exceed 15 ppm shall be in operation</li> <li>* on oil tankers, the oily mixture does not originate from cargo pump-room bilges and is not mixed with oil cargo residues</li> </ul>
Any oil tanker	Cargo Tanks	<p><b>No Discharge</b> except for clean or segregated ballast.</p>

## Appendix II.

### MARPOL Annex II – Noxious Liquid Substances (NLS)

#### Control of discharges

Any discharge into the sea of products in Category X, Y or Z is prohibited unless such discharges are made in compliance with the requirements in regulation 13 of Annex II.

Before any discharge into the sea takes place the following operation shall be carried out

Cat	Operation
X	Prewash
Y	High viscous and solidifying products →prewash Non high viscous and non solidifying products →efficient stripping
Z	Efficient stripping

Any subsequent discharge of water added to the tank shall take place under the following conditions:

- the ship is *en route*;
- the ship has a speed of at least 7 knots (non self propelled 4 knots)
- the discharge is made below the waterline
- the distance from the nearest land is not less than 12 nautical miles
- the depth of the water is not less than 25 metres

On request of the ship's master an exemption *of the prewash (regulation 13.4)* may be granted when:

- the unloaded tank will be reloaded with the same or a compatible cargo;
- the prewash will take place in another port – confirmation of available shore reception facilities is present in writing; or
- the cargo residue will be removed by ventilation.

## Appendix III.

### MARPOL Annex III – NLS

- **Jettisoning prohibited.**

**Appendix IV.****MARPOL Annex IV – Sewage**

<b>Sea area</b>	<b>Discharge criteria</b>
Within 3 nautical miles from land	<b>No discharge</b> except from an approved sewage treatment plant certified to meet regulations 9.1.1 and 11.1.2
Between 3 and 12 nautical miles from the nearest land	<b>No discharge</b> except either; (1) from an approved sewage treatment plant certified to meet regulations 9.1.1 and 11.1.2; or (2) from an approved system for comminuting and disinfecting sewage meeting regulations 9.1.2 and 11.1.1 first part
More than 12 nautical miles from land	<b>Discharge</b> from either (1) or (2) above; or Sewage which is not comminuted or disinfected when the ship is proceeding at not less than 4 knots and the rate of discharge is approved by the Administration. Reference is made to resolution MEPC 157(55) - Recommendation on standards for the rate of discharge of untreated sewage from ships.

**Appendix V.****MARPOL Annex V - Garbage (Mediterranean Sea – Special Area)**

Type of garbage	Ships within special areas	Offshore platforms (more than 12 nm from land) and all ships within 500 m of such platforms
Food waste comminuted or ground	<b>Discharge permitted</b> ≥12 nm from the nearest land, en route and as far as practicable	<b>Discharge permitted</b>
Food waste not comminuted or ground	<b>Discharge prohibited</b>	<b>Discharge prohibited</b>
Cargo residues <sup>4</sup> not contained in wash water	<b>Discharge prohibited</b>	<b>Discharge prohibited</b>
Cargo residues <sup>1</sup> contained in wash water	<b>Discharge permitted</b> ≥12 nm from the nearest land, en route, as far as practicable and subject to two additional conditions <sup>2</sup>	<b>Discharge prohibited</b>
Cleaning agents and additives <sup>1</sup> contained in cargo hold wash water	<b>Discharge permitted</b> ≥12 nm from the nearest land, en route, as far as practicable and subject to two additional conditions <sup>5</sup>	<b>Discharge prohibited</b>
Cleaning agents and additives <sup>1</sup> in deck and external surfaces wash water	<b>Discharge permitted</b>	<b>Discharge prohibited</b>
Carcasses of animals carried on board as cargo and which died during the voyage	<b>Discharge prohibited</b>	<b>Discharge prohibited</b>
All other garbage including plastics, synthetic ropes, fishing gear, plastic garbage bags, incinerator ashes, clinkers, cooking oil, floating dunnage, lining and packing materials, paper, rags, glass, metal, bottles, crockery and similar refuse	<b>Discharge prohibited</b>	<b>Discharge prohibited</b>
Mixed garbage	When garbage is mixed with or contaminated by other substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply	

<sup>4</sup> These substances must not be harmful to the marine environment.

<sup>5</sup> According to regulation 6.1.2 of MARPOL Annex V the discharge shall only be allowed if: (a) both the port of departure and the next port of destination are within the special area and the ship will not transit outside the special area between these ports (regulation 6.1.2.2); and (b) if no adequate reception facilities are available at those ports (regulation 6.1.2.3).

**Appendix VI.****MARPOL Annex VI - Air Emissions – Mediterranean Sea is not a SECA / ECA**

<b>Vessel</b>	<b>Sub-Category</b>	<b>Discharge Conditions</b>
All vessels	Ozone-depleting substances	<ul style="list-style-type: none"> <li>Prohibited</li> </ul>
	Nitrogen Oxides	<ul style="list-style-type: none"> <li>Operation of diesel engines &gt;130kW prohibited unless engine is certified to meet prescribed emission standards.</li> </ul> <p>New Engines:</p> <ul style="list-style-type: none"> <li>Tier I - 17 g/kW from 1 January 2000</li> <li>Tier II - 14.4 g/kW from 1 January 2011</li> <li>Tier III - 3.4 g/kW from 1 January 2016 (in Emission Control Areas (ECA))</li> </ul> <p>Existing Engines (installed on ship on or between 1 January 1990 to 1 January 2000)</p> <ul style="list-style-type: none"> <li>17g/kW for diesel engine with power output &gt;5000kW and displacement per cylinder ≥ 90 litres</li> <li>Approved method by Administration</li> </ul>
	Sulphur Oxides	<ul style="list-style-type: none"> <li>Sulphur content of fuel oil not to exceed 4.5%.**</li> <li>From 1 January 2012, sulphur content of fuel oil not to exceed 3.5% **</li> <li>From 1 January 2020 sulphur content if fuel oil not to exceed 0.5% **</li> </ul> <p>** Fuel oil to be purchased from a registered supplier</p> <p>Note a feasibility review to be completed 2018</p>
	Incinerators	<ul style="list-style-type: none"> <li>Incinerators installed after 1 January 2000 must be type approved and certified to meet prescribed emission standards.</li> <li>Do not use within port limits</li> </ul>

**Appendix VII.**

**International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001 (AFS 2001)**

**Art 4 prohibits the use of harmful anti-fouling systems listed in Annex 1 (exemptions for a certain period of time possible)**

Anti-fouling system	Control measures	Application	Effective date
Organotin compounds which act as biocides in anti-fouling systems	Ships shall not apply or re-apply such compounds	All ships	1 January 2003
Organotin compounds which act as biocides in anti-fouling systems	Ships either:  (1) shall not bear such compounds on their hulls or external parts or surfaces; or  (2) shall bear a coating that forms a barrier to such compounds leaching from the underlying non-complaint anti-fouling systems	All ships (except fixed and floating platforms, FSUs and FPSOs that have been constructed prior to 1 January 2003 and that have not been in dry-dock on or after 1 January 2003):	1 January 2008

**Annex III**  
**Targets in relation to Biodiversity, Non-indigenous species, Harvest of**  
**commercially exploited fish and shellfish, Marine food webs and Sea-floor**  
**integrity**

Inventory of existing targets

The targets included in the following tables were identified through the analysis of official documents adopted within the framework of the International and Regional Agreements/Instruments presented in the Section 2 above. Many of these Agreements provide for measures without setting qualitative or quantitative targets.

**Ecological Objective 1:** 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.

Instrument		Target
SPA/BD Protocol	SAPBIO	<ul style="list-style-type: none"> <li>- GIS-based mapping of sensitive habitats by 2008</li> <li>- Increase (50%) by 2012 the surface area covered by MPAs</li> <li>- Set up a representative Mediterranean network of marine and coastal protected areas by 2012</li> <li>- Control and regulate the urban development of coastal area, land use planning and aquaculture practices within a wider management plan by 2010</li> <li>- Legal regulation of recreational activities by 2008</li> </ul>
	SDF	<ul style="list-style-type: none"> <li>- Inventory of sites of conservation interest using the Standard Data-entry Form and the List of reference Habitat Types</li> </ul>
CBD	Strategic Plan for Biodiversity 2011-2020	<ul style="list-style-type: none"> <li>- By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced (<b>Target 5</b>)</li> <li>- By 2020, at least 17 per cent of terrestrial and inland water areas, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes. (<b>Target 11</b>)</li> </ul>
EU Framework	EU Biodiversity Strategy to 2020	<ul style="list-style-type: none"> <li>- To halt the deterioration in the status of all habitats covered by EU nature legislation and achieve a significant and measurable improvement in their status so that, by 2020, 100% more habitat assessments (compared to 2010 assessments) show an improved conservation status (through the implementation of the Habitats and Birds Directives)</li> </ul>

Instrument		Target
		<ul style="list-style-type: none"> <li>- By 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15% of degraded ecosystems</li> </ul>
GFCM		<ul style="list-style-type: none"> <li>- Contracting Parties and Cooperating non-contracting Parties of GFCM should develop mechanisms to ensure that incidental taking of <b>seabirds</b> in fishing activities is monitored, recorded and kept to the lowest level as possible in particular for species under the Annex II of the SPA/BD protocol of the Barcelona Convention (REC.CM-GFCM/35/2011/3).</li> <li>- Contracting Parties and Cooperating non-contracting Parties of GFCM should ensure the implementation of fisheries management measures that strongly mitigate or eliminate the risk of incidental taking of sea <b>turtles</b> in fishing operations and/or the mortality associated with those incidental takings.</li> <li>- Contracting Parties and Cooperating non-contracting Parties of GFCM shall ensure the implementation of fisheries management measures that strongly mitigate the risk of incidental taking of <b>monk seals</b> during fishing operations (REC.CM-GFCM/35/2011/5).</li> <li>- Contracting Parties and Cooperating non-contracting Parties of the GFCM shall take actions to study, monitor, prevent, mitigate and, to the extent possible, eliminate incidental taking of <b>cetaceans</b> during fishing operations (REC. GFCM/36/2012/2).</li> </ul>

**Ecological Objective 2:** Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystem.

Instrument		Target
SPA/BD Protocol	SAPBIO	Reinforce control and mitigation of the introduction and spread of alien species by 2006.
	Action Plan concerning Species Introductions and Invasive Species in the Mediterranean Sea	There is no specific target set under the Action Plan. However, the implementation calendar includes 20 actions to be undertaken within a three-years period of time starting from the adoption of the Action Plan by the Contracting Parties.
CBD	Strategic Plan for Biodiversity 2011-2020	By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment (Target 9).
EU framework	Commission Communication on Biodiversity (2006)	By 2010 and beyond, a comprehensive EU strategy should be developed for the prevention and control of invasive alien species; as well as specific actions including an early warning system.
	EU Biodiversity Strategy to 2020	- By 2020, Invasive Alien Species (IAS) and their pathways are identified and prioritised, priority species are controlled or eradicated, and pathways are managed to prevent the introduction and establishment of new IAS.

**Ecological Objective 3:** 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

Instrument		Target
SPA/BD Protocol	SAPBIO	<ul style="list-style-type: none"> <li>- Attain the protection of 20 % of the coast as marine fishery reserves by 2012</li> <li>- Maintain or restore fishery stocks to levels that can produce the maximum sustainable yield with the aim of achieving these goals for depleted stocks on an urgent basis and where possible not later than 2015</li> <li>- Urgently develop and implement national plans of action, to put into effect the FAO international plans of action, in particular the international plan of action for the management of fishing capacity by 2005 and the international plan of action to prevent, deter and eliminate illegal, unreported and unregulated fishing by 2004</li> <li>- Establish effective monitoring, reporting and enforcement, and control of fishing vessels, including by flag states, to further the international plan of action to prevent, deter and eliminate illegal, unreported and unregulated fishing</li> </ul>

CBD	Strategic Plan for Biodiversity 2011-2020	- By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits (Target 6)
EU	Commission Communication on Biodiversity (2006)	- By 2010 and beyond, optimising the use of available measures under the reformed Common Fishery Policy, notably to restore fish stocks, reduce impacts on non-target species and reduce damages to marine habitats
	EU Biodiversity Strategy to 2020	- Achieve Maximum Sustainable Yield (MSY) by 2015. - Achieve a population age and size distribution indicative of a healthy stock, through fisheries management with no significant adverse impacts on other stocks, species and ecosystems, in support of achieving Good Environmental Status by 2020, as required under the Marine Strategy Framework Directive.
ICCAT		The total allowable catches (TACs) for Bluefin Tuna in the Eastern Atlantic and Mediterranean shall be set at 13.400 t annually, effective beginning in 2013 and thereafter, until such time the TAC is changed following the advice of SCRS (Standing Committee on Research and Statistics) (Recommendation 12-03 BFT).

**Ecological Objective 4:** 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.

No specific target found in relation to Ecological Objective 4

**Ecological Objective 6:** Sea-floor integrity is maintained, especially in priority benthic habitats.

Instrument		Instruments
CBD	Strategic Plan for Biodiversity 2011-2020	- By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning (Target 10)
EU	Commission Communication on Biodiversity (2006)	- By 2010 and beyond, optimising the use of available measures under the reformed Common Fishery Policy, notably to restore fish stocks, reduce impacts on non-target species and reduce damages to marine habitats

**Annex IV**  
**Targets in relation to Coastal Ecosystem and Landscape**

Inventory of existing targets in relation to Coastal Ecosystem and Landscape

The targets included in the following table were identified through the analysis of documents adopted within the framework of the international agreements and instruments as well as other relevant sources presented in the Section 2 above. Most of these documents provide for measures without setting qualitative or quantitative targets.

Instrument		Target
Territorial Framework	Document	
Global	Ramsar	The 2002 Resolution on ICZM emphasizes the role of coastal erosion in coastal zones, either when it is caused by human alterations of the coast or by a climate change. A set of guiding principles invites countries to increase efforts to implement ICZM, which will, <i>inter alia</i> , help reduce negative impacts of coastal erosion. Neither specific targets nor dates were given.
Regional (Mediterranean)	ICZM Protocol	<p>Coastal landscape:</p> <ul style="list-style-type: none"> <li>• promote regional and international cooperation for landscape protection</li> <li>• implement joint actions for transboundary coastal landscapes</li> <li>• adopt measures to preserve or develop coastal forests and woods, and preserve and rehabilitate dunes and bars</li> </ul> <p>Coastal erosion:</p> <ul style="list-style-type: none"> <li>• implement the 100 m setback rule</li> <li>• adopt necessary measures to maintain or restore natural capacity of the coast to adapt to changes, including those caused by sea level rise</li> <li>• when considering new activities, take in consideration negative impacts of coastal erosion and minimize its effects</li> <li>• adopt special measures for coastal sediments and coastal works</li> <li>• share scientific data on coastal erosion</li> </ul>
	Action Plan for ICZM	The Action Plan is very specific in proposing measures to improve the implementation of ICZM, and integration of sectoral issues, including protection of the coastline and coastal landscapes in ICZM, but is not specific in giving targets on these two issues to be achieved until 2020.
European	PEBLDS	<p>In next 20 years, i.e. from 1996 to 2016:</p> <ul style="list-style-type: none"> <li>• threats to Europe's biological and landscape diversity are reduced substantially, or where possible removed</li> <li>• resilience of European biological and landscape diversity is increased</li> <li>• ecological coherence of Europe as a whole is strengthened</li> </ul>
	European Landscape Convention	<p>To promote landscape protection, management and planning, and to organize European co-operation on landscape issues. Each Party should do the following:</p> <ul style="list-style-type: none"> <li>• recognize landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a</li> </ul>

		<p>foundation of their identity;</p> <ul style="list-style-type: none"> <li>• establish and implement landscape policies aimed at landscape protection, management and planning;</li> <li>• establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of the landscape policies;</li> <li>• integrate landscape into its regional and town planning policies and in its cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape.</li> </ul>
	CEMAT	<ul style="list-style-type: none"> <li>• integration of landscape development into spatial planning as well as into sectoral policies such as those related to the economy, agriculture, infrastructure and urban development, culture, environment, social development, which all have direct or indirect effects on the development of landscapes;</li> <li>• examination and general assessment of landscapes, the analysis of their characteristics, of their ecosystems and of the forces and pressures transforming them; the definition and use of landscape quality objectives;</li> <li>• implementation of integrated policies aimed at simultaneously protecting, managing and planning landscapes;</li> <li>• the consideration of landscape development in international programmes;</li> <li>• stronger cross-border, transnational and interregional co-operation in the fields of landscape development, exchange of experience and research projects involving in particular local and regional authorities;</li> <li>• the strengthening of the awareness of people, private organizations and territorial authorities of the value of landscapes, their economic significance, their evolution and the possibilities of conserving and improving them;</li> <li>• stronger integration of landscape development into training programmes in various disciplines, and interdisciplinary training programmes.</li> </ul>
	EU ICZM Recommendation	<p>National ICZM strategies should be formulated taking in consideration, <i>inter alia</i>, the following:</p> <ul style="list-style-type: none"> <li>• a broad overall perspective (thematic and geographic), which will take into account the interdependence and disparity of natural systems and human activities with an impact on coastal areas</li> <li>• working with natural processes and respecting the carrying capacity of ecosystems, which will make human activities more environmentally friendly, socially responsible and economically sound in the long run</li> </ul>
Other	ICAM Guidelines	<ul style="list-style-type: none"> <li>• identify where resources can be harnessed without causing degradation or depletion;</li> <li>• renew or rehabilitate damaged resources for traditional or new uses;</li> </ul>

		<ul style="list-style-type: none"> <li>• guide the level of uses or intervention so as not to exceed the carrying capacity of the resource base;</li> <li>• ensure the integrity of coastal ecosystems' biodiversity;</li> <li>• ensure that the rate of loss does not exceed the rate of replenishment;</li> <li>• reduce risks to vulnerable resources;</li> <li>• respect natural dynamic coastal processes, encouraging beneficial ones and preventing adverse interferences;</li> </ul>
	Coastal Erosion Management in the Mediterranean	Wise land use planning in the coastal zone that incorporates buffer areas for erosion, expected within a certain time frame is an essential strategy
	Blue Plan	<ul style="list-style-type: none"> <li>• commit to preventive measures to reduce an increasing vulnerability to natural risks</li> <li>• improve ICZM</li> <li>• promote well adapted risk-resistant construction and avoid excessive artificial land cover along shorelines</li> <li>• increase the relative percentage of protected areas</li> </ul>
	State of the Mediterranean Marine and Coastal Environment Report (2012)	Coastal development and sprawl, driven by urban and touristic development, leading to fragmentation, degradation and loss of habitats and landscapes, including the destabilization and erosion of the shoreline
	EUROSION	<ul style="list-style-type: none"> <li>• Restoring the sediment balance and providing space for coastal processes</li> <li>• Internalize coastal erosion cost and risk in planning and investment decisions</li> <li>• Make responses to coastal erosion accountable</li> <li>• Strengthen the knowledge base of coastal erosion management and planning</li> </ul>
	CONSCIENCE	<ul style="list-style-type: none"> <li>• Management plans for coastal erosion should be based on the principle of working with natural processes.</li> <li>• Coastal erosion policies be formulated at national level, both for the short (event) and long (climate change) time scale</li> <li>• Promoting the designation of strategic sediment reservoirs in marine planning</li> <li>• Promoting the use of setback lines in urban areas</li> <li>• Promoting a consistent approach to the monitoring of coastal erosion, which will require cooperation between adjoining coastal states</li> </ul>