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**Agenda item 4: Supporting Resource Mobilization for IMAP Implementation**

**A Funding Strategy for the implementation of the Ecosystem Approach in the Mediterranean, with a special emphasis on the implementation needs of the Integrated Monitoring and Assessment Programme in the Southern Mediterranean**

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# **A FUNDING STRATEGY FOR THE IMPLEMENTATION OF THE ECOSYSTEM APPROACH IN THE MEDITERRANEAN, WITH A SPECIAL EMPHASIS ON THE IMPLEMENTATION NEEDS OF THE INTEGRATED MONITORING AND ASSESSMENT PROGRAMME IN THE SOUTHERN MEDITERRANEAN**

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## 1. EXECUTIVE SUMMARY

### Introduction

1. The document, entitled “A Funding Strategy for the implementation of the Ecosystem Approach in the Mediterranean, with a special emphasis on the implementation needs of the Integrated Monitoring and Assessment Programme in the Southern Mediterranean” (the Ecosystem Approach Funding Strategy) provides an overview of possible funding opportunities for the implementation of the Ecosystem Approach in the Mediterranean with the focus on the implementation needs of the UN Environment/MAP Barcelona Convention Integrated Monitoring and Assessment Programme (IMAP<sup>1</sup>) in the Southern Mediterranean.

2. As such, the Ecosystem Approach Funding Strategy provides an overview on potential funding sources, which may assist Contracting Parties to the Barcelona Convention to implement the ecosystem approach roadmap (Ecosystem Approach) and specifically the Integrated Monitoring and Assessment Programme (IMAP) in the EcAp-MEDII project respective beneficiary countries, noting their specific needs. It includes a country based capacity need analyses for Algeria, Egypt, Israel, Lebanon, Libya, Morocco and Tunisia, accompanied with a list of possible needs of funding<sup>2</sup>.

3. In addition, it also aims to assist UN Environment/MAP, to mobilize further resources to support the implementation of Ecosystem Approach and IMAP on regional level.

4. Furthermore, in line with the EcAp-MEDII project document, it also aims to assist, by listing and analysing potential resources, the replication of the EcAp-MEDII project for other sub-regions of the Mediterranean (based on country requests also specifically for the implementation of the Ecosystem Approach in the Balkan countries<sup>3</sup> and Turkey).

### Ecosystem Approach implementation resource needs

5. The focus for the current 2016-2021 Ecosystem Approach cycle is to develop national integrated monitoring programmes in the initial phase of IMAP (2016-2019, ongoing) and start their implementation (2019-2021).

6. The current EcAp-MEDII project aims to support the development of national integrated monitoring programmes, during the initial phase of IMAP.

7. With the aim to support the further implementation of the Ecosystem Approach and follow-up on the achievements of the EcAp-MEDII project, the Ecosystem Approach Funding Strategy aims to analyse potential resources to

- (i) support the implementation of these national national integrated monitoring programmes (starting as of 2019) developed by the project and
- (ii) mimic the EcAp-MEDII project’s best practices in other sub-regions, noting that the implementation of IMAP will enable a quantitative, regionally comparable assessment of the marine and coastal environment.

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<sup>1</sup> Decision IG. 22/7 Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria

<sup>2</sup> The country capacity assessments were undertaken in 2016-2017 in close consultation with the countries.

<sup>3</sup> Specific aim, in line with the EcAp-MED II project document to look at the replication potential for non\_EU Member Balkan countries and Turkey.

8. Data collection in line with IMAP by all riparian countries of the Mediterranean is key for the planned 2023 Quality Status Report of the Mediterranean Sea and Coast (QSR2023). This upcoming 2023 Quality Status Report which is planned to be a quantitative national data based report on the Mediterranean Sea and Coast will enable investors, donors to have a more impact based, targeted approach in their respective investments, which relate to achieving respective SDG14 targets.

9. Importance of the preparation of the 2023 Quality Status Report and as such implementing the national IMAPs are recognized by all riparian countries, but the implementation of these national IMAPs requires subsequent resources, especially in the Southern Mediterranean.

10. Southern Mediterranean countries have specific needs for IMAP implementation, both in relation to capacity building on monitoring, collecting baseline data, purchase of additional necessary equipments and undertake surveying, sampling (with average estimated one-time cost for setting up system 800,000 USD and average surveying cost per implementation cycle of 400,000 USD base don the country capacity assessments undertaken in 2016-17).

11. Sub-regional cooperation, piloting of common indicators, joint monitoring, foreseen under IMAP also require additional resources, which may range between 200,000 USD and 800,000 USD, depending on the nature of the common indicator and the scope of cooperation.

12. Regional cooperation, exchange of best practices, with strengthened science-policy interface, while require as well additional resources (between 50,000-100,000 USD/meeting preparation and organization) also provide cost-efficient ways of capacity building and strengthening sustainability of ongoing scientific projects, with making knowledge available on cost-efficient technics and latest relevant scientific findings to the policy makers and national monitoring experts.

13. In light with the above, Ecosystem Approach implementation needs, with a focus on IMAP in the Southern Mediterranean are estimated as follows:

- Setting up the IMAP compatible monitoring and assessment system for 7 analyzed Southern Mediterranean countries, 7,000 000 USD;
- Setting up the IMAP compatible monitoring and assessment system for Balkan countries and Turkey (and as such mimicking EcAp-MEDII project there), based on analysis of 7 analyzed Southern Mediterranean countries and their area compared to Balkan countries, 2,500 000 USD;
- Annual 4, 000 000 USD for IMAP implementation based on capacity assessment as above, both in Southern Mediterranean, Balkans and Turkey;
- Sub-Regional and regional further cooperation, capacity building, ecxchange of best practices SPI, foreseen 1,000 000 USD annually on sub-regional and regional level.

14. Total Ecosystem Approach implementation needs, in line with the above, with a focus on IMAP implementation, for which resources would need to be mobilized, with a focus on Southern Mediterranean, but also mimicking EcAp-MEDII project results in the Balkans and Turkey, supporting sub-regional and regional cooperation, capacity-building and exchange of best practices, for the remaining Ecosystem Approach cycle (2019-2021) are estimated to be approximately 24 million USD.

**15. Noting the substantial resource needs, funding for the implementation is feasible only from a diverse source of funding coupled with country's own resources (including human resources).**

**The Ecosystem Approach Funding Strategy aims to identify these possible sources of funding, with analysing their relevance for ecosystem approach/IMAP implementation and their specific rules, which need to be kept in mind, during the preparation of possible projects, programmes,**

**applications to be prepared by the interested Contracting Parties (and/or other key stakeholders of the ecosystem approach roadmap implementation).**

Resource gaps, challenges to be addressed

16. While the implementation of the ecosystem approach is a priority both for the Mediterranean riparian countries and for many potential donors and is also recognized as a future basis for more science/data based targeted investment, monitoring of the marine and coastal environment (and as such implementation of IMAP) suffers from insufficient funding in the Southern Mediterranean (and beyond) for the following main reasons:

- General knowledge gap exists on the importance of data on status of marine and coastal environment, even though this would be key for impact based future measures and investments;
- Countries as such, do not prioritize monitoring of marine and coastal environment (partly for the above reason);
- Countries while may identify Ecosystem Approach implementation as a priority, in bilateral negotiations with key donors, they may not transfer this message clearly;
- Countries are over-whelmed by various monitoring and reporting needs to different organizations and/or with different angle of monitoring under differing type of indicators (such as SDG14 indicators, MSSD indicators, Horizon 2020 indicators, IMAP indicators);
- Donors in general, but especially Development Banks, International Financial Institutions are focusing on larger scale measures/focused investments (even though they aim to have impact based investments the monitoring of impacts is usually done by project specific indicators and with a small amount of the whole investment dedicated to monitoring);
- Countries and relevant institutions may be aware of one or two key financial instruments, but they do not necessarily have an overview on all relevant funding instruments which may support the implementation fo the ecosystem approach;
- Financial resoruces available for scientific projects are not always used to their full potential as many times coordination between relevant scientific projects and national monitoring programmes is not sufficient and lacks even further on sub-regional and regional level, which hinders both sustainability of the scientific projects and the cost-efficiency of the national implementation of the ecosystem approach, which could many times build on ongoing scientific projects and/or to their outputs.
- Philanthropic support is not well established yet for marine and biodiversity conservation in the Mediterranean and beyond, indeed, ocean conservation even on global scale receivees only 0.55% of total philanthropic dollars.<sup>4</sup>

17. Recommendations, suggestions on efforts to mobilize resources for Ecosystem Approach implementation:

- Further knowledge strengthening on the importance of data, data-sharing and in general on monitoring and assessment is needed on all levels;
- A strengthened science-policy interface could contribute to giving more priority to marine and coastal environmental monitoring and provide a cost-efficient way to share best available technics and practices all over the Mediterranean region;
- Support to interested countries to ensure coherence between different monitoring efforts of indicators (such as IMAP and SDG indicators), with possibility of establishing common sets of data could minimize country burden;

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<sup>4</sup> <http://sdgfunders.org/sdgs/goal/life-below-water/lang/en/>

- Specific meetings, bilateral meetings of UN Environment/MAP with relevant IFIs, Development Banks, key funding instruments could highlight more how sound monitoring based data can help also prioritizing future investments and assure impact based investment;
- Further communication and outreach with possible opportunistic monitoring partners (such as shipping industry) can be a cost-efficient way of addressing monitoring needs both on national, sub-regional and in some cases regional level;
- Specific assistance, trainings, presentations can be useful to interested countries on ecosystem approach relevant funding opportunities and on key financial instruments, with highlighting practical ways of possible resource mobilization and innovative and green financial instruments;
- Donor roundtables to be organized by UN Environment/MAP specifically on ecosystem approach implementation needs, in line with capacity assessment on national level and Ecosystem Approach Gap Analysis on sub-regional, regional level could be beneficial;
- More information would be useful to be shared on available funding for ecosystem approach/IMAP implementation through scientific projects, as part of Science-Policy dialogue, with the invitation of relevant donors, both on country (potentially sub-regional) and regional level.

Main funding instruments analysed and found relevant for Ecosystem Approach implementation in the Mediterranean

**EU MFF:**

18. Funding opportunities offered under the EU Multi-Annual Financial Instrument are key possibilities to enhance implementation of the Ecosystem Approach in the Mediterranean, noting that next to the European Neighborhood Policy, as a key funding opportunity, many other EU financial instruments, such as Horizon 2020 are also open/potentially open to all Mediterranean countries and that there are some not as much known (and used) funding instruments, which could be put more into action, such as TAIEX based on specific needs of the countries/sub-region (latter specifically for sub-regional/regional meetings to be undertaken in line with Ecosystem Approach implementation needs, possibly supporting existing meetings/projects, which are in line with TAIEX objectives, principles);

**GEF:**

19. Funding opportunities under GEF could become even more important, especially in relation to biodiversity, fisheries and NIS, which are the biggest gaps for Ecosystem Approach implementation in the Southern Mediterranean and which are foreseen to be even more in the focus during the GEF7 implementation, in line with respective SDG targets and Aichi 11;

**IFIs:**

20. Financing provided by IFIs can be important additional resource, noting that while their priority funding is for measures and for larger scale projects and that resource provided is rather loan based in nature, monitoring and assessment following IMAP common indicators can be integrated into projects, programmes developed in cooperation with them. In addition, IFIs can also be interlocketors to leverage further private funding;

**PRIVATE FUNDS/INNOVATIVE MECHANISMS:**

21. Alternative, innovative ways of funding, through strengthened collaboration with key partners, receiving support from private funds and building stronger cooperation with the private sector, green financial products, innovative funding mechanisms, opportunistic monitoring options are areas where both country and regional level action could be strengthened in the near future for the benefit of the

Ecosystem Approach implementation and as such, for the benefit of the environmental status of the Mediterranean Sea and coast.



## **2. INTRODUCTION: THE IMPLEMENTATION NEEDS OF THE ECOSYSTEM APPROACH IN THE MEDITERRANEAN AND THE OVERALL OBJECTIVE OF THE DRAFT ECOSYSTEM APPROACH FUNDING STRATEGY**

### **2.1 Overall Policy Framework for Ecosystem Approach In The Mediterranean**

22. The Ecosystem Approach is a strategy for the integrated management of land, water and living resources. It promotes conservation and sustainable use in an equitable way. As such, the Ecosystem Approach has been integrated all over the work of the UN Environment/MAP Barcelona Convention. It is the guiding principle for its overall work in line with Decision IG. 21/3 and the core of the current UN Environment/MAP 2016-2021 Mid-Term Strategy (Decision IG 22/1 UN Environment/MAP Mid-Term Strategy 2016-2021 so called MTS). All recent UN Environment/MAP-Barcelona Convention Contracting Parties adopted decisions were developed in line with Ecosystem Approach and its Ecological Objectives, principles, including the Decisions of the 19<sup>th</sup> Meeting of the Contracting Parties, such as Decision IG 22/2 on the Mediterranean Strategy for Sustainable Development 2016-2025 (MSSD), the Decision IG 22/8 on the Implementation of Updated National Action Plans (NAPs), Containing Measures and Timetables for their Implementation (the NAP Decisions), Decision IG 22/10 on Implementing the Marine Litter Regional Plan in the Mediterranean (Fishing for Litter Guidelines, Assessment Report, Baselines Values, and Reduction Targets) and Decision IG 22/7 on Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (so-called IMAP Decision, on which please also see point 2.2).

### **2.2 Ecosystem Approach roadmap under the UN Environment/MAP-Barcelona Convention**

23. Ecosystem Approach also refers to a specific roadmap under the UN Environment/MAP Barcelona Convention, outlined in Decision IG.17/6, which foresees the implementation of Ecosystem Approach through the development of a common vision, Ecological Objectives, targets, common indicators, and based on these through the implementation of an integrated monitoring and assessment programme, which can showcase the status of the marine and coastal environment and the need of potential new measures, with the ultimate objective of achieving the Good Environmental Status (GES) of the Mediterranean Sea and Coast. (the Roadmap or the Ecosystem Approach Roadmap).

24. As an implementation to this Roadmap, 11 Ecological Objectives (EOs) were agreed on (which serve also as a core of the MTS and IMAP) are:

1. Biodiversity is maintained or enhanced.
2. Non-indigenous species do not adversely alter the ecosystem.
3. Populations of commercially exploited fish and shellfish are within biologically safe limits.
4. Alterations to components of marine food webs do not have long-term adverse effects.
5. Human-induced eutrophication is prevented.
6. Sea-floor integrity is maintained.
7. Alteration of hydrographic conditions does not adversely affect coastal and marine ecosystems.
8. The natural dynamics of coastal areas are maintained and coastal ecosystems and landscapes are preserved.
9. Contaminants cause no significant impact on coastal and marine ecosystems and human health.
10. Marine and coastal litter does not adversely affect coastal and marine ecosystems.
11. Noise from human activities cause no significant on marine and coastal ecosystems.

25. These 11 EOs were agreed on together with matching Operational Objectives, and indicators in Decision IG.20/4, which was followed up with Decision IG.21/3, which agreed on definitions of Good Environmental Status (GES) descriptions, and targets and an integrated list of indicators.

26. In the most recent 19th Meeting of Contracting Parties (COP 19, February 2016), the Contracting Parties agreed on an Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP) in Decision IG.22/7. The IMAP lays down the principles for an integrated monitoring, which, for the first time in the Mediterranean, aims to monitor biodiversity and non-indigenous species, pollution and marine litter, coast and hydrography in an integrated manner, following regionally agreed common indicators. The common indicators are the backbone of IMAP. In the context of the Barcelona Convention, a common indicator is an indicator that summarizes data into a simple, standardized, and communicable figure and is ideally applicable in the whole Mediterranean basin, or at least on the level of sub-regions, and is monitored by all Contracting Parties.

27. The IMAP agreed common indicators are as follows:

1. Habitat distributional range (EO1) to also consider habitat extent as a relevant attribute;
2. Condition of the habitat's typical species and communities (EO1);
3. Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles);
4. Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles);
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);
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);
7. Spawning stock Biomass (EO3);
8. Total landings (EO3);
9. Fishing Mortality (EO3);
10. Fishing effort (EO3);
11. Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy (EO3);
12. Bycatch of vulnerable and non-target species (EO1 and EO3)
13. Concentration of key nutrients in water column (EO5);
14. Chlorophyll-a concentration in water column (EO5);
15. Location and extent of the habitats impacted directly by hydrographic alterations (EO7) to also feed the assessment of EO1 on habitat extent;
16. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8) to also feed the assessment of EO1 on habitat extent;
17. Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater)<sup>5</sup>;
18. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9);
19. Occurrence, origin (where possible), and 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);
20. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9)<sup>6</sup>;
21. Percentage of intestinal enterococci concentration measurements within established standards (EO9);

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<sup>5</sup> Use for further work on reference conditions ERL for sediments taking into account specifics of the Mediterranean

<sup>6</sup> Traceability of the origin of seafood sampled should be ensured

22. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source.) (EO10);
  23. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10);
  24. Candidate Indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10);
  25. Candidate Indicator: Land use change (EO8)
  26. Candidate indicator: 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 animals (EO11)
  27. Candidate Indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11)
28. IMAP is aiming to deliver over 2016-2021 its objectives but is introduced first in an initial phase (2016-2019), during which the existing national monitoring and assessment programmes will be integrated, in line with the IMAP structure and principles and based on the agreed common indicators. This implies in practice that the existing national monitoring and assessment programmes are currently being reviewed and revised as appropriate so that national implementation of IMAP can be fulfilled in a sufficient manner.
29. As a further follow-up, initial analysis has been concluded and further detailed analysis is ongoing on gaps between existing measures and the agreed Ecosystem Approach targets, with the aim to address these gaps, if need be, with additional new measures, in order to achieve the Good Environmental Status of the Mediterranean Sea and Coast.
30. The focus for the current 2016-2021 Ecosystem Approach cycle is to develop (with the assistance of EcAp-MEDII project in the case of Southern Mediterranean countries by 2018) national integrated monitoring programmes (so-called national IMAPs) and start their implementation (2019-2021).
31. Implementing these national IMAPs is an absolute priority for the Ecosystem Approach Roadmap, as it is a necessity to assess the status of the Mediterranean marine and coastal environment on a qualitative, common regional basis.
32. This regional assessment of the marine and coastal environment will be than further enable policy-makers to have informative decisions on possible new protection measures, in order to achieve the joint, regional goal, the Good Environmental Status of the Mediterranean Sea and Coast and the international targets of SDG14.

### **2.3 Key implementation needs**

33. The implementation of IMAP will only be possible with the full support and collaboration of all Mediterranean countries both individually and through bilateral, sub-regional and regional cooperation. Even though the capacities of the different countries differ greatly, the process which is undertaken and agreed upon stays the same, with opportunities offered through exchange of best practice, capacity building, technical exchange, cooperation and (joint) pilot activities.
34. While the policy level assistance is financed by the EcAp MED II project (2015-2018) to develop national integrated monitoring programmes, on the ground monitoring pilots need substantial additional resources addressing country specific needs, especially in the Southern Mediterranean Countries.

35. The core objective of this draft Ecosystem Approach Funding Strategy thus is to identify available resources for IMAP on the ground implementation (in line with specific needs of Southern Mediterranean countries).
36. Regional and sub-regional cooperation should be also further enhanced, to ensure that work on the common regional basis can continue, best practices can be exchanged and specific cooperation arrangements, if possible can be reached either on regional or sub-regional manner.
37. In order to achieve this, the draft Ecosystem Approach Funding Strategy also looks into possible duplication potential of the EcAp-MEDII project in the sub-region which is not currently funded by this EcAp-MEDII project (Balkans, Albania, Bosnia and Herzegovina, Montenegro, and Turkey), as well as into funding available to further enhance both regional and sub-regional cooperation efforts to implement IMAP.
38. In line with the above, the draft Ecosystem Approach Funding Strategy is analyzing both regional, sub-regional and national resource mobilization opportunities and needs (the latter specifically for the beneficiary countries of the project), with a focus on areas which cannot be financed by the current project on national level and with the aim to enable efficient co-financing and replication of the project on sub-regional, regional level and to overall strengthen further cooperation on the regional level on Ecosystem Approach /IMAP implementation, including strengthening science-policy interface and data management in the Mediterranean.

**3. SPECIFIC IMPLEMENTATION NEEDS OF THE SOUTHERN MEDITERRANEAN COUNTRIES: CAPACITY ASSESSMENT OF IMAP IMPLEMENTATION NEEDS OF SOUTHERN MEDITERRANEAN (ECAP-MEDII PROJECT BENEFICIARIES) COUNTRIES (ALGERIA, EGYPT, ISRAEL, LEBANON, LIBYA, MOROCCO, TUNISIA)**

**3.1. Country: Algeria**

Introduction

39. Algeria has a coastline of approximately 1280 km characterised by high geomorphological diversity and waters influenced by the “Algerian current”. This is created by Atlantic inflows, and moves along the Algerian coast creating a series of gyres and upwellings, causing marked instability in hydrographical conditions in the area. In some places and seasons, continental freshwater flows can be very high, leaving their mark on the characteristics of the Algerian marine waters, particularly in areas where coastal geomorphology does not encourage water circulation.

40. With large coastal agglomerations such as the capital city (Algiers) in the centre, Oran to the west and Annaba to the east, the Algerian coastline is subject to high anthropogenic pressures. In the face of these pressures, a coastal protection law was enacted in 2002 together with a series of regulations to control discharges into the natural environment.

41. Urban development and industry are the most significant activities associated with the coastal and marine environment, but other activities are also present, including agriculture in the coastal zone, tourism and fishing. The latter primarily involves coastal fishing from a fleet of small boats with a low range. Intensive marine aquaculture is in the early stages, with the launch of a few breeding farms with increasing production capacities.

42. Tourism primarily involves seaside resort activities for Algerians, with high concentrations at the tourist hot spots particularly prized by nationals. There is a diverse range of accommodation, but large hotel zones have not yet emerged. Tourism is therefore spread along large portions of the coastline, although increasing concentrations are being seen at certain points, with all the difficulties that this presents in terms of environmental management.

43. Although marine pollution has reached levels that are increasingly difficult to manage, particularly with regard to eutrophication caused by organic waste, it remains limited to certain hot spots, and the rest of the coast presents good environmental quality.

Analysis of capacities with respect to IMAP indicators

<b>Indicators</b>	
<p>1. Habitat distributional range</p> <p>2. Condition of the habitat's typical species and communities</p>	<p><b>4. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The CNRDPA and the ENSSMAL have equipment for monitoring habitats. However, this activity does not feature among CNRDPA priorities, except for habitats that are important for fish stocks. Collaboration between these two institutions would ensure good coverage of IMAP indicators 1 and 2. The ENSSMAL has set up a seagrass monitoring network in the Bay of Algiers</p> <p><b>5. DATA AND INFORMATION AVAILABLE</b></p> <p>Very little data is available on marine habitats in Algeria. Key marine habitats were mapped with the support of RAC/SPA for the Réghaia Nature Reserve, Rachgoun island and the El Kala National Park marine area.</p> <p><b>6. EQUIPMENT AVAILABLE</b></p> <p>The CNRDPA and the ENSSMAL have vessels equipped for exploration at sea. The CNRDPA Belkacem GRINE ship has a multibeam echosounder, which is very useful for mapping habitats.</p> <p><b>7. DATABASES AND IT SYSTEMS</b></p> <p>There is currently no database on marine habitats in Algeria. The ONEDD has the technical resources for setting up a GIS for collecting data on the distribution of habitats.</p> <p><b>8. PRIORITY NEEDS</b></p> <p>The main needs for Algeria to perform monitoring actions with regard to these two indicators involve the provision of a side-scan sonar, ROV and towed camera system to supplement the multibeam echosounder available on the Belkacem GRINE research vessel. Capacity building is also required.</p> <p><b>9. PRIORITY: THESE TWO INDICATORS ARE HIGH PRIORITY DUE TO THE INCREASING ANTHROPOGENIC PRESSURE ON HABITATS ALONG THE ALGERIAN COASTLINE.</b></p>

<b>Indicators</b>	
<p>3. Species distributional range related to marine mammals, seabirds, marine reptiles</p> <p>4. Population abundance of selected species related to marine mammals, seabirds, marine reptiles</p> <p>5. Population demographic characteristics related to marine mammals, seabirds and marine reptiles</p>	<p style="text-align: center;"><b>10. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The CNRDB is the body responsible for monitoring aspects of biodiversity in Algeria. However, it should be underlined that this centre focuses its attention on land-based and wetland environments. While it is not completely neglected, the marine environment is not among its central concerns.</p> <p>For marine mammals, the CNRDPA, in collaboration with ACCOBAMS, is the institution responsible for monitoring these indicators. The ENSSMAL has the resources and skills for monitoring species, particularly under Master's and Doctorate programmes. The Department of Biology of the Faculty of Natural and Life Sciences of Oran 1 University (Ahmed BENBELLA) performed a series of monitoring of marine species in danger (monk seal, cetaceans and turtles). It has a number of researchers specialised in marine mammals.</p> <p style="text-align: center;"><b>11. DATA AND INFORMATION AVAILABLE</b></p> <p>Data on beaching of cetaceans is available. Data on birds is available from the General Directorate of Forestry, but seabirds get little coverage. Data on cetaceans was collected under a beaching monitoring network initiated in Algeria under the initiative of Professor Boutiba (Oran University).</p> <p style="text-align: center;"><b>12. EQUIPMENT AVAILABLE</b></p> <p>Very few resources are available in Algeria for monitoring the three categories of species covered by these indicators.</p> <p style="text-align: center;"><b>13. DATABASES AND IT SYSTEMS</b></p> <p>There is currently no database or information system containing useful data for these 3 indicators. However, the ONEDD has the resources to implement such tools.</p> <p style="text-align: center;"><b>14. PRIORITY NEEDS</b></p> <p>The main needs for performing monitoring actions with regard to these three indicators involve funding of field monitoring campaigns and setting up appropriate databases for managing monitoring data.</p> <p style="text-align: center;"><b>15. PRIORITY: THESE THREE INDICATORS ARE HIGH PRIORITY FOR ALGERIA</b></p>
<p>6. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species</p>	<p style="text-align: center;"><b>16. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>No systematic monitoring is in place for non-indigenous marine species in Algeria. However, the CNRDPA and ENSSMAL have the skills to monitor non-indigenous marine species.</p> <p style="text-align: center;"><b>17. DATA AND INFORMATION AVAILABLE</b></p> <p>Few non-indigenous species have been observed in Algeria. They tend to be isolated occurrences, and the data available does not allow us to draw conclusions regarding abundance and spatial distribution.</p>

	<p><b>18. EQUIPMENT AVAILABLE</b></p> <p>The ENSSMAL and the CNRDPA have resources at sea that can be used for monitoring via seasonal exploration campaigns performed annually by the CNRDPA and exploration performed by the ENSSMAL.</p> <p><b>19. DATABASES AND IT SYSTEMS</b></p> <p>There are no databases for non-indigenous marine species in Algeria</p> <p><b>20. PRIORITY NEEDS</b></p> <p>The main needs for performing monitoring actions for non-indigenous species in Algeria involve: (i) funding field monitoring campaigns, (ii) training teams of scientists able to seek and identify species and (iii) implementing suitable databases, including a GIS to manage the data from monitoring.</p> <p><b>21. PRIORITY: THIS INDICATOR IS NOT A PRIORITY FOR ALGERIA</b></p>
<p>7. Spawning stock biomass 8. Total landings 9. Fishing mortality 10. Fishing effort 11. Catch Per Unit of Effort (CPUE) or Landing Per Unit of Effort (LPUE) as proxy 12. Bycatch of vulnerable and non-target species (EO1 and EO3);</p>	<p><b>22. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>In Algeria, the CNRDPA is responsible for monitoring and assessing fish stocks. To this end, it performs annual campaigns for pelagic and benthic stocks.</p> <p><b>23. DATA AND INFORMATION AVAILABLE</b></p> <p>The data required for calculating indicators for Ecological Objective 3 is available for several species.</p> <p><b>24. EQUIPMENT AVAILABLE</b></p> <p>The Belkacem GRINE research vessel is well adapted for performing the sampling necessary for calculating indicators 7 to 11. For indicator 12, the CNRDPA uses fishing boats for observing accidental catches of cetaceans in a study launched with the support of ACCOBAMS in 2015.</p> <p><b>25. DATABASES AND IT SYSTEMS</b></p> <p>Data on stocks is compiled on researcher computers.</p> <p><b>26. PRIORITY NEEDS</b></p> <p>Algeria has the material resources required for calculating these indicators. Training on stock assessment models would build capacity of CNRDPA researchers on this them.</p>
<p>13. Concentration of key nutrients in the water column (EO5) 14. Chlorophyll-a concentration in the water column (EO5) 17. Concentration of key harmful contaminants measured in the relevant matrix (EO9) 18. Level of pollution effects of key contaminants where a cause and</p>	<p><b>27. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The National Laboratory for Control and Analysis of Fishing Products, the ONEDD and the CNRDPA are the bodies best equipped for performing monitoring of indicators relating to pollution.</p> <p><b>28. DATA AND INFORMATION AVAILABLE</b></p> <p>Data series are available, including some of the parameters required for calculating indicators 13 to 21.</p>



<p>effect relationship has been established (EO9)</p> <p>19. Occurrence, origin (where possible), and extent of acute pollution events and their impact on biota affected by this pollution (EO9)</p> <p>20. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9)</p> <p>21. Percentage of intestinal enterococci concentration measurements within established standards (EO9)</p>	<p>For data relating to the occurrence and extent of acute pollution events (indicator 19), one potential source of information could be the half-yearly activity reports of the regional Tel Bahr committees as required by Executive Decree no. 14-264 dated 22 September 2014 pertaining to emergency plans.</p> <p><b>29. EQUIPMENT AVAILABLE</b></p> <p>The National Laboratory for Control and Analysis of fishing products and the CNRDPA are equipped for sampling at sea and laboratory analysis of some pollutants and nutrients in the water columns. The regional ONEDD laboratories are currently being equipped and may also be able to contribute to sampling and analysis.</p> <p><b>30. DATABASES AND IT SYSTEMS</b></p> <p>Only the ONEDD has an environmental information system. It is designed to receive all kinds of environmental data with a view to providing decision-makers with a dashboard and decision-making tool.</p> <p><b>31. PRIORITY NEEDS</b></p> <p>The most urgent needs involve funding (i) of field campaigns because the sampling effort is particularly onerous (ii) of reagents and other components required for the analyses.</p> <p><b>32. PRIORITY:</b></p> <p>Indicators 13, 14 and 17 to 21 are very high priority for Algeria.</p>
<p>15. Location and extent of the habitats impacted directly by hydrographic alterations (EO7)</p> <p>15. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8)</p> <p>25. Candidate indicator: Land use change (EO8)</p>	<p><b>33. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The National Coastal Commissariat (CNL) is responsible for coastal monitoring in Algeria. Through its regional representations, the CNL monitors marine habitats and coastlines and species. It also monitors the land use along the coast and the various uses in operation. Moreover, the National Institute of Cartography and Remote Sensing (INCT) has technical resources for monitoring land use via satellite images</p> <p><b>34. DATA AND INFORMATION AVAILABLE</b></p> <p>With regard to marine habitats, data for constituting a reference state in Algeria does exist for the Réghaia Nature Reserve, Rachgoun island and the El Kala National Park marine area. Moreover, for Zemmouri and Tipaza, the CNL has a detailed land use map which was used for zoning classified sites in 2016</p> <p><b>35. EQUIPMENT AVAILABLE</b></p> <p>The INCT has resources for processing satellite images and taking aerial photos using a multi-spectral digital camera.</p> <p><b>36. DATABASES AND IT SYSTEMS</b></p> <p>Information unavailable</p>

	<p><b>37. PRIORITY NEEDS</b></p> <p>The main needs in Algeria for performing monitoring for indicators 9, 10 and 11 involve the acquisition of suitable satellite images and the use of computer modelling for the needs of indicators 9 and 10.</p> <p><b>Priority:</b> These indicators are high priority for Algeria. Implementation of the Coast Act requires the information supplied by indicators 15, 16 and 25.</p>
<p>22. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source.) (EO10)</p> <p>23. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10)</p> <p>24. Candidate indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10)</p>	<p><b>38. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The National Waste Agency (AND) is responsible for waste at a national level, but no public institution performs monitoring of marine litter. Clean beach operations are organised by NGOs, such as the RECIFS association.</p> <p><b>39. DATA AND INFORMATION AVAILABLE</b></p> <p>There are no figures on the quantity and type of marine litter in Algeria.</p> <p><b>40. PRIORITY NEEDS</b></p> <p>This is a new theme for Algeria, and the most urgent need is to form teams and start work on a pilot zone.</p> <p><b>41. PRIORITY:</b></p> <p>These indicators are an important priority for Algeria.</p>
<p>26. Candidate indicator: 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 animals (EO11)</p> <p>26. Candidate indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11)</p>	<p>No institution is currently working on marine noise in Algeria.</p>

Table 3.1.1 Cost estimates of IMAP update for Algeria (in US\$)

Indicators	Baseline data <sup>7</sup>	Equipment <sup>8</sup>	Surveying/sampling/Lab analysis cost <sup>9</sup>
1. Habitat distributional range 2. Condition of the habitat's typical species and communities	50,000	-	50,000
3. Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles). 4. Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles) 5. Population demographic characteristics (EO1, related to marine mammals, seabirds, marine reptiles)	400,000	-	100,000
6. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species	10,000		5,000
7. Spawning stock Biomass (EO3) 8. Total landings (EO3) 9. Fishing Mortality (EO3) 10. Fishing effort (EO3) 11. Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy (EO3) 12. Bycatch of vulnerable and non-target species (EO1 and EO3)	-		60,000
13. Concentration of key nutrients in water column (EO5); 14. Chlorophyll-a concentration in water column (EO5); 15. Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater); 16. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9) 17. Occurrence, origin (where possible), and 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) 18. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9) 19. Percentage of intestinal enterococci concentration measurements within established standards (EO9)	60,000	-	50,000
20. Location and extent of the habitats impacted directly by hydrographic alterations (EO7) to also feed the assessment of EO1 on habitat extent; 21. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8) to also feed the assessment of EO1 on habitat extent 22. Candidate Indicator: Land use change (EO8)	50,000		15,000
23. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source.) (EO10); 24. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10); 25. Candidate Indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10);	25,000 (pilot action)		5/year (pilot action)
26. Candidate indicator: 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 animals (EO11) 27. Candidate Indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11)	20,000	15,000	5,000
<b>Total cost</b>	<b>615,000</b>	<b>15,000</b>	<b>285,000</b>

<sup>7</sup> Cost of acquisition of base line data for the reference sites

<sup>8</sup> Cost of additional equipment

<sup>9</sup> Cost of the regular monitoring according to the IMAP cycle

### 3.2. Country: Egypt

#### Introduction

44. Egypt has a coastline of about 1,150 km located in the Eastern part of the Mediterranean. It is among the most populated countries of the Mediterranean region with high population density in the Nile Delta zone and in some big cities. The main urban concentrations on the Mediterranean coast of Egypt are Alexandria (about 4.4 million), Port Said (630,000) and Marsa Matrouh (400,000).

45. The anthropogenic pressure on the marine environment along the Mediterranean coast of Egypt is linked to urban development, land reclamation for agriculture and aquaculture. For example, Lake Burulus, one of the important coastal wetland and RAMSAR site on the northern coast of Egypt, lost during the last four decades about 50% of its open water surface area because of expansion of urban areas and the intense development of aquaculture ponds.

46. In addition to the urban development, the Mediterranean coast of Egypt hosts 40% of the Industrial activity of the country and some portions of this coast are used for domestic tourism. Indeed, the coastal area located West of Alexandria, in particular between Alexandria and Marsa Matruh, hosts an important development of touristic settlements, especially for domestic tourism. Large tourism developments extend over significant portions of the coast generating an anthropic pressure for the marine environment in terms of sewage and solid wastes discharging. The Nile River and the Suez Canal contribute also with impacts on the marine environment of the area.

47. In its Fifth National Report to CBD, Egypt indicated that in its Mediterranean zone the major factors contributing to the decline of wildlife habitat included "historical overexploitation, degradation of beach nesting habitat due to sand extraction, entanglement in fishing gear, loss of sea grass meadows, pollution and increased ship traffic". As for seabirds, they are threatened by habitat loss due to drainage, water diversion, changes in annual water regime, eutrophication, reed cutting, landfills, chemical pollution and hunting.

48. However, large portions of the Mediterranean coast of Egypt are still in very good environmental status and many sites host marine biodiversity hotspots providing habitats for many species including endangered species such as birds and marine turtles that have nesting sites along this coast. The marine ecosystems in the Mediterranean coast of Egypt have the potential to contribute, through their significant ecological services, to the development of the country and may sustain the development of key economic sectors such as fisheries (60% of the total landings in the countries are made in the Mediterranean) or tourism.

Capacity analysis in relation to IMAP Indicators

Indicators	
<p>15. Habitat distributional range</p> <p>16. Condition of the habitat's typical species and communities</p>	<p style="text-align: center;"><b>42. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>The national institution that can carry out monitoring of marine habitat along the Mediterranean coast of Egypt is the Nature Protection Sector of EEAA. Scientists from the NIOF's Mediterranean Branch and the Oceanography Department at Alexandria University may contribute to the field surveys.</p> <p style="text-align: center;"><b>43. AVAILABLE DATA AND INFORMATION</b></p> <p>The information about marine habitats along the Mediterranean Coast of Egypt is rare and scarce. However, Data and information, including habitat maps, are available for the area of Sallum declared marine reserve in 2010.</p> <p style="text-align: center;"><b>44. AVAILABLE EQUIPMENT</b></p> <p>There is no equipment available, support for scuba diving and acoustic equipment (side scan sonar) is needed for the monitoring surveys under these two IMAP indicators.</p> <p style="text-align: center;"><b>45. DATABASES AND INFORMATION SYSTEMS</b></p> <p>There is no database for the distribution and extent of marine habitats along the Egyptian Mediterranean coast. The GIS of EEAA may be extended to include the data to be collected under IMAP for these two indicators, in particular the habitat distributional range.</p> <p style="text-align: center;"><b>46. PRIORITY NEEDS</b></p> <p>For the proper monitoring in relation to these two IMAP indicators, the urgent needs are: equipment (scuba diving, side scan sonar and boat), funding for the field surveys and support for the further development of marine habitat database and GIS.</p> <p style="text-align: center;"><b>47. PRIORITY: CONSIDERING THE INCREASING DEVELOPMENT OF HUMAN ACTIVITIES IN THE MEDITERRANEAN COASTAL ZONE OF EGYPT, THESE TWO INDICATORS ARE CONSIDERED AS TOP PRIORITY.</b></p>
<p>17. Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles)</p> <p>18. Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles)</p> <p>19. Population demographic characteristics (EO1, related to marine mammals, seabirds, marine reptiles)</p>	<p style="text-align: center;"><b>48. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>The Nature Protection Sector of EEAA has qualified staff that could ensure the monitoring for the three categories of species considered for these IMAP Indicators. The NGO "Nature Conservation Egypt" which is a BirdLife affiliate may contribute in the monitoring in relation to seabirds.</p> <p style="text-align: center;"><b>49. AVAILABLE DATA AND INFORMATION</b></p> <p>For marine mammals, there is only data about sighting and stranding of cetaceans. Egypt being a Party to ACCOBAMS, it may benefit from the ACCOBAMS Survey Initiative launched in November 2016; it will include cetacean population estimates through a comprehensive synoptic survey (expected in summer 2017) of all Mediterranean waters of participating countries.</p>

	<p>A survey conducted in 1995 provided data about turtle nesting sites in the area between Alexandria and Matruh.</p> <p>For birds, census data are available for the most important bird areas, in particular along the northern coast of Sinai.</p> <p><b>50. AVAILABLE EQUIPMENT</b></p> <p>There is no special equipment available</p> <p><b>51. DATABASES AND INFORMATION SYSTEMS</b></p> <p>There is no database for marine mammals, turtles and seabirds in Egypt</p> <p><b>52. PRIORITY NEEDS</b></p> <p>The priority need for these three IMAP indicators are:</p> <ul style="list-style-type: none"> <li>- Surveys to establish baseline data</li> <li>- Equipment and funding for the field surveys</li> <li>- Training of observers for cetaceans</li> </ul> <p><b>53. PRIORITY: THESE ARE HIGH PRIORITY INDICATORS FOR EGYPT.</b></p>
<p>20. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species</p>	<p><b>54. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>The Mediterranean Branch of NIOF and the Oceanography Department at Alexandria University, being located on the Mediterranean coast of Egypt may play a central role in detecting the occurrence of marine non-indigenous species.</p> <p><b>55. AVAILABLE DATA AND INFORMATION</b></p> <p>In its Fifth National Report to CBD, Egypt indicated that "Currently available information about invasive species in Egypt is still insufficient or is not readily available" The same report stressed that invasive species represent a real threat to Egyptian ecosystems, the economy and human health.</p> <p><b>56. AVAILABLE EQUIPMENT</b></p> <p>There is no special equipment available. However, the researcher vessel "Salsabil" of NIOF has equipment for bottom trawling, and for sediment and plankton sampling. However, this research vessel needs substantive maintenance works to be properly operational.</p> <p><b>57. DATABASES AND INFORMATION SYSTEMS</b></p> <p>There is no database for non-indigenous species in Egypt.</p> <p><b>58. PRIORITY NEEDS</b></p> <p>Combating invasive species is beyond the country's current potential. External assistance is therefore urgently needed in terms of financial and technical resources as well for trainings.</p>

	<p><b>59. PRIORITY: MONITORING NON-INDIGENOUS SPECIES, IN PARTICULAR INVASIVE SPECIES, IS A TOP MONITORING PRIORITY FOR EGYPT.</b></p>
<p>21. Spawning stock Biomass (EO3)</p> <p>22. Total landings (EO3)</p> <p>23. Fishing Mortality (EO3)</p> <p>24. Fishing effort (EO3)</p> <p>25. Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy (EO3)</p> <p>26. Bycatch of vulnerable and non-target species (EO1 and EO3)</p>	<p><b>60. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>The General Authority for Fish Resources Development (GAFRD) of theof the Ministry of Agriculture and the Mediterranean Branch of NIOF have the potential to monitor the landings in the main fishing ports and to undertake trawling surveys for stock assessments of benthic resources. From 2005, NIOF is conducting stock assessments in the Mediterranean fishing zones of Egypt.</p> <p><b>61. AVAILABLE DATA AND INFORMATION</b></p> <p>Data on landings are regularly collected at least in the main fishing ports were also data on fishing effort is available, in particular the fishing fleet Recent stock assessments data are also available for 7 species in the Mediterranean waters of Egypt, the results of some of them were transmitted to GFCM.</p> <p><b>62. AVAILABLE EQUIPMENT</b></p> <p>The research vessel "Salsabil" of NIOF may be used for benthic stock surveys, but this boast is not equipped for acoustic surveys needed for pelagic stock assessments and it needs substantive maintenance works to be properly operational.</p> <p><b>63. PRIORITY NEEDS</b></p> <p>To ensure the proper monitoring for these IMAP indicators the relevant actors in Egypt should receive support to carry out more field surveys as well as support in terms of acoustic equipment and trainings in stock assessment. Setting a national programme to monitor bycatch, including through on-board observers, would be very useful.</p> <p><b>64. PRIORITY: GIVEN THE ECONOMIC IMPORTANCE OF THE FISHING SECTOR IN THE MEDITERRANEAN ZONE OF EGYPT AND THE IMPACT OF FISHING ON HABITATS AND SPECIES, MONITORING FOR THESE IMAP INDICATORS IS AMONG THE TOP PRIORITIES.</b></p>

Indicators	
<p>27. Concentration of key nutrients in water column (EO5)</p> <p>28. Chlorophyll-a concentration in water column (EO5)</p> <p>17. Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater)</p> <p>18. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9)</p> <p>19. Occurrence, origin (where possible), and 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)</p> <p>20. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9)</p> <p>21. Percentage of intestinal enterococci concentration measurements within established standards (EO9)</p>	<p style="text-align: center;"><b>65. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>EEAA developed the Environmental Information and Monitoring Program (EIMP) and collaborates with partners for its implementation. In this context EEAA established an agreement with the Institute for Graduate Studies and Research for the implementation, on an annual basis, of the EIMP's component related to Coastal Water in the Mediterranean.</p> <p style="text-align: center;"><b>66. AVAILABLE DATA AND INFORMATION</b></p> <p>From 1998, the National monitoring programme for Mediterranean water from Salloum to Rafah allowed to collect data from 30 sampling stations along the Mediterranean coast of Egypt. These included data for the following parameters:</p> <ul style="list-style-type: none"> <li>- Physical measurements (PH, Temperature, Salinity, Water Transparency, Concentration of Dissolved oxygen)</li> <li>- Bacteriological measurements (Total coliform bacteria, Escherichia coli bacteria, streptococci bacteria)</li> <li>- Chemical measurements (Ammonia NH<sub>4</sub>-N, Nitrate NO<sub>3</sub>-N, Nitrite NO<sub>2</sub>-N, Dissolved Inorganic Nitrogen (DIN), Total Nitrogen TN, Active Phosphate PO<sub>4</sub>-P, Total Phosphorus TP, Active Silicate SO<sub>4</sub>)</li> <li>- Chlorophyll A</li> <li>- Heavy metals (analysis made for 10 sampling sites for Iron, Manganese, Chrome, Copper, Lead, Zinc)</li> <li>- Organochlorine and polychlorobiphenyl pesticides</li> </ul> <p>Annual reports with the monitoring data are issued by IGSR and EEAA.</p> <p style="text-align: center;"><b>67. PRIORITY NEEDS</b></p> <p>The urgent need for EEAA concerning these Indicators is external assistance to assess the adequacy of the existing monitoring programmes with the requirements of IMAP. There is also a need for additional funding to the National monitoring programme for Mediterranean water which is now mainly funded by internal EEAA resources.</p> <p><b>Priority:</b> These are top priority indicators for Egypt</p>
<p>15. Location and extent of the habitats impacted directly by hydrographic alterations (EO7) to also feed the assessment of EO1 on habitat extent</p> <p>16. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8) to also feed the assessment of EO1 on habitat extent</p> <p>25. Candidate Indicator: Land use change (EO8)</p>	<p style="text-align: center;"><b>68. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>At the Alexandria University, the Department of oceanography has among its research topics Coastal Processes (Current and Wave Measurements, Sediment Transport and Erosion) and environmental Modelling (Numerical Modelling of the Eastern Mediterranean Sea, Dispersion Models of Major Pollutants, Pollutants, Biogeochemical Modelling). In addition, the Marine Engineering &amp; Naval Architecture Department of the Faculty of Engineering works on Marine Hydrodynamics. The National Authority for Remote Sensing and Space Sciences (NARSS) has the potential to contribute in particular in the field of land use and of numerical modelling.</p>



	<p style="text-align: center;"><b>69. AVAILABLE DATA AND INFORMATION</b></p> <p>Data on location and extent of habitats are available only for a limited portion of the Egyptian Mediterranean coast. NARSS produced many maps and other geographical data including for some portions of the Mediterranean coast of Egypt. In this context, it elaborated photomap quadrants (scale 1: 250,000) for the Nile Delta using Spot 4 Satellite Data. Also, data analysis and maps are available in the Egyptian Journal of Remote Sensing and Space Sciences.</p> <p style="text-align: center;"><b>70. AVAILABLE EQUIPMENT</b></p> <p>Equipment is available for Satellite image analysis, Geographical Information Systems and Numerical modelling.</p> <p style="text-align: center;"><b>71. PRIORITY NEEDS</b></p> <p>Assess the adequacy of the relevant existing information and initiatives with the requirements of IMAP.</p>
<p>22. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source.) (EO10)</p> <p>23. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10)</p> <p>24. Candidate Indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10)</p>	<p>Being located on the south east of the Mediterranean Sea, the Mediterranean coast of Egypt receives big amount of marine litter. However, for the time being there is no data about this issue in Egypt.</p>
<p>26. Candidate indicator: 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 animals (EO11)</p> <p>27. Candidate Indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11)</p>	<p>No information about marine noise in the Mediterranean waters of Egypt. There is however a Noise Monitoring Network covering some cities in Egypt mainly through mobile terminals.</p>

Table 3.2.1 Cost estimates of IMAP update for Egypt (in US\$)

Indicators	Baseline data <sup>10</sup>	Equipment <sup>11</sup>	Surveying/sampling/Lab analysis cost <sup>12</sup>
29. Habitat distributional range 30. Condition of the habitat's typical species and communities	100,000	-	50,000
31. Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles). Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles) 32. Population demographic characteristics (EO1, related to marine mammals, seabirds, marine reptiles)	600,000	-	200,000
33. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species	60,000		30,000
34. Spawning stock Biomass (EO3) 35. Total landings (EO3) 36. Fishing Mortality (EO3) 37. Fishing effort (EO3) 38. Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy (EO3) 39. Bycatch of vulnerable and non-target species (EO1 and EO3)	250,000		150,000
40. Concentration of key nutrients in water column (EO5); 41. Chlorophyll-a concentration in water column (EO5); 25. Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater); 26. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9) 27. Occurrence, origin (where possible), and 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) 28. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9) 29. Percentage of intestinal enterococci concentration measurements within established standards (EO9)	15,000 (External assistance to evaluate the adequacy of the national monitoring programme with the requirement of IMAP-	-	50,000
17. Location and extent of the habitats impacted directly by hydrographic alterations (EO7) to also feed the assessment of EO1 on habitat extent; 18. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8) to also feed the assessment of EO1 on habitat extent 28. Candidate Indicator: Land use change (EO8)	75,000		15,000
19. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source.) (EO10); 20. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10); 21. Candidate Indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10);	25,000 (pilot action)		5/year (pilot action)
22. Candidate indicator: 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 animals (EO11) 23. Candidate Indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11)	20,000	15,000	5,000
<b>Total cost</b>	<b>1,145,000</b>	<b>15,000</b>	<b>500,000</b>

<sup>10</sup> Cost of acquisition of base line data for the reference sites

<sup>11</sup> Cost of additional equipment

<sup>12</sup> Cost of the regular monitoring according to the IMAP cycle

### 3.3 Country: Israel

#### Introduction

49. In the Mediterranean, Israel has a coastline of 196 Km located in the South-East Mediterranean. Its biodiversity is particularly rich because of its location at the crossroads of three biogeographical regions with a wide variety of climatic and geomorphologic conditions.

50. The marine ecosystems in the Mediterranean coast of Israel have the potential to contribute, through their significant ecological services, to the development of the country and may sustain the development of key economic sectors such as fisheries or tourism. Furthermore, they provide cultural services and coastal protection against erosion.

51. The increasing development of the coastal zone by various sectors such as housing, tourism, industry and agriculture, generated an anthropogenic pressure on the coastal zone and the marine environment. However, besides the areas of important coastal cities, large portions of the Mediterranean coast of Israel are still in very good environmental status and many sites host marine biodiversity hotspots providing habitats for many species including endangered species such as birds and marine turtles that have nesting sites along this coast. Most of these habitats are vulnerable to a wide range of threats. One of the significant threats to the Mediterranean marine biodiversity in Israel is the increasing invasion by Red Sea species that is expected to intensify due to global warming. The Israel's National Plan for Biodiversity of 2010 stressed the significance of this threat as well as the existing and growing threats of chemical and other pollution from domestic and industrial sewage (including power stations, desalination plants and mariculture)" as well as illegal fishing.

52. Israel has established several Marine Protected Areas (MPAs) to safeguard ecosystems, species and their habitats. However, while the country effort for creating terrestrial protected areas is considered satisfactory, further effort is required to achieve Aichi Targets regarding MPAs in Israel. In this context a new master plan for marine protected areas was formulated and being implemented. It aims at improving the representativeness of the network by covering more habitat types, including underwater limestone ridges, underground canyons, and mountain ridges that extend to the sea.

Capacity analysis in relation to IMAP Indicators

Indicators	
<p>42. Habitat distributional range</p> <p>43. Condition of the habitat's typical species and communities Condition des</p>	<p style="text-align: center;"><b>72. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>The national institutions that can carry out monitoring of marine habitat along the Mediterranean coast of Israel are the Israel Oceanographic and Limnological Research and the Israel Nature and Parks Authority).</p> <p style="text-align: center;"><b>73. AVAILABLE DATA AND INFORMATION</b></p> <p>Distribution maps are available for the most important habitats in the Mediterranean waters of Israel. Data from monitoring of benthic communities along the coastline are available since 2005.</p> <p style="text-align: center;"><b>74. AVAILABLE EQUIPMENT</b></p> <p>The National Institute of Oceanography has acoustic equipment to perform habitat surveys and mapping including in deep sea zones:</p> <ul style="list-style-type: none"> <li>- Multibeam echo-sounder</li> <li>- Side-scan sonar</li> <li>- Sub-bottom profiling system</li> <li>- Grab</li> <li>- Box and Piston corers</li> <li>- ROV</li> <li>- GIS</li> </ul> <p style="text-align: center;"><b>75. PRIORITY NEEDS</b></p> <p>The priority regarding habitat in Israel is the monitoring of the impact of non-indigenous species with special focus for the invasive or potential invasive species.</p> <p style="text-align: center;"><b>76. PRIORITY: CONSIDERING THE BIOLOGICAL INVASION FROM THE RED SEA AND THE INCREASING DEVELOPMENT OF INFRASTRUCTURE IN THE MEDITERRANEAN COASTAL ZONE OF ISRAEL, THESE TWO INDICATORS ARE CONSIDERED AS A PRIORITY.</b></p>
<p>44. Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles)</p> <p>45. Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles)</p> <p>46. Population demographic characteristics (EO1, related to marine mammals, seabirds, marine reptiles)</p>	<p style="text-align: center;"><b>77. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>Israel Nature and Parks Authority (NPA) is conducting the monitoring for endangered species in Israel (Turtles, cetaceans, etc.). Concerning cetacean species, it collaborates with the NGO IMMRAC for stranding animals and sighting at sea. For bird species, the NGO "Society for the Protection of Nature in Israel" (SPNI) is conducting monitoring and share data through the network of Birdlife International. It focuses however on migratory species with a limited emphasis on marine birds.</p> <p style="text-align: center;"><b>78. AVAILABLE DATA AND INFORMATION</b></p> <p>For marine mammals, there are scientific records about stranding and occurrence at sea. For marine turtles, monitoring of nesting beaches allowed to gather long-time series of data about the nesting activity and occurrence at sea.</p>

	<p><b>79. AVAILABLE EQUIPMENT</b></p> <p>IMMRAC has a semi-inflatable, fiberglass-bottomed 6-meter Zodiac boat with a 75 horsepower engine and equipment for photoidentification of cetaceans. The Israel Nature and Parks Authority has satellite tracking equipment it uses for turtles.</p> <p><b>80. PRIORITY NEEDS</b></p> <p>The priority need for these three IMAP indicators is the finalisation of the analysis of the available data</p> <p><b>81. PRIORITY: THESE ARE PRIORITY INDICATORS FOR ISRAEL.</b></p>
<p>47. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species</p>	<p><b>82. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>Israel Nature and Parks Authority (NPA) is responsible for the monitoring of non-indigenous species. Scientists from Tel Aviv University and the Israel Oceanographic and Limnological Research are also very active in monitoring NIS in Israel</p> <p><b>83. AVAILABLE DATA AND INFORMATION</b></p> <p>In its Fifth National Report to CBD, Israel indicated that "Invasive species are very common in all biological groups examined (algae, invertebrates and fish). Many native species (especially invertebrates), which were apparently very common in the past, are rare or not found at all in recent surveys. This is based on a thorough literature review, mainly molluscs of the Levant and anecdotal data on sea urchins, but it is most probably also true for other groups on which there is no quantitative information from the past. Overfishing significantly reduced the incidence of most commercial species in the reef area. This is based on a comparative study of fish in the Achziv reserve compared with all of the other sites".</p> <p><b>84.</b></p> <p>Data is also available concerning non-indigenous jellyfish species recorded along the Mediterranean coast of Israel.</p> <p><b>85. AVAILABLE EQUIPMENT</b></p> <p>There is no special equipment need.</p> <p><b>86. PRIORITY: MONITORING NON-INDIGENOUS SPECIES, IN PARTICULAR INVASIVE SPECIES, IS A TOP PRIORITY FOR ISRAEL.</b></p>

Indicators	
<p>48. Spawning stock Biomass (EO3)</p> <p>49. Total landings (EO3)</p> <p>50. Fishing Mortality (EO3)</p> <p>51. Fishing effort (EO3)</p> <p>52. Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy (EO3)</p> <p>53. Bycatch of vulnerable and non-target species (EO1 and EO3)</p>	<p style="text-align: center;"><b>87. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>The Ministry of Agriculture, through its Department of Fisheries is the governmental body in charge of the fishing sector in Israel. The Society for the Protection of Nature in Israel is also active in this field through its MAFISH initiative.</p> <p style="text-align: center;"><b>88. AVAILABLE DATA AND INFORMATION</b></p> <p>Data on landings are regularly collected and data on fishing effort is available at the Department of Fisheries of the Ministry of Agriculture</p> <p style="text-align: center;"><b>89. AVAILABLE EQUIPMENT</b></p> <p>The Department of Fisheries uses private fishing boats to collect data and make fishing experiments.</p> <p style="text-align: center;"><b>90. PRIORITY NEEDS</b></p> <p>The deep sea zone should be investigated as a priority in Israel. For the coastal zone, the priority should be given to the assessment of incidental catches of endangered species.</p> <p style="text-align: center;"><b>91. PRIORITY: EXCEPT INDICATOR 12, WHICH IS A TOP PRIORITY IN ISRAEL THE OTHER INDICATORS RELATED TO FISHERY ARE MEDIUM PRIORITY.</b></p>
<p>54. Concentration of key nutrients in water column (EO5)</p> <p>55. Chlorophyll-a concentration in water column (EO5)</p> <p>30. Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater)</p> <p>31. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9)</p> <p>32. Occurrence, origin (where possible), and 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)</p> <p>33. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9)</p> <p>34. Percentage of intestinal enterococci concentration measurements within established standards (EO9)</p>	<p style="text-align: center;"><b>92. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>The Israel Oceanographic and Limnological Research, through the National Institute for Oceanography of Haifa is responsible for the monitoring of pollution parameters in the Mediterranean Sea. Being Party to the Barcelona Convention Israel shares data generated by its Mediterranean Monitoring Programme with MEDPOL</p> <p style="text-align: center;"><b>93. AVAILABLE DATA AND INFORMATION</b></p> <p>Series of data are available for the following parameters:</p> <ul style="list-style-type: none"> <li>- Heavy metals in coastal waters (since 1978)</li> <li>- Nutrients and particulate metals into coastal waters through coastal rivers (since 1990)</li> <li>- Atmospheric fluxes of nutrients and heavy metals into coastal waters (since 1996)</li> <li>- Nutrient levels and algal populations in the shallow area of the coastal waters (since 2000)</li> <li>- Biological effects of pollution on the sea - biomarkers (since 2005)</li> <li>- Environmental mapping of the coastal waters area based on satellite data (SISCAL) (since 2005)</li> </ul> <p><b>Priority:</b> These are top priority indicators for Israel</p>

<b>Indicators</b>	
<p>35. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source.) (EO10)</p> <p>36. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10)</p> <p>37. Candidate Indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10)</p>	<p>Marine litter is a significant issue in Israel. Indeed, as for the other countries located on the south east of the Mediterranean Sea, the Mediterranean coast of Israel suffers from an accumulation of marine debris.</p> <p>A comprehensive survey was conducted in 2013, 2014 and 2015 by the University of Haifa, EcoOcean and the Marine and Coast Division of Ministry of Environmental Protection. It covered marine litter and micro-plastic abundances, types of marine litter and sources and accumulation of pollutants on micro-plastic particles.</p> <p>The data of the study may serve as baseline information for the trends in amounts of litter washed ashore (Indicator 22 of IMAP) and for the trends in the amount of litter in the water column including microplastics.</p>
<p>29. Candidate indicator: 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 animals (EO11)</p> <p>30. Candidate Indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11)</p>	<p>In Israel, the monitoring of marine noise is among the elements required in the Environmental Statement (ES) enclosed with an Application for permit to drill, to conduct offshore exploration drilling and production tests.</p> <p>The guidelines elaborated to guide the preparation of the ES require to monitor frequencies and intensities of noise created during the works, at varying distances from the noise source.</p>

Table 3.3.1 Cost estimates of IMAP update for Israel (in US\$)

Indicators	Baseline data <sup>13</sup>	Equipment <sup>14</sup>	Surveying/sampling/ Lab analysis cost <sup>15</sup>
28. Habitat distributional range 29. Condition of the habitat's typical species and communities	50,000	-	50,000
30. Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles). 31. Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles) 32. Population demographic characteristics (EO1, related to marine mammals, seabirds, marine reptiles)	300,000	-	100,000
33. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species	20,000		40,000
34. Spawning stock Biomass (EO3) 35. Total landings (EO3) 36. Fishing Mortality (EO3) 37. Fishing effort (EO3) 38. Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy (EO3) 39. Bycatch of vulnerable and non-target species (EO1 and EO3)	150,000		50,000
40. Concentration of key nutrients in water column (EO5); 41. Chlorophyll-a concentration in water column (EO5); 42. Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater); 43. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9) 44. Occurrence, origin (where possible), and 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) 45. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9) 46. Percentage of intestinal enterococci concentration measurements within established standards (EO9)	-	-	50,000
47. Location and extent of the habitats impacted directly by hydrographic alterations (EO7) to also feed the assessment of EO1 on habitat extent; 48. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8) to also feed the assessment of EO1 on habitat extent 49. Candidate Indicator: Land use change (EO8)	50,000		15,000
50. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source.) (EO10); 51. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10); 52. Candidate Indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10);	25,000 (pilot action)		5/year (pilot action)
53. Candidate indicator: 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 animals (EO11) 54. Candidate Indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11)	20,000	15,000	5,000
<b>Total cost</b>	<b>615,000</b>	<b>15,000</b>	<b>310,000</b>

<sup>13</sup> Cost of acquisition of base line data for the reference sites

<sup>14</sup> Cost of additional equipment

<sup>15</sup> Cost of the regular monitoring according to the IMAP cycle



### 3.4 Country: Lebanon

#### Introduction

53. Lebanon has approximately 220 km of coastline along a north-south axis at the far east of the eastern Mediterranean basin. Lebanese coastal waters cover approximately 19,516 km<sup>2</sup>. They are relatively deep and characterised by the presence of several canyons and a continental shelf no greater than 21 km at its widest point.

54. The Lebanese coast mainly consists of three bays and a series of promontories and water-course outlets. Approximately 20% of the coastline is sand or gravel, but many of the sandy beaches have been seriously degraded by illegal sand extraction, which has only been under control since the 1990s.

55. Lebanese marine currents run in a north-east direction and produce anticyclonic gyres near the coast. With regard to hydrology, there are under-sea freshwater resurgences along the Lebanese coastline.

56. The Lebanese coast is subject to major anthropogenic pressures, in particular those associated with urbanisation. The main sources of pollution for Lebanese seawater are the dumping of solid waste along the coastline, and domestic and industrial wastewater discharge. Oil pollution constituted a serious threat in 2006-2007 when approximately 15,000 tonnes of oil was spilt and made its way along 100-120 km of the Lebanese coastline, affecting tourist beaches, marinas, fishing quays and sea ports (UNDP, 2007). Currently this type of pollution is limited to sites housing petrochemical storage areas.

57. With regard to marine biodiversity, remarkable habitats have been noted along the coast of Lebanon. For example, the Lebanese coast is characterised by organogenic reefs, mainly of vermetid gastropods; vermetid reefs are considered natural monuments in the Mediterranean. To protect the country's remarkable marine habitats, the Lebanese authorities, in collaboration with the International Union for Conservation of Nature (IUCN) and the Regional Activity Centre for Specially Protected Areas (RAC/SPA), have launched a programme to create several Marine Protected Areas (MPA), on the basis of field explorations that have delimited and characterised sites of interest.

58. The fishing sector is not highly developed in Lebanon. Annual landings are estimated at approximately 6000 tonnes. There have been no studies of the state of the stocks exploited in Lebanon, but studies published in 2006 showed that mainly juveniles are caught, which does not favour the sustainability of this activity.

Analysis of capacities with respect to IMAP indicators

Indicators	
<p>56. Habitat distributional range</p> <p>57. Condition of the habitat's typical species and communities</p>	<p><b>94. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The National Centre for Marine Sciences is the main institution that performs fieldwork on marine habitats in Lebanon. The Ecosystems Department of the Ministry of Environment coordinates projects and other initiatives for marine habitats. Academics from the Lebanese University perform field studies on marine habitats and their species and typical communities.</p> <p><b>95. DATA AND INFORMATION AVAILABLE</b></p> <p>Inventories of habitats and species are available thanks to a series of exploration campaigns performed in 2014 on 7 sites of interest along the Lebanese coast (Enfeh, Ras Chekaa, Raoucheh, Saida, Tyre and Nakoura). This data is very useful for selecting reference sites and habitats.</p> <p><b>96. EQUIPMENT AVAILABLE</b></p> <p>The National Centre for Marine Sciences has:</p> <ul style="list-style-type: none"> <li>- a 27m research vessel (CANA-CNRS) with multi-beam and dual-beam echosounders, and ROV. This vessel is operational, but cannot be used in shallow waters</li> <li>- a 7m twin-engine catamaran, which can be used for exploration in shallow waters</li> <li>- diving equipment</li> </ul> <p><b>97. DATABASES AND IT SYSTEMS</b></p> <p>Habitat data collected during 2014 exploration campaigns is available in GIS format.</p> <p><b>98. PRIORITY NEEDS</b></p> <p>The main needs for Lebanon to perform monitoring actions with regard to these two indicators involve funding for field monitoring campaigns.</p> <p><b>99. PRIORITY: THESE TWO INDICATORS ARE OF INTERMEDIATE PRIORITY FOR LEBANON.</b></p>
<p>58. Species distributional range, related to marine mammals, seabirds, marine reptiles</p> <p>59. Population abundance of selected species, related to marine mammals, seabirds, marine reptiles</p> <p>60. Population demographic characteristics, related to marine</p>	<p><b>100. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The National Centre for Marine Sciences (NCMS) monitors marine mammals, in particular cetaceans. The Centre can also monitor monk seals and sea turtles. With regard to seabirds, the Society for the Protection of Nature in Lebanon (SPNL) represents BirdLife International in Lebanon and monitors birdlife in Key Biodiversity Areas (KBA) and Important Bird and Biodiversity Areas (IBA). The Palm Islands Nature Reserve has integrated monitoring seabirds into its management plan.</p> <p><b>101. DATA AND INFORMATION AVAILABLE</b></p> <p>For cetaceans, NCMS has data on the distribution and relative abundance of <i>T. truncatus</i>. The monk seal is rare in Lebanon and its appearance sporadic. There is no scientific monitoring data for this species in Lebanon.</p>

<p>mammals, seabirds, marine reptiles</p>	<p>Sea turtle nesting sites are monitored in Lebanon and data covering several years is available from the associations that perform the monitoring. In contrast, at-sea data is not available.</p> <p>With regard to birds, in November 2016, SPNL drew up a working plan for two years of activities monitoring birds in Lebanese KBAs and IBAs. Furthermore, a training project on identification of seabirds is currently underway for the local community and the management team of the Palm Islands Nature Reserve, with the support of the RAC/SPA.</p> <p><b>102. EQUIPMENT AVAILABLE</b></p> <p>For at-sea monitoring of the species covered by these three indicators, the NCMS has a 27m research vessel (CANA-CNRS) and a 7m twin-engine catamaran.</p> <p>For continuous monitoring of the monk seal, automatic video cameras need to be acquired so that the presence of the species can be monitored on favourable sites.</p> <p><b>103. DATABASES AND IT SYSTEMS</b></p> <p>The data available on cetaceans and sea turtle nesting beaches is not stored in IT systems. The Ministry of Environment, in collaboration with the NCMS and other stakeholders, has the capacity to manage the monitoring data for these three indicators in databases to be implemented by the Ministry's Department of environmental monitoring and statistics.</p> <p><b>104. PRIORITY NEEDS</b></p> <p>The main Lebanese needs for performing monitoring actions for these three indicators involve (i) the funding of field monitoring campaigns, (ii) acquisition of automatic cameras for monitoring monk seals and (iii) implementation of a suitable database for managing data from monitoring.</p> <p><b>105. PRIORITY: THESE THREE INDICATORS ARE HIGH PRIORITY FOR LEBANON.</b></p>
<p>61. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species</p>	<p><b>106. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The National Centre for Marine Sciences (NCMS), and researchers from the Lebanese University and the private institutions University of Balamand and Saint Joseph University of Beirut, are performing monitoring of non-indigenous species, but not systematically and continuously.</p> <p><b>107. DATA AND INFORMATION AVAILABLE</b></p> <p>Lists of non-indigenous marine species have been drawn up in Lebanon, but these lists are not exhaustive and need to be supplemented by greater effort in field exploration. Furthermore, they only cover occurrence of the species and not their abundance or spatial distribution.</p> <p><b>108. EQUIPMENT AVAILABLE</b></p> <p>For at-sea campaigns, the NCMS has a 27m research vessel (CANA-CNRS) and a 7m twin-engine catamaran. These two vessels are adequate for exploration in shallow and medium waters. They are not fitted out for areas of great depth.</p>

	<p><b>109. DATABASES AND IT SYSTEMS</b></p> <p>The lists mentioned under “Data and information available” above have not all been published and some are only available from their authors.</p> <p><b>110. PRIORITY NEEDS</b></p> <p>The main Lebanese needs for performing monitoring actions for non-indigenous species involve (i) funding of field monitoring campaigns, (ii) training teams of scientists able to seek and identify species and (iii) implementing suitable databases, including a GIS, to manage the data from monitoring.</p> <p><b>111. PRIORITY: THIS INDICATOR IS OF EXTREME IMPORTANCE FOR LEBANON AS THIS COUNTRY'S WATERS ARE BEING INVADDED BY SPECIES FROM THE RED SEA, LEADING TO DISRUPTION OF THE MARINE FAUNA AND FLORA COMPOSITION. SEVERAL SPECIES ARE KNOWN TO BE INVASIVE AND POSE PROBLEMS FOR ECOLOGY AND PUBLIC HEALTH. FURTHERMORE, ITS GEOGRAPHICAL POSITION MAKES LEBANON A KEY COUNTRY IN THE EARLY DETECTION OF INVASIVE SPECIES.</b></p>
<p><b>Indicators</b></p>	
<p>62. Spawning stock Biomass 63. Total landings 64. Fishing Mortality 65. Fishing effort 66. Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy 67. Bycatch of vulnerable and non-target species (EO1 and EO3)</p>	<p><b>112. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>In Lebanon, the Fisheries Department of the Ministry of Agriculture is responsible for fishing sector governance. It has the main information regarding the sector. The National Centre for Marine Sciences (NCMS) contributes via biological studies of species of interest for fishing. The University of Balamand, via its “Institute of the Environment”, assesses stocks and performs biological studies for certain fish species of commercial interest.</p> <p><b>113. DATA AND INFORMATION AVAILABLE</b></p> <p>Fishing in Lebanon is mainly small scale, practiced using small boats distributed along the whole coastline, so data on landings is not easy to gather. Reliable data on landings is not available, only approximate estimates exist. With regard to fishing effort, a study under the FAO-Medfesis project performed a census of the fishing fleet and supplies data on the characteristics of the boats and tackle used. With regard to stock assessments, no assessment has been made in Lebanon; however, in 2016, there was an initial joint regional stock assessment initiative for <i>Sardinella aurita</i> involving Lebanon, Egypt and the Gaza strip.</p> <p><b>114. EQUIPMENT AVAILABLE</b></p> <p>Data collection for these indicators does not require special equipment. The CANA-CNRS research vessel can perform exploration campaigns to assess stocks.</p> <p><b>115. DATABASES AND IT SYSTEMS</b></p> <p>At the moment, there is no database or IT system for collecting data on Lebanese fishing.</p>

	<p><b>116. PRIORITY NEEDS</b></p> <p>Implementation of data collection systems for fishing has been identified as a priority in the GFCM roadmap for Concerted Action for Lebanon. Training in data collection, fishing statistics and stock assessment techniques is also a priority.</p>
<p>68. Concentration of key nutrients in water column (EO5) 69. Chlorophyll-a concentration in water column (EO5) 70. Concentration of key harmful contaminants measured in the relevant matrix (EO9) 71. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9) 72. Occurrence, origin (where possible), and extent of acute pollution events and their impact on biota affected by this pollution (EO9) 22. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9) 23. Percentage of intestinal enterococci concentration measurements within established standards (EO9)</p>	<p><b>117. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The National Centre for Marine Sciences (NCMS) of the CNRS is the main player in continuous monitoring of marine pollution in Lebanon. An Agreement is currently being signed between the Ministry of Environment and the CNRS, with support from the MED POL Programme, to monitor a series of parameters.</p> <p><b>118. DATA AND INFORMATION AVAILABLE</b></p> <p>Since 1980, the National network for observing the Lebanese coastal waters has provided permanent monitoring of physical, chemical, bacteriological and biological parameters. Currently, the network covers 30 stations which are checked monthly (twice-monthly in summer). Furthermore, data was collected on oil pollution during the 2006 oil slick.</p> <p><b>119. EQUIPMENT AVAILABLE</b></p> <p>The NCMS has a 27m research vessel (CANA-CNRS) fitted with equipment for sampling in the sediment and water column. It also has analysis equipment in its Jounieh laboratory. It will receive additional equipment under the Agreement being signed with the Ministry of Environment.</p> <p><b>120. DATABASES AND IT SYSTEMS</b></p> <p>The data series gathered are stored in Excel files, and are currently only available from the NCMS which provides information based on this data to various ministries as requested.</p> <p><b>121. PRIORITY NEEDS</b></p> <p>Lebanon has the necessary resources for environmental monitoring with regard to indicators 13 to 19. The main needs concern (i) support for maintenance and upkeep of sampling and analysis equipment, (ii) acquisition of reagents and other components needed for the analyses, and (iii) implementation of a suitable database, including tools for processing and interpreting data.</p> <p><b>122. PRIORITY: THESE INDICATORS ARE HIGH PRIORITY FOR LEBANON.</b></p>
<p>16. Location and extent of the habitats impacted directly by hydrographic alterations (EO7) 17. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8) 26. Candidate Indicator: Land use change (EO8)</p>	<p><b>123. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The National Centre for Remote Sensing (NCRS) uses analysis of satellite imagery and GISs to produce reports and maps on the country's land resources. It can therefore make a significant contribution to monitoring indicators 20, 21 and 22. For habitats, it would need to collaborate with the NCMS or one of the Lebanese universities.</p>

	<p><b>124. DATA AND INFORMATION AVAILABLE</b></p> <p>GIS data on land use has been available since 2010. It has been developed using the CORINE classification and IKONOS satellite images from 2005.</p> <p>For habitats, reference data is available for the following marine sites: Enfeh, Ras Chekaa, Raoucheh, Saida, Tyre and Nakoura. It was collected in 2014, and is available from the Ecosystems Department of the Ministry of Environment.</p> <p><b>125. EQUIPMENT AVAILABLE</b></p> <p>The NCRS has means for processing satellite images and producing maps using GISs.</p> <p><b>126. DATABASES AND IT SYSTEMS</b></p> <p>NCRS has implemented a Map Viewer system for viewing geographical data based on searches. (<a href="http://rsensing.cnrs.edu.lb/geonetwork/srv/eng/search#fast=index&amp;from=1&amp;to=50&amp;keyword=Downloadable%20Data&amp;keyword=planningCadastre&amp;keyword=Urban">http://rsensing.cnrs.edu.lb/geonetwork/srv/eng/search#fast=index&amp;from=1&amp;to=50&amp;keyword=Downloadable%20Data&amp;keyword=planningCadastre&amp;keyword=Urban</a>)</p> <p><b>127. PRIORITY NEEDS</b></p> <p>The main needs for Lebanon to perform monitoring for indicators 20, 21 and 22, involve improving the data exchange system, acquiring suitable satellite imagery, and using computer modelling for the needs of Indicators 20 and 21.</p> <p><b>Priority:</b> These indicators are high-priority for Lebanon, in particular due to the strong anthropization of the coast, and the increasingly pressing need for coastal developments and the extension of certain infrastructure.</p>
<p>22. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source.) (EO10)</p> <p>23. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10)</p> <p>24. Candidate Indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10)</p>	<p><b>128. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>Institutionally, the Department of Urban Environmental Pollution Control, which is part of the Service of Urban Environment, is the structure of the Ministry of Environment responsible for solid waste in Lebanon.</p> <p>Currently, no institution is working on assessment of marine waste in Lebanon. A few NGOs are involved in beach cleaning operations (for example: T.E.R.R.E Liban, Operation Big Blue Association (OBBA), etc.). Microplastics are the subject of a PhD thesis at the NCMS.</p> <p>It should be noted that Lebanon is Party to conventions regarding waste disposal, in particular the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1972) and the Barcelona Convention and its Land-based Sources and Activities Protocol.</p> <p><b>129. DATA AND INFORMATION AVAILABLE</b></p> <p>Several reports show that marine waste is one of the major environmental concerns in Lebanon, but that there is no numerical data on the quantities and types of waste.</p> <p><b>130. PRIORITY NEEDS</b></p> <p>Implement a case study on a pilot site to collect the data needed to calculate these indicators, while offering opportunities to enhance national capacities.</p>

	<b>131. PRIORITY:</b> These indicators are an important priority for Lebanon.
27. Candidate Indicator: 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 animals (EO11) 28. Candidate Indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11).	No institution is working on marine noise in Lebanon. These indicators are not considered a priority for the moment.

Table 3.4.1 Cost estimates of IMAP update for Lebanon (in US\$)

Indicators	Baseline data <sup>16</sup>	Equipment <sup>17</sup>	Surveying/sampling/ Lab analysis cost <sup>18</sup>
55. Habitat distributional range 56. Condition of the habitat's typical species and communities	25,000	-	25,000
57. Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles). 58. Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles) 59. Population demographic characteristics (EO1, related to marine mammals, seabirds, marine reptiles)	150,000	-	75,000
60. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species	100,000		50,000
61. Spawning stock Biomass (EO3) 62. Total landings (EO3) 63. Fishing Mortality (EO3) 64. Fishing effort (EO3) 65. Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy (EO3) 66. Bycatch of vulnerable and non-target species (EO1 and EO3)	200,000		75,000
67. Concentration of key nutrients in water column (EO5); 68. Chlorophyll-a concentration in water column (EO5); 69. Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater); 70. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9) 71. Occurrence, origin (where possible), and 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) 72. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9) 73. Percentage of intestinal enterococci concentration measurements within established standards (EO9)	75,000	-	50,000
74. Location and extent of the habitats impacted directly by hydrographic alterations (EO7) to also feed the assessment of EO1 on habitat extent; 75. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8) to also feed the assessment of EO1 on habitat extent 76. Candidate Indicator: Land use change (EO8)	50,000		15,000
77. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source.) (EO10); 78. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10); 79. Candidate Indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10);	25,000 (pilot action)		5/year (pilot action)
80. Candidate indicator: 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 animals (EO11) 81. Candidate Indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11)	20,000	15,000	5,000
<b>Total cost</b>	<b>645,000</b>	<b>15,000</b>	<b>295,000</b>

<sup>16</sup> Cost of acquisition of base line data for the reference sites

<sup>17</sup> Cost of additional equipment

<sup>18</sup> Cost of the regular monitoring according to the IMAP cycle



### 3.5 Country: Libya

#### Introduction

59. The coastline of Libya extends over 1,970 km and is characterized by its relative homogeneity since there is no marked differentiation of its topography and geomorphology. The seabed topography is also characterised by a relative homogeneity with a gradual extension of the continental shelf covering a surface area of about 65,000 km<sup>2</sup>.

60. The hydrological conditions of the coastal region are dominated by three water mass layers. The surface layer, with low salinity is relatively poor in nutrient. It comes from the Atlantic, crosses Gibraltar and moves eastwards. The intermediate layer with a maximum salinity of 38.75‰ and a high nutrient level. It moves westward out of the Levantine Sea. The deep layer extends from below the intermediate layer (at a depth of >1000 m) to the bottom. The water of this layer is very homogeneous flowing from the nearby Adriatic. It is very cold and less saline than the intermediate water.

61. Important portions of the coastal zone of Libya are still in very good natural condition. However, some portions of the coast are under anthropogenic pressure generated by petroleum exploration and exploitation, fisheries and urbanisation of the coast.

62. Fishing activity in Libya is an active and growing sector of the economy. Although the sector employs a low number of Libyans, it can be classified as one of the main economic activities for the population in the coastal area

63. Tourism in Libya was for many years a minor contributor to the national economy, but following the adoption in 2005 of the Law no 7 on tourism development, a national tourism plan was developed and included the identification of sites suitable for tourism development. Most of the identified sites are located along the Mediterranean coast. However, the current political situation in the country stopped the development of some economic sectors such as tourism.

64. The main threats to the marine environment in Libya are linked to the uncontrolled coastal development, the illegal fishing practices and overfishing. Marine pollution generated by oil activities and sewage is affecting the marine environment in Libya only in a limited number of zones. Other threats are reported, in particular: Invasive species (including through ballast waters) coastal sand mining, brine discharged by seawater desalination plants and the use of explosives (dynamite) for fishing.

65. From 2011, the political circumstances prevailing in Libya are affecting the marine environment, in particular because of the lack of control by the authorities of harmful practices.

Capacity analysis in relation to IMAP Indicators

66. All the monitoring activities undertaken by the national organisations in relation to the marine and coastal environment were stopped during the three last years. All the international organisations working on environment and nature conservation stopped their activities in Libya. It is not possible to predict how the situation will evolve in the country in the near future.

<b>Indicators</b>	
<p>73. Habitat distributional range</p> <p>74. Condition of the habitat's typical species and communities</p>	<p style="text-align: center;"><b>132. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>Environment General Authority Marine Biology Research Centre Universities.</p> <p style="text-align: center;"><b>133. AVAILABLE DATA AND INFORMATION</b></p> <p>Mapping data of marine habitats are available for the area of Ain Ghazala, Garbulli, Bomba and farowa lagoon</p> <p style="text-align: center;"><b>134. AVAILABLE EQUIPMENT</b></p> <p>There is no equipment for habitat monitoring in Libya</p> <p style="text-align: center;"><b>135. DATABASES AND INFORMATION SYSTEMS</b></p> <p>There is no databases and Information systems for marine habitats in Libya</p> <p style="text-align: center;"><b>136. PRIORITY NEEDS</b></p> <p>Training and mapping of key habitats are the most urgent needs regarding the monitoring of marine habitats en Libya. However, field surveys cannot be envisaged in the political circumstances prevailing in the country during the 3 last years.</p> <p style="text-align: center;"><b>137. PRIORITY: THESE INDICATORS ARE A MEDIUM PRIORITY FOR THE COUNTRY</b></p>
<p>75. Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles)</p> <p>76. Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles)</p> <p>77. Population demographic characteristics (EO1, related to marine mammals, seabirds, marine reptiles)</p>	<p style="text-align: center;"><b>138. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>Environment General Authority Marine Biology Research Centre Universities NGOs</p> <p style="text-align: center;"><b>139. AVAILABLE DATA AND INFORMATION</b></p> <p>From 2002 to 2007, a monitoring program was conducted to assess the status of the monk seal population in Libya. It provided data about the presence of the species through interviews of fishermen.</p> <p>Regular surveys for birds organised by EGA with the support of RAC/SPA between 2005 and 2010 generated series of data and led to the elaboration of the Atlas of water birds in Libya</p> <p>The monitoring of the nesting activities of marine turtles started in 1995. Data about the number of nests and demographic parameters are available for the most important nesting sites.</p>

	<p><b>140. DATABASES AND INFORMATION SYSTEMS</b></p> <p>There are no databases and information systems about the three categories of species covered by these indicators. The available data are in paper reports and Excel files.</p> <p><b>141. PRIORITY NEEDS</b></p> <p>Surveys for monitoring the marine turtle nesting sites and the key bird areas are a priority in Libya, but they can be envisaged only when the political situation will improve in the country. Libya is Party to ACCOBAMS, but its participation to the ACCOBAMS Survey Initiative that will take place in the summer 2018 is not expected.</p> <p><b>Priority:</b> These indicators are a top priority for Libya</p>
<p>78. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species</p>	<p><b>142. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>Marine Biology Research Centre Universities</p> <p><b>143. AVAILABLE DATA AND INFORMATION</b></p> <p>Records made by scientists from the Libyan universities are available, including collection and classification of Invasive fish species on the Libyan coast.</p> <p><b>144. DATABASES AND INFORMATION SYSTEMS</b></p> <p>There is no databases and information systems for marine invasive species in Libya</p> <p><b>145. PRIORITY NEEDS</b></p> <p><b>146. TRAINING AND SUPPORT TO THE ESTABLISHMENT OF AN EARLY WARNING SYSTEM TO DETECT THE OCCURRENCE OF INVASIVE SPECIES ARE A TOP PRIORITY ON LIBYA</b></p> <p><b>147. PRIORITY: CONSIDERING ITS GEOGRAPHICAL POSITION IN THE EAST MEDITERRANEAN AND THE INTENSITY OF THE MARITIME TRAFFIC AND THE IMPORTANT AMOUNT OF BALLAST WATERS DISCHARGED IN LIBYA, THE MONITORING OF NON-INDIGENOUS SPECIES IS A HIGH PRIORITY IN THE COUNTRY.</b></p>
<p>79. Spawning stock Biomass (EO3)</p> <p>80. Total landings (EO3)</p> <p>81. Fishing Mortality (EO3)</p> <p>82. Fishing effort (EO3)</p> <p>83. Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy (EO3)</p> <p>84. Bycatch of vulnerable and non-target species (EO1 and EO3)</p>	<p><b>148. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>Marine Biology Research Centre Fisheries authority</p> <p><b>149. AVAILABLE DATA AND INFORMATION</b></p> <p>During the four past years, the effort for collecting data about landings is not sufficient to provide reliable information about fishery sector in Libya. Most of available data are not up-to-date and cannot be used for the calculation of the Indicators 7 to 12.</p>

	<p><b>150. AVAILABLE EQUIPMENT</b></p> <p>There is no Research Vessel in Libya that could be used for stock assessment. Most of the surveys organised in the past used foreign Research Vessels (Russia and France)</p> <p><b>151. PRIORITY</b></p> <p>The monitoring of fisheries is a medium priority for Libya</p>
<p>85. Concentration of key nutrients in water column (EO5)</p> <p>86. Chlorophyll-a concentration in water column (EO5)</p> <p>38. Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater)</p> <p>39. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9)</p> <p>40. Occurrence, origin (where possible), and 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)</p> <p>41. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9)</p> <p>42. Percentage of intestinal enterococci concentration measurements within established standards (EO9)</p>	<p><b>152. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>Environment General Authority Marine Biology Research Centre</p> <p><b>153. AVAILABLE DATA AND INFORMATION</b></p> <p>There is annual bathing water monitoring and blue beach status is given by municipality labs. Data exists but not systematically accessible</p> <p><b>154. AVAILABLE EQUIPMENT</b></p> <p>Labs (Chemistry and Bacteriology) available in major coastal cities, and oil refineries, and within the Man-made River Co. Municipality labs in need of upgrade and reagents.</p> <p><b>155. DATABASES AND INFORMATION SYSTEMS</b></p> <p>Data exists but not systematically organised.</p> <p><b>156. PRIORITY NEEDS</b></p> <p>Training for the elaboration of monitoring programmes, sampling sites selection and data processing Elaboration of a monitoring programme based on a network of sampling sites</p> <p><b>157. PRIORITY: THE INDICATORS RELATED TO EO5 AND EO9 ARE A HIGH PRIORITY FOR LIBYA</b></p>

<p><b>Indicators</b></p> <p>24. Location and extent of the habitats impacted directly by hydrographic alterations (EO7) to also feed the assessment of EO1 on habitat extent</p> <p>25. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8) to also feed the assessment of EO1 on habitat extent</p> <p>31. Candidate Indicator: Land use change (EO8)</p>	<p><b>158. NATIONAL INSTITUTION/ORGANISATIONS</b></p> <p>Libyan Centre for Remote Sensing and Space Science (LCRSSS) Environment General Authority</p> <p><b>159. AVAILABLE DATA AND INFORMATION</b></p> <p>There are maps of Posidonia meadows for the areas of Ain Ghazala, Bomba, Garabulli and the Farwa Lagoon These maps and the related documentation are held by the Biodiversity sector of the Environment General Authority</p> <p><b>160. AVAILABLE EQUIPMENT</b></p> <p>No information</p> <p><b>161. DATABASES AND INFORMATION SYSTEMS</b></p> <p>No information</p>
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	<p><b>162. PRIORITY: THESE INDICATORS ARE CONSIDERED AS LOW PRIORITY IN LIBYA</b></p>
<p>43. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source.) (EO10)</p> <p>44. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10)</p> <p>45. Candidate Indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10)</p>	<p><b>163. THERE IS NO MONITORING FOR MARINE LITTER IN LIBYA AND THE CONTACTED AUTHORITIES CONSIDERED THIS ISSUE AS A LOW PRIORITY FOR LIBYA</b></p>
<p>32. Candidate indicator: 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 animals (EO11)</p> <p>33. Candidate Indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11)</p>	<p><b>164. THERE IS NO MONITORING FOR MARINE NOISE IN LIBYA AND THE CONTACTED AUTHORITIES CONSIDERED THIS ISSUE AS A LOW PRIORITY FOR LIBYA.</b></p> <p><b>165. HOWEVER, CONSIDERING THE INTENSITY OF MARITIME TRAFFIC AND THE OIL DRILLING ACTIVITIES IN LIBYA, THE MARINE NOISE MAY BE A SIGNIFICANT SOURCE OF DISTURBANCE FOR THE MARINE ENVIRONMENT IN THE COUNTRY.</b></p>

Table 3.5.1 Cost estimates of IMAP update for Libya (in US\$)

Indicators	Baseline data <sup>19</sup>	Equipment <sup>20</sup>	Surveying/sampling/Lab analysis cost <sup>21</sup>
1. Habitat distributional range 2. Condition of the habitat's typical species and communities	150,000	-	50,000
3. Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles). 4. Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles) 5. Population demographic characteristics (EO1, related to marine mammals, seabirds, marine reptiles)	700,000	-	250,000
6. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species	60,000		30,000
7. Spawning stock Biomass (EO3) 8. Total landings (EO3) 9. Fishing Mortality (EO3) 10. Fishing effort (EO3) 11. Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy (EO3) 12. Bycatch of vulnerable and non-target species (EO1 and EO3)	250,000		150,000
13. Concentration of key nutrients in water column (EO5); 14. Chlorophyll-a concentration in water column (EO5); 15. Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater); 16. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9) 17. Occurrence, origin (where possible), and 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) 18. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9) 19. Percentage of intestinal enterococci concentration measurements within established standards (EO9)	250,000	250,000	50,000
20. Location and extent of the habitats impacted directly by hydrographic alterations (EO7) to also feed the assessment of EO1 on habitat extent; 21. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8) to also feed the assessment of EO1 on habitat extent 22. Candidate Indicator: Land use change (EO8)	35,000		15,000
23. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source.) (EO10); 24. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10); 25. Candidate Indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10);	25,000 (pilot action)		5/year (pilot action)
26. Candidate indicator: 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 animals (EO11) 27. Candidate Indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11)	20,000	15,000	5,000
<b>Total cost</b>	<b>1,490,000</b>	<b>265,000</b>	<b>550,000</b>

<sup>19</sup> Cost of acquisition of base line data for the reference sites

<sup>20</sup> Cost of additional equipment

<sup>21</sup> Cost of the regular monitoring according to the IMAP cycle

### 3.6 Country: Morocco

#### Introduction

67. Morocco's Mediterranean shoreline stretches over approximately 512 km and features an often rugged landscape where cliffs tower over valleys, a few bays and beach strips. Located at the gateway to the Mediterranean. The eastern portion of Morocco's Mediterranean coast is flatter, however, and presents a large coastal lagoon (Nador Lagoon) as well as the mouth of a broad watercourse (La Moulya). Morocco's Mediterranean coast is subject to the influence of Atlantic waters, which condition water mass movements and significantly the composition of fauna and flora.

68. Anthropogenic pressure along the Moroccan Mediterranean coastline is focused on specific coastal areas with 3 major urban centres (Tangiers, Tétouan and Nador), two major industrial zones (Tangiers and Nador), and 3 major port facilities located at Tangiers, Al Hoceima and Nador. The opening up of this area, following large-scale investment in road and railway infrastructure developed during the last decade, tends to increase anthropogenic pressure along Morocco's Mediterranean coast. Moreover, the area is subject to the impact of heavy maritime traffic crossing the Strait of Gibraltar.

69. Tourist activity along the Moroccan Mediterranean coast has developed thanks to the appeal of the area for both local and international tourism, offering hotel units and secondary residences. Also, marinas (Saïdia, Marina Smir and Kabila) have grown up, making the most of the area's natural attractiveness and taking advantage of the saturation of marinas along the Mediterranean's northern shores.

70. Fishing in Morocco's northern zone is essentially coastal and small-scale. It generates employment for approximately 17,000 fishermen working on board around 2,700 fishing boats and craft mainly operating from 8 fishing ports (Ras Kebdana, El Jebha, M'diq, Cala Iris, Sidi Hssaine, Chmaala, Fnideq, Ksar Sghir) and several landing points, some of which have specific facilities. Annual landing figures reach 22,675 tonnes (2013 data), and as for the rest of the country, development of fisheries in the Mediterranean area of Morocco is conducted within the framework of the "Halieutis" Plan which sets a fishing sector development strategy in Morocco aiming at upgrading and modernising the various segments of this sector and enhancing its competitiveness and performance.

71. Marine biodiversity along Morocco's Mediterranean coast is becoming better known. Since the implementation of the National Strategy for Conservation and Sustainable Use of Biodiversity and its related action plan in 2004, field studies have been conducted for improving knowledge of habitats and the fauna and flora of this marine zone. Several sites of interest have been identified: the Moulouya River mouth, Nador Lagoon, Cape of Three Forks, the Jebha Cirque, Rhomara Coast, Koudiat Taifour, Smir Lagoon and Jebel Moussa. Detailed information is now available for some of these sites for defining habitats and species, and monitoring them will provide a clear idea on the development of the marine environment's ecological condition in this area.

Analysis of capacities with respect to IMAP Indicators

Indicators	
<p>1. Habitat distributional range</p> <p>2. Condition of the habitat's typical species and communities</p>	<p><b>166. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>Mohammed V University (Rabat), has already participated in mapping and marine habitat characterisation programmes through its academics, along the Mediterranean coast of Morocco. This institution has the skills for conducting monitoring on these two indicators.</p> <p>The HCEFLCD could contribute, by way of its role as Protected Area Manager and RAC/SPA Focal Point.</p> <p>The INRH could also offer an effective contribution throughout Morocco's Mediterranean zone, including by way of its regional centres.</p> <p><b>167. DATA AND INFORMATION AVAILABLE</b></p> <p>There is only data on habitats for a few sites along Morocco's Mediterranean coastline: Cape of Three Forks, Al Hoceima, Jebha, Jebel Moussa. These include maps of some habitats and species inventories. For the Jebel Moussa site, a monitoring network for coralligenous formations and the <i>Zostera marina</i> seagrass bed is in operation.</p> <p><b>168. EQUIPMENT AVAILABLE</b></p> <p>Diving gear is available. The monitoring programme related to Indicator 1 (Habitat distributional range) also requires sonar tools which are not available.</p> <p><b>169. DATABASES AND IT SYSTEMS</b></p> <p>For the time being there are no databases on marine habitats of the Moroccan Mediterranean coast. The GIS available with the INRH may be developed to receive data on habitat distributional range.</p> <p><b>170. PRIORITY NEEDS</b></p> <p>The main needs for Morocco to perform monitoring actions with regard to these two indicators involve the provision of sonar tools (side-scan sonar, multibeam echosounder), ROV and a towed camera system. Capacity-building is required.</p> <p><b>171. PRIORITY: II THESE TWO INDICATORS ARE HIGH PRIORITY DUE TO GROWING ANTHROPOGENIC PRESSURE ON HABITATS ALONG THE MOROCCAN MEDITERRANEAN COAST.</b></p>



Indicators	
<p>3. Species distributional range related to marine mammals, seabirds, marine reptiles</p> <p>4. Population abundance of selected species related to marine mammals, seabirds, marine reptiles</p> <p>5. Population demographic characteristics related to marine mammals, seabirds, marine reptiles</p>	<p><b>172. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>For seabirds, the HCEFLCD and Universities (Rabat's Mohamed V and the Institute of Science) as well as the GREPOM-Birdlife and AGIR associations are the major players that may be of use for the IMAP.</p> <p>For turtles, it is the INRH's Network for monitoring stranding events and the ATOMM association which seem best suited for conducting monitoring actions to generate useful data regarding these three indicators.</p> <p>For marine mammals, the INRH and the Maritime Fisheries Department (an ACCOBAMS Focal Point) are the recommended institutions for monitoring these indicators.</p> <p><b>173. DATA AND INFORMATION AVAILABLE</b></p> <p>The only data currently available for these indicators relates to birds, specifically the Osprey and stranding data collected under the INRH network.</p> <p><b>174. EQUIPMENT AVAILABLE</b></p> <p>For monitoring purposes related to these three indicators, it is primarily resources for sea outings that are required. On the Moroccan Mediterranean coast, the AGIR association possesses a boat provided through a project funded by the MAVA Foundation, but its scope of action is limited.</p> <p><b>175. DATABASES AND IT SYSTEMS</b></p> <p>There are currently no databases or IT systems containing useful data for these 3 indicators. However, researchers from Mohamed V Rabat University and the Institute of Science have data, some of which has been published. Moreover, a database containing stranding data is held by the INRH.</p> <p><b>176. PRIORITY NEEDS</b></p> <p>The main needs for performing monitoring actions related to these three indicators involve funding of field monitoring campaigns and setting up databases for handling data from the monitoring effort.</p> <p><b>177. PRIORITY: THESE THREE INDICATORS ARE HIGH PRIORITY FOR MOROCCO.</b></p>
<p>6. Trends in abundance, temporal occurrence and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species</p>	<p><b>178. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>No systematic monitoring is conducted for non-indigenous marine species in Morocco.</p> <p><b>179. DATA AND INFORMATION AVAILABLE</b></p> <p>Few non-indigenous marine species have been recorded in Morocco. There are just a few isolated reports and no conclusions can be drawn from the data available regarding abundance trends and spatial distribution.</p>

	<p><b>180. EQUIPMENT AVAILABLE</b></p> <p>The INRH possesses research vessels for sea campaigns.</p> <p><b>181. DATABASES AND IT SYSTEMS</b></p> <p>No databases on non-indigenous marine species exist in Morocco</p> <p><b>182. PRIORITY NEEDS</b></p> <p>The main needs for performing monitoring action for non-indigenous marine species in Morocco involve (i) funding of field monitoring campaigns, (ii) training teams of scientists able to seek and identify species, and (iii) implementing suitable databases, including a GIS, to manage the data from monitoring.</p> <p><b>183. PRIORITY: THIS INDICATOR IS NOT A PRIORITY FOR MOROCCO.</b></p>
<p>7. Spawning stock biomass</p> <p>8. Total landings</p> <p>9. Fishing mortality</p> <p>10. Fishing effort</p> <p>11. Catch per unit of effort (CPUE) or landing per unit of effort (LPUE) as a proxy</p> <p>12. Bycatch of vulnerable and non-target species (EO1 and EO3)</p>	<p><b>184. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>In Morocco, the INRH is responsible for monitoring and assessing fish stocks. The Maritime Fisheries Department holds data on landings.</p> <p><b>185. DATA AND INFORMATION AVAILABLE</b></p> <p>Fishing is a key sector in Morocco. The data required for calculating indicators under Ecological Objective 3 is available, particularly for major fish species.</p> <p><b>186. EQUIPMENT AVAILABLE</b></p> <p>The INRH has a research vessel equipped for trawling in up to 800 - 1000m depths - the Charf AL Idrissi (a 41m boat with a 30-day endurance at sea that can carry up to 9 scientists in addition to the crew). This research vessel can collect data on benthic stock. The INRH also has a boat for sonar assessment of pelagic stock (Al AMir Moulay Abdellah: a 38.5m-boat with echo-sounding equipment, 21-day endurance at sea. Can carry 14 crew members and 7 scientists.</p> <p><b>187. DATABASES AND IT SYSTEMS</b></p> <p>The INRH has databases and software for data processing and assessment of fish stocks.</p> <p><b>188. PRIORITY NEEDS</b></p> <p>Morocco has the material and human resources required for calculating these indicators.</p>

<b>Indicators</b>	
<p>13. Concentration of key nutrients in water column (EO5)</p> <p>14. Chlorophyll-a concentration in water column (EO5)</p> <p>17. Concentration of key harmful contaminants measured in the relevant matrix (EO9)</p> <p>18. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9)</p> <p>19. Occurrence, origin (where possible) and extent of acute pollution events and their impact on biota affected by this pollution (EO9)</p> <p>20. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9)</p> <p>21. Percentage of intestinal enterococci concentration measurements within established standards (EO9)</p>	<p><b>NATIONAL INSTITUTIONS AND ORGANISATIONS</b> The National Pollution Survey and Monitoring Laboratory (LNEP) and National Fisheries Research Institute (INRH) are the two major institutions monitoring the parameters linked to these indicators.</p> <p><b>189. DATA AND INFORMATION AVAILABLE</b></p> <p>Series of data are available for all parameters required for calculating Indicators 13 to 21.</p> <p><b>190. EQUIPMENT AVAILABLE</b></p> <p>The INRH has the equipment required for water column sampling and analysis of nutrient elements, chlorophyll-a, pollutants (lead, mercury, organochlorines) and enterococci in the water, sediment and biota. These testing laboratories are duly accredited. Several other institutions have testing equipment such as the LNEP and CEREP.</p> <p><b>191. DATABASES AND IT SYSTEMS</b></p> <p>Results of the monitoring conducted by the INRH are stored in a database that is not open to the public. Reports based on this data are sent to the Maritime Fisheries Department, the ONSSA and the MED POL Focal Point.</p> <p>Other IMAP-relevant databases exist:</p> <ul style="list-style-type: none"> <li>- Database on the results of bathing water microbiological testing campaigns</li> <li>- Database on assessment of land-based pollution disposed of in the Mediterranean Sea</li> <li>- Database on national inventory of persistent organic pollutants</li> </ul> <p><b>192. PRIORITY NEEDS</b></p> <p>The most urgent needs involve funding (i) of field campaigns, because field campaigns are particularly onerous (ii) of reagents and other elements required for analyses and (iii) setting-up an information system for improved management of data flows, georeferencing and interpretation of results.</p> <p><b>193. PRIORITY:</b></p> <p>Indicators 13, 14 and 17 to 21 are a high priority for Morocco. Monitoring these indicators is required by Moroccan regulation and by destination countries of Moroccan seafood exports.</p>

Indicators	
<p>15. Location and extent of the habitats impacted directly by hydrographic alterations (EO7)</p> <p>16. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8)</p> <p>25. Candidate Indicator: Land use change (EO8)</p>	<p><b>NATIONAL INSTITUTIONS AND ORGANISATIONS</b> The Coastal Department of the Ministry responsible for the Environment, Royal Centre for Remote Sensing (CRTS) and Public Test and Survey Laboratory (LPEE) are directly involved in these three indicators. The Urban Planning Agency and the Ministry responsible for the Maritime Public Domain (Ministry of Infrastructure) are also involved.</p> <p><b>194. DATA AND INFORMATION AVAILABLE</b></p> <p>Data on the impact of certain coastal projects and infrastructure is available under the Environmental Impact Studies examined by regional or national committees. Data obtained under MedMPAnet Projects and MedKeyHabitats is available at Mohamed V University in Rabat and at the HCEFLCD regarding the distributional range of some coastal marine habitats of Al Hoceima and Jebel Moussa, and may therefore serve as a reference for IMAP Indicator 15.</p> <p><b>195. EQUIPMENT AVAILABLE</b></p> <p>The CRTS is equipped for processing satellite images and producing maps via the GIS. The LPEE provides particularly relevant services for IMAP Indicator 16, as follows:</p> <ul style="list-style-type: none"> <li>- Small-scale model studies on the stability of maritime infrastructure, using a random wave generator on canal and vessel tanks.</li> <li>- Mathematical model studies of discharge flow and sediment transport into rivers and canals</li> <li>- Oceanographic studies: tides, swells, currents</li> </ul> <p><b>196. DATABASES AND IT SYSTEMS</b></p> <ul style="list-style-type: none"> <li>- Database on use of the Moroccan coastline</li> <li>- IT system for integrated coastal zone management of the Central Rif</li> </ul> <p><b>197. PRIORITY NEEDS</b></p> <p>Morocco's main needs for monitoring under Indicators 9,10 &amp; 11 concern appropriate satellite image acquisition and use of digital modelling for Indicators 9 &amp;10.</p> <p><b>Priority:</b> These indicators are high priority along Morocco's Mediterranean coast, which is extremely appealing and where major coastal infrastructure projects are in progress or planned.</p>

Indicators	
<p>22. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source) (EO10)</p> <p>23. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10)</p> <p>24. Candidate Indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10)</p>	<p><b>198. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>Monitoring of marine solid waste is not conducted along Morocco's Mediterranean coast by any of its public institutions. Beach clean-up campaigns are organised to prepare for the summer season. A few NGOs contribute to this effort. The Mohamed VI Foundation for Environmental Protection has a Clean Beach programme.</p> <p><b>199. DATABASES AND IT SYSTEMS</b></p> <p>No detailed figures exist on the quantity and nature of marine solid waste on the Mediterranean coast of Morocco. This aspect is included in the Memorandum of Understanding which is currently being signed with MED POL.</p> <p><b>200. PRIORITY NEEDS</b></p> <p>This is a new subject for Morocco, and the most urgent need is to form teams and commence work on a pilot zone.</p> <p><b>201. PRIORITY:</b></p> <p>These indicators are a considerable priority for Morocco.</p>
<p>26. Candidate Indicator: 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 animals (EO11)</p> <p>28. Candidate Indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11)</p>	<p>No institution is working on marine sounds in Morocco. Due to their geographic location, the Mediterranean waters of Morocco are located in an area where maritime traffic is among the densest in the world (Strait of Gibraltar). Monitoring maritime sounds should be seriously taken into consideration.</p>

Table 3.6.1 Cost estimates of IMAP update for Morocco (in US\$)

Indicators	Baseline data <sup>22</sup>	Equipment <sup>23</sup>	Surveying/sampling/Lab analysis cost <sup>24</sup>
1. Habitat distributional range	10,000	-	50,000
2. Condition of the habitat's typical species and communities			
3. Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles).			
4. Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles)	200,000	-	100,000
5. Population demographic characteristics (EO1, related to marine mammals, seabirds, marine reptiles)			
6. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species	10,000		5,000
7. Spawning stock Biomass (EO3)			
8. Total landings (EO3)			
9. Fishing Mortality (EO3)			
10. Fishing effort (EO3)	-		50,000
11. Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy (EO3)			
12. Bycatch of vulnerable and non-target species (EO1 and EO3)			
13. Concentration of key nutrients in water column (EO5);			
14. Chlorophyll-a concentration in water column (EO5);			
15. Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater);			
16. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9)			
17. Occurrence, origin (where possible), and 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)	-	-	50,000
18. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9)			
19. Percentage of intestinal enterococci concentration measurements within established standards (EO9)			
20. Location and extent of the habitats impacted directly by hydrographic alterations (EO7) to also feed the assessment of EO1 on habitat extent;			
21. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8) to also feed the assessment of EO1 on habitat extent	50,000		10,000
22. Candidate Indicator: Land use change (EO8)			
23. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source.) (EO10);			
24. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10);	25,000 (pilot action)		5/year (pilot action)
25. Candidate Indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10);			
26. Candidate indicator: 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 animals (EO11)	20,000	15,000	5,000
27. Candidate Indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11)			
<b>Total cost</b>	<b>135,000</b>	<b>15,000</b>	<b>270,000</b>

<sup>22</sup> Cost of acquisition of base line data for the reference sites

<sup>23</sup> Cost of additional equipment

<sup>24</sup> Cost of the regular monitoring according to the IMAP cycle

### 3.7 Country: Tunisia

#### Acronyms used

- ANGed : *Agence Nationale de Gestion des Déchets* (National Waste Management Agency)
- ANPE : *Agence Nationale de Protection de l'Environnement* (National Environmental Protection Agency)
- APAL : *Agence de Protection et Aménagement du Littoral* (Coastline Protection and Development Agency)
- CITET : *Centre International des Technologies de l'Environnement de Tunis* (Tunis Environmental Technologies International Centre)
- COPEAU : *Réseau national de Surveillance de la Qualité des Eaux* (National Water Quality Monitoring Network)
- DGPA : *Direction Générale de la Pêche et de l'Aquaculture* (General Directorate of Fisheries and Aquaculture)
- DGSV : *Direction Générale des Services Vétérinaires* (General Directorate of Veterinary Services)
- DHMPE : *Direction de l'Hygiène du Milieu et de la Protection de l'Environnement* (Directorate of Environmental Protection and Health)
- EIA : Environmental Impact Assessment
- GIS : Geographic Information System
- IMAP : Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast
- INNORPI : *Institut National de la Normalisation et de la Propriété Industrielle* (National Industrial Property and Standardisation Institute)
- INS : *Institut National de la Statistique* (National Statistics Institute)
- INSTM : *Institut National des Sciences et Technologies de la Mer* (National Marine Science and Technology Institute)
- MEDPOL : Programme for pollution assessment and control in the Mediterranean region
- ONAS : *Office National de l'Assainissement* (National Sanitation Office)
- OTEDD : *L'Observation Tunisien de l'Environnement et du Développement Durable* (Tunisian Observation of the Environment and Sustainable Development)
- PMD : Public Maritime Domain
- REBIO : *Réseau de surveillance des biotoxines* (Biotoxin monitoring network)
- RECNO : *Réseau de surveillance des contaminants nocifs* (Noxious contaminant monitoring network)
- REMI : *Réseau de surveillance microbiologique* (Microbiological monitoring network)
- REPHY : *Réseau de surveillance du phytoplancton* (Phytoplankton monitoring network)
- REZS : *Réseau Zoo-sanitaire* (Animal health network)
- SIAD : *Système d'Information et d'Aide à la Décision* (Information and decision-support system)

## Introduction

72. Tunisia is located in North Africa. Its coast extends over roughly 1,300 km opening to the east onto the Eastern Mediterranean basin, and to the north onto the Western Mediterranean basin.
73. The country's northern coasts are rocky, characterised by many headlands, and the continental shelf is very narrow. The underwater relief is a continuation of the coastal mountains, separated by vast trenches consisting of soft sediments forming channels towards the depths.
74. The eastern coasts are less rocky than the northern coasts. Here the continental shelf is relatively wide and there are large sandy beaches.
75. The country's southern coastline essentially consists of the Gulf of Gabès, which extends as far as the Tunisia-Libya border, and is characterised by sandy and sandy-silty bottoms. The continental shelf slopes down very gently, and is very wide.
76. Overall, on all the northern rocky coasts, biodiversity undergoes a low level of disturbance (infrequent pollution, bottoms not suitable for trawling, difficult access for recreational fishing, etc.). Although exploration of the eastern part of Cap-Bon, Gulf of Hammamet and the Sousse and Monastir region has been limited, they can be considered regions where biodiversity status is good, except in specific zones that are currently considered to be hot spots, in particular regarding eutrophication. Biodiversity in the Gulf of Gabès has undergone considerable anthropogenic pressure due to industrial pollution and intensive trawling. The country has many islands along its coast, most of which constitute environmental oases.
77. The main anthropogenic pressures on the marine environment in Tunisia are caused by excessive urban development and tourism. Industry is another source of nuisance, but its impact remains limited to isolated zones except in the Gulf of Gabès where industrial pollution has contributed to severe deterioration of marine habitats in a large part of the area.
78. Fishing is a very important sector in Tunisia, in social and economic terms. Fishing activities have many environmental consequences, in particular on the most fragile habitats such as *Posidonia* seagrass beds, and on fisheries stocks. Signs of over-exploitation are visible for several species.



3.2. Analysis of capacities with respect to IMAP indicators

Indicators	
<p>87. Habitat distributional range</p> <p>88. Condition of the habitat's typical species and communities</p>	<p style="text-align: center;"><b>202. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>APAL and INSTM are institutions with the resources and skills to carry out monitoring of underwater habitats in Tunisia.</p> <p style="text-align: center;"><b>203. DATA AND INFORMATION AVAILABLE</b></p> <p>Data on habitats only exists for a few coastline sites in Tunisia. Adequate coverage is available for the zones including the islands of Kuriat, Kerkennah and Galite and also for the coastal strip between Cap Negro and Sidi Mechreg in the north of the country. Detailed mapping of benthic habitats is also available for sites at Tabarka (Tunnels, Rocher des mérours and Cap Tabarka)</p> <p style="text-align: center;"><b>204. AVAILABLE EQUIPMENT</b></p> <p>Diving equipment is available. The monitoring programme with respect to indicator 1 (Habitat distributional range) also requires sonar tools which are not available in Tunisia.</p> <p style="text-align: center;"><b>205. DATABASES AND IT SYSTEMS</b></p> <ul style="list-style-type: none"> <li>- “Protection of Gulf of Gabès Marine and Coastal Resources” GIS (GISWEB)</li> <li>- Coastal dunes geographical database</li> <li>- Geographical database on sensitive coastal areas</li> <li>- Dynamic atlas of Cap-Bon Wetlands (MedWedCoast project sites)</li> <li>- GIS on benthic habitats in the 0-50m coastal strip between Cap Negro and Sidi Mechreg</li> </ul> <p>All these IT systems and databases are hosted by APAL</p> <p style="text-align: center;"><b>206. PRIORITY NEEDS</b></p> <p>The main needs for Tunisia to perform monitoring actions with regard to these two indicators involve the provision of sonar devices (side-scan sonar, multibeam echosounder), ROV and towed camera system. Capacity-building is required.</p> <p style="text-align: center;"><b>207. PRIORITY: IL THESE TWO INDICATORS ARE HIGH PRIORITY DUE TO THE INCREASING ANTHROPOGENIC PRESSURE ON HABITATS ALONG THE TUNISIAN COASTLINE.</b></p>
<p>89. Species distributional range related to marine mammals, seabirds, marine reptiles</p> <p>90. Population abundance of selected species related to marine mammals, seabirds, marine reptiles</p>	<p style="text-align: center;"><b>208. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The INSTM is the main institution that has the resources and skills to monitor the species categories covered by these 3 indicators.</p> <p>With regard to marine mammals, the INSTM has been designated by the ACCOBAMS Focal Point to carry out exploration for assessment of cetacean populations programmed in the Framework of the ACCOBAMS Survey Initiative, planned for the 2018 summer season.</p> <p>For birds, the “Les Amis des Oiseaux” association performs annual counting for several species.</p>

<p>91. Population demographic characteristics related to marine mammals, seabirds, marine reptiles</p>	<p style="text-align: center;"><b>209. DATA AND INFORMATION AVAILABLE</b></p> <p>Data is available on the presence of the species covered by these indicators, as well as data from monitoring strandings along the Tunisian coast. Nesting monitoring data on the Kuriat islands is available for these marine turtles.</p> <p style="text-align: center;"><b>210. AVAILABLE EQUIPMENT</b></p> <p>For monitoring corresponding to these three indicators, the primary resources needed are for sea trips. The INSTM has been handicapped for several years since the breakdown of its research vessel.</p> <p style="text-align: center;"><b>211. DATABASES AND IT SYSTEMS</b></p> <p>There are currently no computerised databases for these species in Tunisia. A database is being compiled for stranding data.</p> <p style="text-align: center;"><b>212. PRIORITY NEEDS</b></p> <p>The main needs for performing monitoring actions with regard to these three indicators involve funding of field monitoring campaigns and setting up appropriate database for managing monitoring data.</p> <p style="text-align: center;"><b>213. PRIORITY: THESE THREE INDICATORS ARE HIGH PRIORITY FOR TUNISIA.</b></p>
<p>92. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species</p>	<p style="text-align: center;"><b>214. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The INSTM and the INAT monitor the appearance of non-indigenous species in Tunisia.</p> <p style="text-align: center;"><b>215. DATA AND INFORMATION AVAILABLE</b></p> <p>Lists of non-indigenous species have been compiled for Tunisia and are continually updated through the efforts of individual researchers, and as part of research work for PhD or Master's studies.</p> <p>A study has been carried out to monitor arrivals of non-indigenous marine species in ballast water.</p> <p style="text-align: center;"><b>216. AVAILABLE EQUIPMENT</b></p> <p>For sea campaigns, the INSTM has small boats, but its research vessel broke down several years ago.</p> <p style="text-align: center;"><b>217. DATABASES AND IT SYSTEMS</b></p> <p>No databases on non-indigenous marine species in Tunisia.</p> <p style="text-align: center;"><b>218. PRIORITY NEEDS</b></p> <p>The main needs for performing monitoring actions for non-indigenous species in Tunisia involve: (i) funding field monitoring campaigns, (ii) training teams of scientists able to seek and identify species and (iii) implementing suitable databases, including a GIS to manage the data from monitoring.</p>

	<p><b>219. PRIORITY:</b> THIS INDICATOR IS A PRIORITY IN TUNISIA, WHICH FOR SEVERAL DECADES HAS BEEN INVADDED BY NON-INDIGENOUS MARINE SPECIES ORIGINATING FROM THE RED SEA VIA THE SUEZ CANAL AND FROM BALLAST WATER.</p>
<p><b>Indicators</b></p> <p>93. Spawning stock biomass 94. Total landings 95. Fishing mortality 96. Fishing effort 97. Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy 98. Bycatch of vulnerable and non-target species (EO1 and EO3)</p>	<p><b>220. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>In Tunisia, the INSTM is responsible for monitoring and assessing fish stocks. The DGPA (General Directorate of Fisheries and Aquaculture) has data for landings and the fleet.</p> <p><b>221. DATA AND INFORMATION AVAILABLE</b></p> <p>Fishing is a key sector in Tunisia. The data required to calculate the indicators relating to Ecological Objective 3 is available, in particular for the main fish species. In addition, every year the DGPA publishes a directory of landings for each fishing port and species. The directory also gives information about the size of the active fleet.</p> <p><b>222. AVAILABLE EQUIPMENT</b></p> <p>The INSTM has a research vessel equipped to carry out trawl fishing. But this vessel broke down several years ago.</p> <p><b>223. DATABASES AND IT SYSTEMS</b></p> <p>The INSTM has databases and software for processing data and assessing fish stocks. The DGPA has a database for landings and the fleet.</p> <p><b>224. PRIORITY NEEDS</b></p> <p>Tunisia has the human resources required for calculating these indicators, but it has not had a research vessel to carry out exploration campaigns for benthic stocks (trawling) and pelagic stocks (sonar) for several years.</p>
<p>99. Concentration of key nutrients in water column (EO5) 100. Chlorophyll-a concentration in water column (EO5) 24. Concentration of key harmful contaminants measured in the relevant matrix (EO9) 25. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9) 26. Occurrence, origin (where possible), and extent of acute</p>	<p><b>225. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The institutions responsible for monitoring the parameters necessary to calculate indicators 13 to 21 are the INSTM, ONAS and ANPE.</p> <p><b>226. DATA AND INFORMATION AVAILABLE</b></p> <p>Data series are available for all the parameters required for calculating indicators 13 to 21. The INSTM has reliable data according to the MEDPOL and AIEA standards, thanks to the harmful contaminant monitoring network (RECNO). Trends are available for these parameters.</p>

<p>pollution events and their impact on biota affected by this pollution (EO9)</p> <p>27. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9)</p> <p>28. Percentage of intestinal enterococci concentration measurements within established standards (EO9)</p>	<p>Similarly, the DHMPE has data from bacteriological monitoring of the quality of bathing water.</p> <p>The DGSV centralises data from the following networks:          RECNO: Harmful contaminant monitoring network          REMI: Microbiological monitoring network          REBIO: Biotoxin monitoring network          REPHY: Phytoplankton monitoring network          REZS: Animal health network</p> <p style="text-align: center;"><b>227. AVAILABLE EQUIPMENT</b></p> <p>The INSTM has the equipment required for analysing nutritive elements, chlorophyll a, pollutants (trace metals, organochlorine) and in water, sediment and biota. However, several of its devices are old and must be replaced.</p> <p>Several other institutions also have such equipment.</p> <p style="text-align: center;"><b>228. DATABASES AND IT SYSTEMS</b></p> <p>The INSTM has a database on contaminants and nutritive elements          The APAL has a database on sources of nuisance on the coastline and a database on the quality of bathing waters at beaches.</p> <p style="text-align: center;"><b>229. PRIORITY NEEDS</b></p> <p>The most urgent needs involve funding (i) of field campaigns because the sampling effort is particularly onerous, (ii) of reagents and other components required for the analyses, and (iii) creation of an IT system to allow better management of the data flow, geo-referencing and interpretation of the results.</p> <p>In addition, the INSTM laboratories carrying out analyses within the MEDPOL framework need to be modernised or moved to new premises to enable them to be accredited. The documentation necessary for accreditation (quality manuals and technical procedures) is available.</p> <p>For the sampling, it is important to provide the INSTM with equipment for core sampling in sediment.</p> <p style="text-align: center;"><b>230. PRIORITY:</b></p> <p>Indicators 13, 14 and 17 to 21 are high priority for Tunisia. Monitoring of these indicators is required by Tunisian legislation and also by countries receiving Tunisian seafood exports.</p>
<p>18. Location and extent of the habitats impacted directly by hydrographic alterations (EO7)</p> <p>19. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8)</p> <p>27. Candidate indicator: Land use change (EO8)</p>	<p style="text-align: center;"><b>231. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>The institution best placed to monitor these indicators is the APAL, through its Coastline Observatory.</p> <p style="text-align: center;"><b>232. DATA AND INFORMATION AVAILABLE</b></p> <p>The geographical databases held by APAL already contain information about coastal physical disturbance and land use.</p> <p>For habitats, the data only covers a few zones. These areas are islands (Galite, Kerkennah, Kuriat), the Gulf of Gabès and the coastal strip between Cap Negro and Sidi Mechreg</p> <p style="text-align: center;"><b>233. AVAILABLE EQUIPMENT</b></p> <p>In Tunisia, only equipment for processing satellite images and GISs is available. Equipment for modelling is not available.</p>

	<p><b>234. DATABASES AND IT SYSTEMS</b></p> <ul style="list-style-type: none"> <li>- Coastal Wetlands geographical database (GISWEB)</li> <li>- Coastal geo-morphology geographical database (GISWEB)</li> <li>- PMD geographical database</li> <li>- Coastal dunes geographical database</li> <li>- Geographical database on sensitive coastal areas</li> </ul> <p>These databases are at the APAL Coastline Observatory.</p> <p><b>235. PRIORITY NEEDS</b></p> <p>The main needs in Tunisia for performing monitoring for indicators 9, 10 and 11 involve the acquisition of suitable satellite images and the use of computer modelling for the needs of indicators 9 and 10. Monitoring of indicator 15 depends on the availability of data originating from monitoring of indicator 1. The priority needs stated for indicator 1 must also be considered for indicator 15.</p> <p><b>Priority:</b> These indicators are high priority for Tunisia, since the coastal space is attractive to several sectors of activity and is being subjected to increasing pressures.</p>
<p><b>Indicators</b></p> <p>29. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source) (EO10)</p> <p>30. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10)</p> <p>31. Candidate indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10)</p>	<p><b>236. NATIONAL INSTITUTIONS AND ORGANISATIONS</b></p> <p>No monitoring of solid marine waste is performed in Tunisia. The ANGED is the body responsible for the issue of solid waste in Tunisia.</p> <p><b>237. DATA AND INFORMATION AVAILABLE</b></p> <p>The ANGED has data on the quantities and composition of solid waste generated in Tunisia. But there is no data on the amount of litter in the water column, or on litter washed ashore and/or deposited on the Tunisian coastline.</p> <p><b>238. PRIORITY NEEDS</b></p> <p>This is a new theme for Tunisia, and the most urgent need is to form teams and start work on a pilot zone.</p> <p><b>239. PRIORITY:</b></p> <p>These indicators are an important priority for Tunisia in terms of both ecology and the development of beach tourism.</p>
<p>29. Candidate indicator: 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 animals (EO11)</p> <p>30. Candidate indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11).</p>	<p>No institution is currently working on marine noise in Tunisia.</p> <p>The bodies contacted for the purposes of this assessment do not consider these indicators to be a priority for the time being in Tunisia.</p>

Table 3.7.X Cost estimates of IMAP update for Tunisia (in US\$)

Indicators	Baseline data <sup>25</sup>	Equipment <sup>26</sup>	Surveying/sampling/ Lab analysis cost <sup>27</sup>
82. Habitat distributional range	10,000	-	10,000
83. Condition of the habitat's typical species and communities			
84. Species distributional range (EO1 related to marine mammals, seabirds, marine reptiles).			
85. Population abundance of selected species (EO1, related to marine mammals, seabirds, marine reptiles)	200,000	-	100,000
86. Population demographic characteristics (EO1, related to marine mammals, seabirds, marine reptiles)			
87. Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species	30,000		10,000
88. Spawning stock Biomass (EO3)			
89. Total landings (EO3)			
90. Fishing Mortality (EO3)			
91. Fishing effort (EO3)			
92. Catch per unit of effort (CPUE) or Landing per unit of effort (LPUE) as a proxy (EO3)	150,000		100,000
93. Bycatch of vulnerable and non-target species (EO1 and EO3)			
94. Concentration of key nutrients in water column (EO5);			
95. Chlorophyll-a concentration in water column (EO5);			
96. Concentration of key harmful contaminants measured in the relevant matrix (EO9, related to biota, sediment, seawater);			
97. Level of pollution effects of key contaminants where a cause and effect relationship has been established (EO9)			
98. Occurrence, origin (where possible), and 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)	-	120,000	30,000
99. Actual levels of contaminants that have been detected and number of contaminants which have exceeded maximum regulatory levels in commonly consumed seafood (EO9)			
100. Percentage of intestinal enterococci concentration measurements within established standards (EO9)			
101. Location and extent of the habitats impacted directly by hydrographic alterations (EO7) to also feed the assessment of EO1 on habitat extent;			
102. Length of coastline subject to physical disturbance due to the influence of man-made structures (EO8) to also feed the assessment of EO1 on habitat extent	50,000		10,000
103. Candidate Indicator: Land use change (EO8)			
104. Trends in the amount of litter washed ashore and/or deposited on coastlines (including analysis of its composition, spatial distribution and, where possible, source.) (EO10);			
105. Trends in the amount of litter in the water column including microplastics and on the seafloor (EO10);	25,000 (pilot action)		5/year (pilot action)
106. Candidate Indicator: Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds and marine turtles (EO10);			
107. Candidate indicator: 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 animals (EO11)	20,000	15,000	5,000
108. Candidate Indicator: Levels of continuous low frequency sounds with the use of models as appropriate (EO11)			
<b>Total cost</b>	<b>485,000</b>	<b>135,000</b>	<b>265,000</b>

<sup>25</sup> Cost of acquisition of base line data for the reference sites

<sup>26</sup> Cost of additional equipment

<sup>27</sup> Cost of the regular monitoring according to the IMAP cycle

#### 4. FUNDING OPPORTUNITIES FOR THE IMPLEMENTATION OF THE ECOSYSTEM APPROACH/IMAP IN THE MEDITERRANEAN UNDER THE EU MFF

##### 4.1 An overview of the EU funding instruments, opportunities, based on current EU MFF, available for Ecosystem Approach /imap implementation

79. The **Multi-Annual Financial Framework (MFF)** 2014-2020 provides a structure and sets the basis for the EU strategies and budget for the 2014-2020 period, both for internal and external actions.<sup>28</sup> As such, the MFF translates the EU's political priorities for seven years into financial terms. It sets annual maximum amounts (ceilings) for EU expenditure as a whole and for the main categories of expenditure (headings). The current MFF 2014-2020 has been approved by the EU institutions for an overall budget of € 959 988 million (indicative maximal amount).

80. **Global Europe**<sup>29</sup> is the Funding Instrument of the EU, which steers spending in the field of external action (i.e. funding to non-EU countries, including all of the non-EU Mediterranean Contracting Parties). It consists of three geographic and three thematic instruments and a horizontal act with common implementing rules for all instruments. The total amount agreed for this external relations package is €51,419 million over the period 2014-2020, with the following key instruments of:

- Instrument for Pre-accession Assistance (IPA): €11,699 million (geographic instrument);
- European Neighbourhood Instrument (ENI): €15,433 million (geographic instrument);
- Development Cooperation Instrument (DCI): €19,662 million
- Partnership Instrument (PI): €955 million
- Instrument contributing to Stability and Peace (IfSP): €2,339 million
- European Instrument for Democracy and Human Rights (EIDHR): €1,333 million

Out of the above instruments, two geographic instruments (ie instruments that target specific regions and countries) specifically aim to assist non-EU Barcelona Convention Contracting Parties (IPA and ENI), as illustrated in Table 3.1.1.

While these instruments do not focus specifically on marine environmental protection, there is possibility to finance marine environment/ Ecosystem Approach and IMAP related specific goals under these instruments as well.

In addition, under DCI, there is one specific thematic funding instrument, Global Public Goods and Challenges (**GPGC**<sup>30</sup>), which specifically aims to support inclusive sustainable development, with the total allocation of 5 101 million EUR and as such specifically interesting for Ecosystem Approach /IMAP implementation in the Mediterranean (GPGC financed projects include EcAp-MEDI and EcApMEDII UN Environment/MAP projects).

81. While Global Europe is the main Funding Instrument available from the EU budget to non-EU countries, there are also some other EU MFF funding instruments, which while mainly aim at assisting EU Member States in implementing EU policies and priorities, are also open to non-EU countries.

Out of these, the most important available instrument for Ecosystem Approach /IMAP implementation in the Mediterranean, noting the importance of science for monitoring, is **Horizon 2020**<sup>31</sup>, the EU funding instrument dedicated to scientific research and innovation.

82. As such, Horizon 2020 is the financial instrument implementing the Innovation Union<sup>32</sup>, a Europe 2020 flagship initiative aiming to drive economic growth and create jobs, through investing research, which is in the heart of smart, sustainable and inclusive growth and jobs.

While Horizon 2020 mainly aims to drive research and innovation in the EU, it is also open to all Barcelona Convention Contracting Parties and with Blue Economy as one of its focus areas, can be key for Ecosystem Approach /IMAP implementation.

<sup>28</sup> The MFF 2014-2020 was established by Council Regulation No. 1311/2013.

<sup>29</sup> For more details please see: [http://europa.eu/rapid/press-release\\_MEMO-13-1134\\_en.htm](http://europa.eu/rapid/press-release_MEMO-13-1134_en.htm)

<sup>30</sup> For more details please see:

[https://webgate.ec.europa.eu/fpfi/mwikis/aidco/images/2/23/Session4\\_GPGC\\_thematic\\_programme.pdf](https://webgate.ec.europa.eu/fpfi/mwikis/aidco/images/2/23/Session4_GPGC_thematic_programme.pdf)

<sup>31</sup> <https://ec.europa.eu/programmes/horizon2020/en/what-horizon-2020>

<sup>32</sup> [http://ec.europa.eu/research/innovation-union/index\\_en.cfm](http://ec.europa.eu/research/innovation-union/index_en.cfm)

83. In light of the above, please find under a table, which aims to summarize the key funding sources available for the support of marine and environmental protection to the non-EU Contracting Parties of the Barcelona Convention.

**Table 4.1.1. Potential MFF 2014-2020 sources for ecosystem approach implementation in the mediterranean**

<b>GEOGRAPHIC</b>	<b>European Neighbourhood Instrument (ENI) Covering Barcelona Convention Contracting Parties of Algeria, Egypt, Israel, Lebanon, Libya, Morocco, Syria<sup>33</sup> and Tunisia.</b>	<b>15,433 million EUR</b>
	<b>Instrument for Pre-Accession Assistance (IPA) Covering Barcelona Convention Contracting Parties of Albania, Bosnia and Herzegovina, Montenegro and Turkey</b>	<b>11,699 million EUR</b>
<b>THEMATIC</b>	<b>Global Public Goods and Challenges Covering Barcelona Convention Contracting Parties of Algeria, Egypt, Israel, Lebanon, Libya, Morocco, Syria<sup>30</sup> and Tunisia</b>	<b>5,101 million EUR</b>
	<b>Horizon 2020 Covering all Barcelona Convention Contracting Parties (except the EU itself)</b>	<b>79,4 billion EUR</b>

Source: [http://ec.europa.eu/budget/mff/programmes/index\\_en.cfm](http://ec.europa.eu/budget/mff/programmes/index_en.cfm).

84. In addition, it is important to note that the EU has committed itself to dedicate at least **20% of the total budget of the MFF** (applying across all instruments and programmes) **to a low carbon and climate resilient society**. The EU has also committed to **double its financial support for biodiversity** throughout the seven year period, in line with its international commitments from the 2012 Hyderabad Conference<sup>34</sup>.

## 4.2 Geographic Funding Instruments applicable to the Mediterranean

### 4.2.1 The European Neighborhood Instrument (in support of ENP)

85. The European Neighbourhood Policy (ENP) was launched in 2004 to reinforce relations with EU neighbouring countries. It covers both the Eastern and the Southern Neighbourhood of the EU and represents the umbrella for EU regional and sub-regional policy dialogue in those regions. It is a very important policy area of the EU and has been strengthened in the EU MFF 2014-2020.

86. At present, 16 ENP countries/ partners are addressed by the ENP, which are located in two geographic regions:

- The ENP East (Eastern Partnership): Armenia, Azerbaijan, Belarus, Georgia, Moldova, Ukraine;
- EUROMED Partnership: **Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Syria<sup>35</sup>, Tunisia.**

The ENP is organised around two main components:

- Bilateral policy and cooperation: The ENP provides the means to deepen bilateral relations between the EU and the partner countries, i.e. through jointly agreed bilateral action plans.
- Regional policy and cooperation: The ENP supports regional policy and cooperation and integration, such as the Eastern Partnership, the Black Sea Synergy, and *the* Union for the Mediterranean.

<sup>33</sup> At the time of the drafting of this Funding Strategy, cooperation between the EU and Syria is suspended.

<sup>34</sup> [Annual Report 2014 on the European Union's development and external assistance policies and their implementation in 2013](#), p24.

<sup>35</sup> At the time of the drafting of this draft Ecosystem Approach Funding Strategy, cooperation between the EU and Syria is suspended.



87. The ENP was reviewed in 2011, following the 'Arab Spring' uprisings. However, given the significant developments in the Neighbourhood since 2011, it became essential to undertake a further review of the ENP. In this regard, a Joint Communication setting out the main lines of the review of the ENP Search for available translations of the preceding link has been published on 18 November 2015 following a public consultation, involving partner countries, international organisations, social partners, civil society and academia.

88. Under the revised ENP, stabilisation of the region, in political, economic, and security related terms, will be at the heart of the new policy.

89. The ENP review proposed revised joint priorities for cooperation, better suited to the challenges of our time and adapted to the regions evolutions. In addition to good governance, democracy, rule of law and human rights, three other sets of joint priorities have been identified, each of them covering a wide number of cooperation sectors: 1) economic development for stabilisation; 2) the security dimension and 3) migration and mobility.

90. The ENP is being supported by the European Neighbourhood Instrument (**ENI, € 15 432.63 million**<sup>36</sup>) with the objective to support deeper political cooperation, closer economic integration with the EU and an effective and sustainable transition to democracy. Its focus areas include sustainable development and climate change. Furthermore the ENI gives support to the implementation of the political initiatives shaping the ENP, including the Union for the Mediterranean (UfM)<sup>37</sup>.

91. As such, the ENI (€15.4 billion for the period 2014-2020) is the main financial instrument for implementing the ENP. The ENI provides the bulk of EU funding to the 16 ENP partner countries.

The vast majority of ENI funding is used for bilateral cooperation (for more details, please see under), tailor-made to each Neighbourhood partner country<sup>38</sup>.

### **Bilateral cooperation under ENI**

92. The bilateral path is the main part of ENI, which includes country specific policy dialogue and cooperation, on the basis of jointly agreed bilateral Action Plans. These set out an agenda of political and economic reforms for a period of three to five years. To date, Action Plans have been agreed for almost all ENP South countries, with the EU's bilateral relations being most advanced with Morocco and Tunisia to be followed by Jordan and Lebanon.

93. While bilateral cooperation is complementary, in financial terms, it is important to note that the vast majority of ENI funding is used for bilateral cooperation, tailor-made to each Neighborhood partner country.

94. Priorities of bilateral cooperation include good governance (incl. justice and security), sustainable economic development (incl. trade, transport, energy, environment) and social and human development (incl. education, health, people-to-people contacts and civil society).

95. Bilateral Cooperation under the ENI is based on so-called Single Support Frameworks (SSF), which are agreed on between the beneficiary country and the EU. All ENI eligible Barcelona Contracting Parties receive bilateral support through SSFs, which are all available online.

European Neighborhood Policy Barcelona Convention Contracting Parties Single Support Frameworks	
Country	Link
Algeria	<a href="http://ec.europa.eu/enlargement/neighbourhood/countries/algeria/index_en.htm">http://ec.europa.eu/enlargement/neighbourhood/countries/algeria/index_en.htm</a>

<sup>36</sup> [http://eeas.europa.eu/enp/pdf/enp-regulation-11032014\\_en.pdf](http://eeas.europa.eu/enp/pdf/enp-regulation-11032014_en.pdf) *REGULATION (EU) No 232/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF EUROPE establishing a European Neighbourhood Instrument*

<sup>37</sup> Please see more on UfM in Chapter 7, under point 7.1.

<sup>38</sup> For more information on bilateral cooperation, please see point

Egypt	<a href="http://ec.europa.eu/enlargement/neighbourhood/countries/egypt/index_en.htm">http://ec.europa.eu/enlargement/neighbourhood/countries/egypt/index_en.htm</a>
Israel	<a href="http://ec.europa.eu/enlargement/neighbourhood/countries/israel/index_en.htm">http://ec.europa.eu/enlargement/neighbourhood/countries/israel/index_en.htm</a>
Lebanon	<a href="http://ec.europa.eu/enlargement/neighbourhood/countries/lebanon/index_en.htm">http://ec.europa.eu/enlargement/neighbourhood/countries/lebanon/index_en.htm</a>
Libya	<a href="http://ec.europa.eu/enlargement/neighbourhood/countries/libya/index_en.htm">http://ec.europa.eu/enlargement/neighbourhood/countries/libya/index_en.htm</a>
Morocco	<a href="http://ec.europa.eu/enlargement/neighbourhood/countries/morocco/index_en.htm">http://ec.europa.eu/enlargement/neighbourhood/countries/morocco/index_en.htm</a>
Syria	<a href="http://ec.europa.eu/enlargement/neighbourhood/countries/syria/index_en.htm">http://ec.europa.eu/enlargement/neighbourhood/countries/syria/index_en.htm</a>
Tunisia	<a href="http://ec.europa.eu/enlargement/neighbourhood/countries/tunisia/index_en.htm">http://ec.europa.eu/enlargement/neighbourhood/countries/tunisia/index_en.htm</a>

96. As such, these multiannual programming documents are established in partnership between the EU and the respective relevant authorities of partner countries concerned, civil society organizations, and other stakeholders and in coordination with Member States and other donors, including International Financial Institutions. The programming is also subject of a Strategic Dialogue with the European Parliament.

97. In accordance with the aid effectiveness principles, programming documents for bilateral cooperation in general present a limited number of sectors, in order to achieve better focus and impact. In addition, a horizontal envelope in bilateral programming documents allows notably for complementary support for capacity development and Civil Society.

98. In addition, to the specific bilateral cooperation agreements, the Summaries of the SSFs, including priorities (showcasing also whether environment is a priority or not of the specific SSF) are available at the following website:

[https://eeas.europa.eu/headquarters/headquarters-homepage/8410/financing-enp\\_en](https://eeas.europa.eu/headquarters/headquarters-homepage/8410/financing-enp_en)

### **Regional Neighbourhood-wide and Cross-Border Cooperation**

99. In addition to bilateral cooperation, ENI funding also supports regional, Neighbourhood-wide and Cross Border Cooperation (CBC) programmes. These programmes are designed to complement bilateral cooperation programmes.

100. **Regional cooperation** in the European Neighbourhood complements national assistance programmes, addresses regional challenges, promotes cooperation amongst partners and builds bridges. It encourages South-North and South-South cooperation and promotes dialogue, exchange of views and knowledge sharing.

101. Regional cooperation usually involves all the countries in the Southern Neighbourhood (from UN Environment/MAP Contracting Parties Algeria, Egypt, Israel, Lebanon, Libya, Morocco, Syria and Tunisia) but can also take place at sub-regional level. It focuses on activities where:

- the region is facing common challenges and thus where common approaches are most effective,
- a shared resource is concerned for which common responsibility needs to be taken, such as the **Mediterranean Sea**,
- partners seek to move jointly towards more integrated economies, and need to work in a coordinated manner on such issues as transport networks or electricity transmissions.

102. Most of the regional cooperation activities support priorities agreed jointly by the partners in Ministerial meetings covering the region (inside the framework of UfM).

103. The priorities which will be implemented under the European Neighbourhood Instrument (ENI)

over the period 2014-2020 are (with Indicative allocation 2014-2020 EUR 674,000,000-EUR 824,000,000):

- Building a partnership for liberty, democracy and security – 20%.
- Building a partnership for inclusive and **sustainable economic** development – 20%.
- Building a partnership between the people – 25%.
- Support **regional and sub-regional institutional cooperation** – 15%.

104. **ENI Regional South Strategy Paper** (2014-2020) and multiannual indicative programme (2014-2017) are available at the following link:

[http://eeas.europa.eu/archives/docs/enp/pdf/financing-the-enp/regional\\_south\\_summary\\_of\\_the\\_strategy\\_paper\\_2014\\_2020\\_and\\_multiannual\\_indicative\\_programme\\_2014\\_2017\\_en.pdf](http://eeas.europa.eu/archives/docs/enp/pdf/financing-the-enp/regional_south_summary_of_the_strategy_paper_2014_2020_and_multiannual_indicative_programme_2014_2017_en.pdf)

105. **Cross-Border Cooperation (CBC)** compliments regional cooperation by promoting cooperation between EU countries and neighbourhood countries sharing a land border or sea crossing. Funding can also be provided for a programme between several EU and neighbourhood countries which, for example, are part of the same sea basin.

106. Interesting to note, that the Barcelona Convention is highlighted in the Programming document for EU support to ENI Cross-Border Cooperation (2014-2020) as the regionally acknowledged fora for dealing with marine and coastal environment issues in the Mediterranean<sup>39</sup>.

107. **CBC** has three main objectives:

- promoting economic and social development in border areas;
- addressing common challenges (environment, public health, safety and security);**
- putting in place better conditions for persons, goods and capital mobility.

108. Mediterranean specific CBC programmes include:

**Italy-Tunisia Programme (2014-2020):** <http://www.italietunisie.eu/>

and the

**ENI Mediterranean Sea Basin CBC Programme 2014-2020<sup>40</sup>/Strategy of the Mediterranean Sea Basin Programme 2014-2020<sup>41</sup>**

109. **Regions** from Barcelona Convention Contracting Parties participating in the Programme include ones from **Algeria, Cyprus, Egypt, France, Greece, Israel, Italy, Jordan Lebanon, Libya, Malta, Morocco, Spain, Syria<sup>42</sup>, Tunisia, Turkey.**

110. Environmental, climate change adaptation and mitigation is one of the four thematic objectives of the The Strategy of the Mediterranean Sea Basin Programme 2014-2020, which dedicates a specific priority to “incorporating the Ecosystem-Based management approach to ICZM into local development planning through the improvement of intra-territorial coordination among different stakeholders”. As such, this Strategy also highlights the Ecosystem Approach of the Barcelona Convention as an important tool and the Strategy foresees under this priority the coordination among, and enhancing capacities of, differing relevant administrations and stakeholders, specifically in the areas of planning and monitoring. Joint initiatives aimed at sharing experiences and technologies, possibly using IMAP monitoring for future MSP/ICZM, could be all potentially interesting activities under the implementation of this Strategy.

<sup>39</sup> [http://eeas.europa.eu/archives/docs/enp/pdf/financing-the-enp/cbc\\_2014-2020\\_programming\\_document\\_en.pdf](http://eeas.europa.eu/archives/docs/enp/pdf/financing-the-enp/cbc_2014-2020_programming_document_en.pdf)

<sup>40</sup> [http://www.enpicbmed.eu/sites/default/files/website\\_guidelines\\_jmc\\_en\\_23.11.2016.pdf](http://www.enpicbmed.eu/sites/default/files/website_guidelines_jmc_en_23.11.2016.pdf)

<sup>41</sup> [http://www.enpicbmed.eu/sites/default/files/jop\\_eni\\_cbc\\_med\\_2014-2020\\_adopted\\_modified\\_financial\\_tables\\_19.12.2015.pdf](http://www.enpicbmed.eu/sites/default/files/jop_eni_cbc_med_2014-2020_adopted_modified_financial_tables_19.12.2015.pdf)

<sup>42</sup> At the time of the drafting of this Ecosystem Approach Funding Strategy, cooperation between the EU and Syria is suspended.

111. The overall EU contribution of the Programme for the 2014-2020 period is € 209.057.812 out of which €188.152.030,80 for project financing.

112. The Programme finances provides EU contribution for maximum 90% of the total eligible budget costs of the projects, while a co-financing of minimum 10% has to be provided at project level.

113. In addition, at least 50% of the project budget shall be dedicated to activities implemented in the Mediterranean Partner Countries. The Programme does not foresee any pre-allocation of funds by territory or country. Therefore, projects are selected solely on the basis of the selection and award criteria.

114. Three types of projects are possible under the ENI Mediterranean Sea Basin CBC Programme: Standard (demonstration character, such as a pilot, 1-3 Million EUR EU support possible, with minimum of 3 participating countries, with maximum 3partners per country and maximum 3 years length).

115. EU Member States and Southern Mediterranean countries have an equal say in the Programmedecisions and the selection of projects. The day-to-day functioning of the Programme is ensured by the Autonomous Region of Sardinia (Italy), appointed by the participating countries as Managing Authority.

For more information please see:

<http://www.enpicbmed.eu/enicbmed-2014-2020>

116. In addition to Bilateral and cross-border cooperation, **Neighbourhood-wide cooperation programmes** have also been established, since some aid activities can be managed more efficiently and flexibly at interregional level.

117. A Neighbourhood-wide approach can for instance enhance the visibility of certain actions and lead to more coherent implementation of support mechanisms.

Neighbourhood-wide cooperation programmes include:

- Promoting administrative reform and institution-building
- Promoting higher education
- Promoting interregional dialogue
- Promoting investment through the Neighbourhood Investment Facility (NIF)

### **Support to Civil Society**

118. A key element of the ENP is to strengthen and promote the role of civil society actors in reforms and democratic changes taking place in the Neighbourhood countries. In particular local civil society organisations and their capacity to engage with public authorities are being strengthened.

119. In addition to bilateral and regional cooperation under the ENI, various additional EU initiatives and programmes also support civil society in the region, such as the European Instrument for Democracy and Human Rights (EIDHR), the Non-State Actors and Local Authorities thematic programme (NSA-LA) and the ENI Civil Society Facility.

### **Instrument for Pre-accession Assistance (IPA) – € 11 698.67 million<sup>43</sup>**

120. The Instrument for Pre-accession Assistance (IPA) is the means by which the EU supports reforms in the “enlargement countries” with financial and technical help. The IPA funds build up the capacities of the countries throughout the accession process, resulting in progressive, positive developments in the

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<sup>43</sup> [http://ec.europa.eu/enlargement/pdf/financial\\_assistance/ipa/2014/231-2014\\_ipa-2-reg.pdf](http://ec.europa.eu/enlargement/pdf/financial_assistance/ipa/2014/231-2014_ipa-2-reg.pdf) REGULATION (EU) No 231/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF EUROPE establishing an Instrument for Pre-accession Assistance (IPA II)

region. For the period 2007-2013 IPA had a budget of some € 11.5 billion; while its successor, **IPA II**<sup>44</sup> building on the results already achieved is dedicating € 11.7 billion for the period 2014-2020.

121. As such, the objective of IPA is to support the EU accession process, by supporting countries to implement EU strategies and policies (incl. “EU acquis”) in their national legislation and to implement political reforms, strengthen democratic institutions and the rule of law and promote human rights and fundamental freedoms, socio-economic development and regional cooperation.

122. According to the regulation for 2014-2020 cycle, the new pre-accession instrument continues to focus on delivering on the Enlargement Policy, which is one of the core priorities of EU External Action, and help to promote stability, security and prosperity in Europe. It continues to pursue the general policy objective of supporting candidate countries and potential candidates in their preparations for EU membership and the progressive alignment of their institutions and economies with the standards and policies of the European Union, according to their specific needs and adapted to their individual enlargement agendas.

### **Mediterranean riparian eligible Countries for IPAII funding:**

Candidates: **Albania, Montenegro and Turkey**; and potential candidate: **Bosnia & Herzegovina**

123. The most important novelty of IPA II is its strategic focus. **Country Strategy Papers** are the specific strategic planning documents made for each beneficiary for the 7-year period. These provide for a stronger ownership by the beneficiaries through integrating their own reform and development agendas. A **Multi-Country Strategy Paper** address priorities for regional cooperation or territorial cooperation.

IPA II targets reforms within the framework of pre-defined sectors. These sectors cover areas closely linked to the enlargement strategy, such as democracy and governance, rule of law or growth and competitiveness. This sector approach promotes structural reform that will help transform a given sector and bring it up to EU standards. It allows a move towards a more targeted assistance, ensuring efficiency, sustainability and focus on results.

124. IPA II also allows for a more systematic use of sector budget support. Finally, it gives more weight to performance measurement: indicators agreed with the beneficiaries will help assess to what extent the expected results have been achieved.

Financial assistance under IPA II pursues the following four specific objectives:

- support for political reforms;
- support for economic, social and territorial development;
- strengthening the ability of the beneficiaries to fulfil the (future) obligations stemming from EU membership by supporting progressive alignment with the Union acquis;
- strengthening regional integration and territorial cooperation.

Furthermore, the IPA II Regulation states that financial assistance shall mainly address five policy areas:

- a) reforms in preparation for Union membership and related institution-and capacity-building,
- b) socioeconomic and regional development,
- c) employment, social policies, education, promotion of gender equality, and human resources development, d) agriculture and rural development, and
- e) regional and territorial cooperation.

125. The **Multi-Country Indicative Strategy Paper**<sup>45</sup> (the Strategy Paper) sets out the priorities for EU horizontal and regional financial assistance for the period 2014-2020 to support **Albania, Bosnia and**

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<sup>44</sup> IPAII Implementing Regulation available here:

[http://ec.europa.eu/enlargement/pdf/financial\\_assistance/ipa/2014/20140502-commission-implementing-reg-on-ipa2\\_en.pdf](http://ec.europa.eu/enlargement/pdf/financial_assistance/ipa/2014/20140502-commission-implementing-reg-on-ipa2_en.pdf)

<sup>45</sup> [http://ec.europa.eu/enlargement/pdf/key\\_documents/2014/20140919-multi-country-strategy-paper.pdf](http://ec.europa.eu/enlargement/pdf/key_documents/2014/20140919-multi-country-strategy-paper.pdf)

**Herzegovina, Kosovo\***, the former Yugoslav Republic of Macedonia, **Montenegro, Serbia and Turkey**. As such, it translates the political priorities set out in the enlargement policy framework including the stabilisation and association process into key areas and sectors where cross-border and multi-country assistance will be most useful to support the enlargement countries prepare to meet the accession criteria. It is designed to be consistent with the national strategies as set out in the Country Strategy Papers and to complement and enhance them by supporting regional and territorial cooperation, facilitating coordination and effective horizontal implementation mechanisms.

126. The Strategy Paper concentrates on issues for which there is a clear need for regional cooperation in order to achieve results that a beneficiary listed in annex I of the IPA II Regulation ("IPA II beneficiary") is less likely or even unable to achieve alone or where there is an advantage from providing horizontal support because joint efforts are more cost-effective.

127. Environment and Climate Action is an area where regional cooperation is key, as investing in the area of environment and climate action to promote protection of the environment, quality of life particularly in the areas of water, waste management and air pollution, climate change adaptation and mitigation including disaster risk reduction, and the development towards a resource-efficient, low-carbon and climate-resilient economy are found important to all IPA countries.

128. As such, relevant (macro-) regional strategies and initiatives, in support of country strategy, are listed in the Strategy, with the most important ones, also addressing environmental protection:

- the South-East **Europe 2020 Strategy** (modelled on the Europe 2020 Strategy), which seeks to promote a comprehensive approach to the economic development of the region by stimulating key long-term drivers of growth – innovation, skills and trade integration, with regional headline targets to be achieved by 2020, which have been set for five development priorities: integrated, smart, sustainable, and inclusive growth, as well as governance for growth.
- The **Adriatic-Ionian Strategy**, which intends to build on the lessons learnt inter alia from the EUSDR and will focus on a limited number of areas of mutual interest, where the added value of cooperation is the highest: Blue growth; Connecting the Region; Environmental quality and Sustainable tourism. Capacity building, communication, research, innovation and businesses support are cross-cutting issues.

129. In addition, in line with the Strategy, the most important instrument under IPA, supporting sub-regional, regional cooperation in relation to environment, climate change (including civil protection) is the Environment and Climate Regional Accession Network (**ECRAN**), which provides an interface between the regional aspects of environmental protection and climate action and the respective national priorities, helping the beneficiaries to exchange information and experience related to the preparation for accession and to assist their progress in the transposition and implementation of EU environmental and climate acquis. The Union Civil Protection Mechanism is the EU framework for cooperation in the field of disaster prevention, preparedness and response, and it is open for participation to the EU candidate countries and potential candidates. Regional capacity building programmes based on cooperation with the Mechanism should ensure their preparedness to join the Mechanism (if not done yet) and their further integration.

130. IPA is also further supported by the **Western Balkans Investment Framework**<sup>46</sup>, which is a 180 million EUR Joint Grant Facility (JGF), which pools grants from the European Commission's budget, Council of Europe Development Bank, European Bank of Reconstruction and Development, European Investment Bank and other bilateral donors; with investment support dedicated, among other areas, for the environmental protection, with a focus on water supply, wastewater treatment and waste management. The additional focus is on the largest agglomerations (densely populated and industrialised areas) and environmentally sensitive areas.

131. Bilateral Cooperation between the EU and IPA countries is organized based on Country Strategy Papers, which are available for all the IPA eligible Barcelona Convention Contracting Parties:

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<sup>46</sup> <https://www.wbif.eu/>

Barcelona Convention Contracting Parties Strategy Papers under IPA	
Country	Link
Bosnia and Herzegovina	<a href="http://ec.europa.eu/enlargement/pdf/news/annexe_acte_autonome_nlw_part1_v1.pdf">http://ec.europa.eu/enlargement/pdf/news/annexe_acte_autonome_nlw_part1_v1.pdf</a>
Albania	<ul style="list-style-type: none"> <li>• <a href="http://ec.europa.eu/enlargement/pdf/key_documents/2014/20140919-csp-albania.pdf">http://ec.europa.eu/enlargement/pdf/key_documents/2014/20140919-csp-albania.pdf</a></li> </ul>
Montenegro	<a href="http://ec.europa.eu/enlargement/pdf/key_documents/2014/20140919-csp-montenegro.pdf">http://ec.europa.eu/enlargement/pdf/key_documents/2014/20140919-csp-montenegro.pdf</a>
Serbia	<a href="http://ec.europa.eu/enlargement/pdf/key_documents/2014/20140919-csp-serbia.pdf">http://ec.europa.eu/enlargement/pdf/key_documents/2014/20140919-csp-serbia.pdf</a>
Turkey	<a href="http://ec.europa.eu/enlargement/pdf/key_documents/2014/20140919-csp-turkey.pdf">http://ec.europa.eu/enlargement/pdf/key_documents/2014/20140919-csp-turkey.pdf</a>
Multi-country	<a href="http://ec.europa.eu/enlargement/pdf/key_documents/2014/20140919-multi-country-strategy-paper.pdf">http://ec.europa.eu/enlargement/pdf/key_documents/2014/20140919-multi-country-strategy-paper.pdf</a>

Please also see for development related EU Calls for proposals (both for ENI and IPA countries):  
<https://webgate.ec.europa.eu/europeaid/online-services/index.cfm?do=publi.welcome&nbPubliList=15&orderby=upd&orderbyad=Desc&searchtype=QS>

### **Other specific instrument available for capacity building in ENI and IPA countries: Twinning and TAIEX**

#### **Twining<sup>47</sup>**

132. Twinning is a European Union instrument for institutional cooperation between Public Administrations of EU Member States and of beneficiary or partner countries. As such, Twinning projects bring together public sector expertise from EU Member States and beneficiary countries with the aim of achieving concrete mandatory operational results through peer to peer activities.

133. Twinning is available both to ENI and IPA countries. In the IPA region, Twinning focuses on supporting the transposition, implementation and enforcement of the EU legislation (the Union acquis). It builds up capacities of beneficiary countries' public administrations throughout the accession process, resulting in progressive, positive developments in the region. Twinning strives to share good practices developed within the EU with beneficiary public administrations and to foster long-term relationships between administrations of existing and future EU countries.

134. In the EU Southern Neighborhood, it aims at upgrading the administrative capacities of the public administration of a partner country through the training of its staff and the support to the re-organization of its structure.

135. Under twinning, the beneficiary / partner administration in a Twinning project is a public administration with sufficient staff and absorption capacity to work with a Member State institution having a similar structure and mandate. The beneficiary / partner country must mobilize its staff, demonstrate enduring commitment and ownership and take on board changes and best practices in a sustainable way. Twinning is not a one-way technical assistance instrument but a shared commitment.

<sup>47</sup> [http://ec.europa.eu/enlargement/tenders/twinning/index\\_en.htm](http://ec.europa.eu/enlargement/tenders/twinning/index_en.htm)

136. Twinning projects are implemented with a view to the mandatory results to be achieved. They are usually articulated in components corresponding to the expected results and foresee a number of activities including workshops, training sessions, expert missions, study visits, internships and counselling. Twinning lies on learning by doing principle and sharing of best practices.

137. To set up twinning projects, the European Union relies on the co-operation and administrative experience of EU Member States (MS) which mobilize public expertise both from public administrations and semi-public bodies.

138. Two Project Leaders (one on behalf of the EU Member State leading the project, the other of the beneficiary administration) and a Resident Twinning Adviser (RTA) are the backbone of Twinning projects. The RTA is seconded to the beneficiary administration for a minimum of 12 months up to 36 months throughout the entire duration of the implementation period of the Action and coordinates the project's activities.

"Twinning Light" is designed to offer a more flexible, mid-term approach (up to six months, in exceptional cases can be extended to eight months) without the presence of an RTA.

### **TAIEX**<sup>48</sup>

139. TAIEX is the Technical Assistance and Information Exchange instrument of the European Commission. TAIEX supports public administrations with regard to the approximation, application and enforcement of EU legislation as well as facilitating the sharing of EU best practices. It is largely needs-driven and delivers appropriate tailor-made expertise to address issues at short notice in three ways:

- Workshops: EU Member State experts present specific areas of EU legislation in workshops to a large number of beneficiary officials;
- Expert missions: EU Member States expert(s) are sent to the beneficiary administration to provide in-depth advice on the transposition, implementation or enforcement of a specific part of EU legislation;
- Study visits: a group of three practitioners from a beneficiary administration take part in a study visit to an EU Member State's administration.

140. The TAIEX mandate to provide assistance covers the following Barcelona Convention Contracting Parties:

- IPA countries of Turkey, Montenegro, Albania, Bosnia and Herzegovina;
- ENI countries of Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia

TAIEX assistance is open to civil servants working in central public administrations, judiciary and law enforcement authorities, Parliaments and civil servants working in Parliaments and Legislative Councils; as well as representatives of social partners, trade unions and employers' associations. TAIEX however does not provide direct support to civil society, private citizens or to individual companies.

**141. As such, TAIEX can be seen as a key potential instrument to strengthen IMAP implementation, specifically in the areas of (i) exchange of best practices; (ii) subregional cooperation, (iii) regional cooperation and (iv) science-policy interface, through mobilizing support to specific meetings for Southern Mediterranean and Balkans Contracting Parties and Turkey, in line with their specific needs and the rules above.**

### **Thematic Funding Instruments applicable to the Mediterranean**

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<sup>48</sup> [http://ec.europa.eu/enlargement/tenders/taix/index\\_en.htm](http://ec.europa.eu/enlargement/tenders/taix/index_en.htm)



**Global Public Goods and Challenges (GPGC): € 5 101 million<sup>49</sup>**

142. Global public good and challenges is a specific component of the Development Cooperation Instrument (DCI) which addresses climate change, environment, energy, human development, food security and migration while ensuring coherence with the poverty reduction objective. No less than 27% of this programme is spent on climate change and environment objectives. At least 25% of the programme is used to support social inclusion and human development

- Environment and climate change – € 1,377.27 million (27%);
- Sustainable energy – € 612.12 million (12%);
- Human development including decent work, social justice and culture - € 1,275.25 million (25%) of which: Health (at least 40%); Education, knowledge and skills (at least 17.5%); Gender equality, women empowerment and protection of women's and girls' rights; Children and young people, non-discrimination; Employment, decent work, skills, social protection and social inclusion; Growth, jobs and private sector engagement; Culture (at least 27.5%);
- Food and nutrition security and sustainable agriculture – € 1,479.29 million (29%);
- Migration and asylum – € 357.07 million (7%).

143. Key priorities of the GPGC relevant for Ecosystem Approach /IMAP implementation are:

1. Priority 1.1. Environment and Climate Change, in particular:

- Component 2: Valuation, protection, enhancement and sustainable management of ecosystems
- Component 4: International environmental and climate governance

144. The GPGC is also at the origin of key EC thematic flagship programmes, which are pulling funding from both thematic and geographic instruments. Most relevant flagships for Ecosystem Approach /IMAP is Flagship 2. Biodiversity for Life Initiative (B4LIFE) – An ecosystem-based approach for economic growth, climate change mitigation and adaptation, food security and good governance (EU launch press release and B4LIFE brochure).

145. The entities which are eligible for funding under GPGC are:

- partner countries and regions, and their institutions,
- decentralized bodies in the partner countries (municipalities, provinces, departments and regions),
- joint bodies set up by the partner countries and regions with the Community,
- Non State Actors,
- international organisations,
- EU agencies

For more information on the GPGC, see

<https://webgate.ec.europa.eu/europeaid/online-services/index.cfm?do=publi.welcome&nbPubliList=15&orderby=upd&orderbyad=Desc&searchtype=QS>

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<sup>49</sup> [https://webgate.ec.europa.eu/fpfis/mwikis/aidco/images/2/23/Session4\\_GPGC\\_thematic\\_programme.pdf](https://webgate.ec.europa.eu/fpfis/mwikis/aidco/images/2/23/Session4_GPGC_thematic_programme.pdf)

3.3. Horizon 2020 - Strategic Framework for Research and Innovation<sup>50</sup> – € 79  
401.83 million

146. Objective of Horizon 2020 is to contribute to building an economy based on knowledge, innovation, science, industrial leadership and addressing societal challenges (incl. climate change and resource efficiency).

147. The Horizon 2020 programme is structured around tackling a series of ‘‘Societal Challenges’’ (SC), notably SC on ‘‘Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the bioeconomy’’ and SC on ‘‘Climate action, resource efficiency and raw materials’’ as the two SCs most relevant to marine and coastal environmental protection related research and as such, to Ecosystem Approach /IMAP implementation.

148. Important to note, that one of the Focus Areas of Horizon 2020 is **Blue Growth** (under SC on Food Security, sustainable agriculture and forestry, marine and maritime and inland water research, and the bioeconomy’), supporting cross-cutting initiatives e.g. on the sustainable exploitation of marine life, new offshore challenges and developing improved ocean observation technologies/systems<sup>51</sup>.

149. The Horizon 2020 Blue Growth area had EUR 145 million only for 2014–2015, of which EUR 8 million is for SMEs. There are also other cross-thematic opportunities in the Horizon 2020 Programme in the areas of food security, energy, transport, materials, information technology, and research infrastructures. Furthermore, the JPI for Healthy and Productive Seas and Oceans is a strong coordination instrument of blue growth at Member State level.

150. Under the Horizon 2020 Blue Growth, the funding, which is based on **Calls for Proposals**, supports trans-national and virtual access activities by European (and international, associated country) researchers, and the cooperation between research infrastructures, scientific communities, industries and other stakeholders.

151. They combine networking activities; trans-national access or virtual access; and joint research activities. These calls mobilize consortia of several research infrastructures as well as stakeholders from different Member States, Associated Countries<sup>52</sup> and third countries.

Research and supported activities include:

- energy: support the precompetitive research in wind turbines, ocean energy
- converters and electrical subsystems for grid integration;
- research infrastructures for ocean drilling.

152. Associated Countries can, in line with Article 7 of the Horizon 2020 Regulation, participate under the same conditions as legal entities from the Member States. Barcelona Contracting Parties, who are Associated Countries are: **Albania, Bosnia-Herzegovina, Montenegro, Turkey, Israel, and Tunisia**. In addition, under the Horizon 2020 Grants Manual<sup>53</sup> following Barcelona Convention Contracting Parties are also automatically eligible to Horizon 2020 Grants application: **Algeria, Egypt, Lebanon, Libya, Morocco and Syria**.

In line with the above, all Barcelona Contracting Parties are automatically eligible for Horizon 2020 funding.

Horizon 2020 Grant Research Database:

<sup>50</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1291&from=EN> REGULATION (EU) No 1291/2013 OF THE EUROPEAN PARLIAMENT AND THE COUNCIL 11 December 2013 establishing Horizon 2020- the Framework Programme for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC

<sup>51</sup> [http://www.europarl.europa.eu/RegData/etudes/STUD/2015/518775/IPOL\\_STU\(2015\)518775\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/518775/IPOL_STU(2015)518775_EN.pdf)

<sup>52</sup> Associated Countries are countries, which are allowed to have a share in Framework Programme-funded activities. Horizon 2020 explicitly specifies them :

[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/3cpart/h2020-hi-list-ac\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cpart/h2020-hi-list-ac_en.pdf)

<sup>53</sup> [http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/3cpart/h2020-hi-3cpart\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cpart/h2020-hi-3cpart_en.pdf)

[http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/search/search\\_topics.html#.topics=topicFileName,callIdentifier,callTitle,identifier,title,description,tags,flags/s/Aquaculture/1/1/0&+title/desc](http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/search/search_topics.html#.topics=topicFileName,callIdentifier,callTitle,identifier,title,description,tags,flags/s/Aquaculture/1/1/0&+title/desc)

and

<https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/calls/h2020-bg-2016-2017.html>

#### 4.4 Additional eu Structural & Investment Funds Available for Non-Eu Countries in The Area of Marine Environmental Protection

##### 4.4.1 Common rules and country eligibility for ERDF, ESF, CF, EAFRD, EMFF

153. Regulation (EU) No 1303/2013<sup>54</sup> lays down the common provisions on the **European Regional Development Fund**, the **European Social Fund**, the **Cohesion Fund**, the **European Agricultural Fund for Rural Development** and the **European Maritime and Fisheries Fund**. Under this Regulation and in line with the main objectives of the specific funds, explained under, the main aim of these structural and investment funds is to assist EU countries and specific regions to implement EU policies and priorities and to strengthen overall development and cohesion of all EU countries and regions. The Regulation however also mentions that its funding may be available under specific circumstances also for third countries and it specifies also that Macro-Regional Strategies including third countries (see for example above, by point 3.2.2. the Adriatic-Ionian Strategy) may benefit from ESI funds and that these funds are also available to support actions to disseminate information, support information, communication and promote cooperation, including with thirds countries.

154. While these funds are thus mainly targeting EU Countries, in case one of them may have a specific grant and/or call for proposal addressing marine environmental protection, it is advisable to carefully read the conditions of the specific grant or call for proposal, as it may cover also “third countries”, i.e. in relation to Ecosystem Approach /IMAP implementation, non-EU, Barcelona Convention Contracting Parties as well. It is important to note, that UN Environment/MAP here, as a Regional Sea Convention, capable of assisting coordination, information sharing and overall cooperation in relation to Macro-Regional Strategies between all of its Contracting Parties, share best practices and disseminate information on Ecosystem Approach /IMAP related matters in between EU and Non-EU countries can have a key role, to ensure that these funds can benefit also Ecosystem Approach /IMAP implementation needs.

155. Based on their specific focus areas, the two most important funds here, which may address the marine and coastal environment and as such may be relevant to Ecosystem Approach /IMAP implementation to all Barcelona Convention Contracting Parties, are the European Regional Development Fund and the European Maritime and Fisheries Fund.

#### **The European Regional Development Fund (ERDF)**<sup>55</sup>

156. The ERDF aims to strengthen economic, social and territorial cohesion in the EU by correcting imbalances between regions. The ERDF supports regional and local development to contribute to all of the thematic objectives, laid down in the CPR.

In relation to Ecosystem Approach implementation, it is important to note that ERDF aims at promoting climate change adaption, risk prevention and management through:

- a) Supporting investment for adaption to climate change, including eco-system based approaches
- b) Promoting investment to address specific risks, ensuring disaster resilience and developing management systems

ERDF, also aims at protecting the environment and promoting resource efficiency, through:

- a) Investing in the waste sector to meet the requirements of the Union’s environmental acquis and to address needs, identified by Member States, for investment that goes beyond requirements
- b) Investing in the water sector to meet the requirements of the Union’s environmental acquis and to address needs, identified by Member States, for the investment that goes beyond those requirements
- c) Conserving, protecting, promoting, and developing natural and cultural heritage

<sup>54</sup> file:///C:/Users/gyorgyi.gurban/Downloads/RegulationEUNo13032013oftheEuropeanParliamentandoftheCouncil.pdf

<sup>55</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1301&from=NL> REGULATION (EU) No 1301/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 December 2013 on the European Regional Development Fund and on specific provisions concerning the Investment for growth and jobs goal and repealing Regulation (EC) No 1080/2006

- d) Protecting and restoring biodiversity and soil and promoting ecosystem services including NATURA 2000 and green infrastructure
- e) Taking action to improve the urban environment, to revitalise cities, regenerate and decontaminate brownfield sites (including conversion areas), reduce air pollution and promote noise-reduction measures
- f) Promoting innovative technologies to improve environmental protection and resource efficiency in the waste sector, water sector and with regard to soil or to reduce air pollution
- g) Supporting industrial transition towards a resource-efficient economy, promoting green growth, eco-innovation and environmental performance management in the public and private sectors.

157. INTERREG (Innovation and Environment, Regions of Europe Sharing Solutions), with its current **INTERREG Europe**<sup>56</sup> programme provides funding for interregional cooperation across Europe. It is implemented under the European Community's territorial co-operation objective and financed through the ERDF. Cooperation, collaboration and community engagement are at the heart of Interreg Europe. These '3 C's' are incorporated into our two main support services with the aim to aid understanding and critical thinking by creating space for new ideas, different perspectives and collective learning. Any actions developed with financial support from Interreg Europe must fall into one of the following four categories:

- Research and innovation
- SME competitiveness
- Low-carbon economy
- **Environment and resource efficiency**

158. Interreg Europe co-finance up to 85% of project activities that you carry out in partnership with other policy organisations based in different countries in Europe (and beyond).

Through interregional cooperation projects, you and your partners must identify a common interest and then work together for 3-5 years.

Initially, partners are to share experience, ideas and know-how about how best to deal with the issue at hand. Each partner region must:

- Produce an action plan;
- Set up a stakeholder group;
- Participate in the Interreg Europe Policy Learning Platforms

159. After this stage, each partner must monitor progress of the implementation of their action plan and report to the lead partner. Pilot actions may be supported during this period.

Depending on the number of partners involved, duration of interregional learning etc., the average total ERDF budget of a project is expected to be EUR 1-2 million. Interreg Europe launches calls for proposals throughout the programming period.

160. Within Interreg Europe, Interreg MED<sup>57</sup> is a specific Programme designed to support the needs of the Mediterranean region. The main objective of the Interreg MED Programme is to promote sustainable growth in the Mediterranean area by fostering innovative concepts and practices and a reasonable use of resources and by supporting social integration through an integrated and territorially based cooperation approach.

The eligible area of the Interreg MED Programme includes Mediterranean candidates or potential candidates to the European Union.

The total budget for the 2014-2020 period amounts to 265 million €, composed of 224 million € ERDF (European Regional Development Fund), 9 million IPA (Instrument of Pre-Accession) and national co-

<sup>56</sup> <http://www.interregeurope.eu/>

<sup>57</sup> <http://interreg-med.eu/en/what-is-the-interreg-med-programme/>

funding. These countries are: **Albania, Bosnia and Herzegovina and Montenegro**. The participation of the three countries is covered by the Instrument for Pre-accession Assistance (IPA II)<sup>58</sup>.

#### 4.4.2 The European Maritime & Fisheries Fund (EMFF)<sup>59</sup>

161. The EMFF is the primary financing instrument for the reformed Common Fisheries Policy (CFP) and the Integrated Maritime Policy (IMP), including the Marine Strategy Framework Directive (MSFD). It has a total budget of just under € 6.4 billion (current prices). The new CFP, sets a number of environmental objectives, notably:

- Ensure that fishing and aquaculture activities are environmentally sustainable in the long term
- Implement the ecosystem-based approach to fisheries management to ensure that negative impacts on the ecosystem are minimized,
- Endeavour to ensure that aquaculture and fisheries activities avoid the degradation of the marine environment
- Be coherent with the EU environmental legislation, in particular with the objective of achieving GES by 2020 as set out in the MSFD

162. In addition, the EMFF also aims to improve the knowledge on the state of the marine environment and support cooperation. It also aims to promote the exchange of the best practices and dialogue at international level and including bilateral dialogue with non-EU countries, taking into account UNCLOS and the relevant international conventions based on UNCLOS, without prejudice to other agreements arrangements which may exist between the Union and the third countries concerned.

163. In addition, it provides basis for voluntary contributions to international organizations: financial contribution to any activity (including working, informal or extraordinary meetings of contracting parties) and the presence of representatives of third countries in negotiations and meetings in international for and organizations becomes necessary for the interest of the Union, the EMFF may bear the costs of their participation.

#### 4.4.3 LIFE programme<sup>60</sup>

164. The LIFE funding instrument is the only MFF funding instrument, exclusively dedicated for environmental and climate change protection.

165. For the period 2014-2020, incorporates both Environment and Climate policies, has a total budget of € 3.5 billion (current prices), on which € 2.1 billion is devoted to the environment sub-programme.

166. The major innovation of the programme is the introduction of so-called 'integrated projects', large scale undertakings aiming to contribute to the implementation of plans, programmes or strategies required by EU legislation, including in the area of water policy. Links to marine issues can be made, e.g. through land-based or coastal issues covered by the WFD. Integrated projects require the mobilization of at least one other EU, national or private fund.

167. These are larger projects (an average EU contribution of 10 million euros) aimed at contributing to the implementation of some environmental EU policies, in particular the Water Framework Directive and Marine Strategy Framework Directive.

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<sup>58</sup> [http://www.programmemed.eu/fileadmin/PROG\\_MED/MED\\_2014/\\_Factsheet\\_for\\_IPA\\_partners.pdf](http://www.programmemed.eu/fileadmin/PROG_MED/MED_2014/_Factsheet_for_IPA_partners.pdf)

<sup>59</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0508&from=en> REGULATION (EU) No 508/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 May 2014 on the European Maritime and Fisheries Fund and repealing Council Regulations (EC) No 2328/2003, (EC) No 861/2006, (EC) No 1198/2006 and (EC) No 791/2007 and Regulation (EU) No 1255/2011 of the European Parliament and of the Council  
<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1293&from=EN> REGULATION (EU) No 1293/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 on the establishment of a Programme for the Environment and Climate Action (LIFE) and repealing Regulation (EC) No 614/2007<sup>60</sup>

168. The European Commission (DG Environment and DG Climate Action) manages the LIFE programme directly. The Commission has delegated the implementation of many components of the LIFE programme to the Executive Agency for Small and Medium-sized Enterprises (EASME). External selection, monitoring and communication teams provide assistance to the Commission and EASME. The European Investment Bank will manage the two new financial instruments (NCFE and PF4EE).

169. Projects financed by LIFE+ must satisfy the following criteria:

- Projects must be of EU interest, making a significant contribution to the achievement of the general objective of LIFE+;
- They must be technically and financially coherent and feasible and provide value for money;
- Where possible, projects financed by LIFE+ should promote synergies between different priorities under the sixth Environmental Action Programme and integration.

In addition, to ensure European added value and avoid financing recurring activities, projects should satisfy at least one of the following criteria:

- Best-practice or demonstration projects, for the implementation of the Birds and Habitats Directives;
- Innovative or demonstration projects, relating to EU environmental objectives, including the development or dissemination of best practice techniques, know-how or technologies;
- Awareness-raising campaigns and special training for agents involved in forest fire prevention;
- Projects for the development and implementation of EU objectives relating to the broad-based, harmonized, comprehensive and long-term monitoring of forests and environmental interactions.

170. Following the annual call for proposals, applicants to the programme must submit their proposals to the competent national authority of the Member State in which the coordinating beneficiary is registered. Member States forward project proposals to the Commission, may set national priorities and may prepare comments on proposals, in particular in relation to national annual priorities.

Guidelines for applicants are published annually with the call for proposals. The European Commission also organizes information workshops for potential LIFE+ applicants in each EU Member State, providing valuable advice and guidance on what national authorities and the Commission expect from project proposals in national languages.

171. The project proposals received from the national LIFE+ authorities are registered by the Commission and an acknowledgement of receipt is transmitted to the coordinating beneficiary. The LIFE Unit of the Environment Directorate General is responsible for the evaluation procedure. It will verify the admissibility, exclusion and eligibility, the selection and the award criteria and propose to the LIFE+ Committee a list of project proposals for co-financing, according to the criteria outlined in the "Guide for the evaluation of LIFE+ project proposals" (which is published each year with the call).

The LIFE+ Committee is made up of representatives of the 27 Member States and is chaired by the Commission. Should this Committee give a favorable opinion, and within the limits of the funds available, the Commission will then decide upon a list of projects to be co-financed. After approval by the European Parliament, individual grant agreements are sent to each successful coordinating beneficiary for signature.

172. The maximum EU co-financing rate for LIFE+ projects is 50 percent of the total eligible project costs. By way of exception, a co-financing rate of up to 75 percent of the total eligible costs may be granted to LIFE+ Nature proposals that focus on concrete conservation actions for priority species or habitat types of the Birds and Habitats Directives.

173. LIFE, in line with Article 5 of the Regulation 1293/2013, establishing LIFE, is open to non-EU Countries, including both IPA and ENI Countries, as well as International Organizations.

**Table 5.4.1 Summary of eu funding instruments available to Barcelona Convention Contracting Parties to assist Ecosystem Approach /Imap implementation needs**

<i>Contracting Parties</i>	<i>KEY EU FUNDING INSTRUMENTS FOR ECOSYSTEM APPROACH /IMAP<sup>61</sup></i>						
	<i>ENI</i>	<i>IPA</i>	<i>GPGC</i>	<i>EMFF<sup>62</sup></i>	<i>ERDF<sup>59</sup></i>	<i>HORIZON 2020<sup>59</sup></i>	<i>LIFE<sup>59</sup></i>
<i>Albania</i>	x	√	x	o	o	√	√
<i>Algeria</i>	√	x	√	o	o	√	√
<i>Bosnia and Herzegovina</i>	x	√	x	o	o	√	√
<i>Egypt</i>	√	x	√	o	o	√	√
<i>Israel</i>	√	x	√	o	o	√	√
<i>Lebanon</i>	√	x	√	o	o	√	√
<i>Libya</i>	√	x	√	o	o	√	√
<i>Montenegro</i>	x	√	x	o	o	√	√
<i>Morocco</i>	√	x	√	o	o	√	√
<i>Syria</i>	√	x	√	o	o	√	√
<i>Tunisia</i>	√	x	√	o	o	√	√
<i>Turkey</i>	x	√	x	o	o	√	√
<i>Monaco</i>	x	x	x	o	o	√	√
<i>EU Countries</i>	x	x	x	o	o	√	√

174. As indicated in the table, all specific EU MFF funding instruments, noting their specific country eligibility and process for funding, can potentially assist Barcelona Convention Contracting Parties, to implement Ecosystem Approach /IMAP.

175. It is important to note that the main funding instrument for the beneficiary countries of the EcAp-MEDII project (for Southern Mediterranean Countries), which can assist their country specific Ecosystem Approach /IMAP implementation needs, in line with the national integrated monitoring programmes, to be drawn up by 2019, in line with the IMAP Decision, is under ENI.

176. In relation to country specific implementation needs of the Balkans and Turkey and replication potential of EcAp-MEDII project, the most important instrument is IPA.

177. For regional specific implementation needs, GPGC can provide key benefits and address specific gaps, with a focus on the Southern Mediterranean.

<sup>61</sup> All funding instruments are also available in principle to UN Environment/MAP as an international organization, who could play a catalyst role for assisting country implementation for Ecosystem Approach /IMAP through the strategic usage of these funds.

<sup>62</sup> Main target of these funding instruments is Europe, but in principle they can be open also to ENI and IPA eligible countries too. Specific rules of calls for proposal apply, which need to be checked for each specific case. In case of ERDF, funding is as a principle rule only for EU countries, but from cooperation and information sharing third countries can benefit too. Under Horizon 2020, all Barcelona Contracting Parties are eligible and for funding and under LIFE, in cooperation with EU Countries, as a general rule they are all eligible as well.



178. TAIEX can be a practical and extremely useful tool, to support exchange of best practices, sub-regional and regional cooperation, both for Southern Mediterranean and Balkans countries and Turkey.

179. While the EMFF, ERDF, Horizon2020 and LIFE mainly focus on EU countries, they are open in principle to all Barcelona Convention Contracting Parties (except to the EU itself). Specific calls of proposals need to be followed thus in the cases of these funding instruments, noting that LIFE for the first time, also includes specifically marine biodiversity protection and is open under certain conditions also to non-EU countries.

180. Horizon 2020 is the most robust funding instrument, which also has a specific focus area on blue growth and as such, could be key for Ecosystem Approach /IMAP implementation, especially in those areas where data gaps and scientific uncertainty still exists. It is important to note that Horizon 2020 is open to all Contracting Parties to the Barcelona Convention.

## 5. FUNDING OPPORTUNITIES FOR THE IMPLEMENTATION OF ECOSYSTEM APPROACH/IMAP IN THE MEDITERRANEAN UNDER GEF

### 5.1 Introduction to the GEF

181. The **Global Environment Facility (GEF)**<sup>63</sup> is a unique international partnership of governments, international institutions, civil society organizations (CSOs), Indigenous Peoples, and the private sector, which aims to address drivers of global environmental degradation. GEF funds are available to developing countries and countries with economies in transition to meet the objectives of the international environmental conventions and agreements. As such, it provides grants or concessional financing for measures to achieve agreed global environmental benefits.

182. GEF, in line with its current **GEF6 Strategy Integrated Vision**<sup>64</sup>, provides funding for the following areas of work, and multi-focal and cross-cutting issues and programs:

- Biodiversity
- Chemicals and Wastes
- Climate Change
- International Waters
- Land Degradation and
- Sustainable Forest Management.

183. **GEF biodiversity related funding** aims to improve the sustainability of protected area systems and reduce threats to globally significant biodiversity. It also aims to help the sustainable use of biodiversity and mainstreams biodiversity conservation and sustainable use into production landscapes/seascapes and sectors.

184. In the areas of **chemicals and wastes** GEF priorities include developing the enabling conditions, tools and environment for the sound management of harmful chemicals and wastes, to reduce the prevalence of harmful chemicals and waste and to support the implementation of clean alternative technologies/substances.

185. In relation to **climate change**, GEF aims to promote innovation, technology transfer, and supportive policies and strategies. It also aims to demonstrate systemic impacts of mitigation options, to foster enabling conditions to mainstream mitigation concerns into sustainable development strategies.

186. In relation to **International Waters**, it aims to catalyze sustainable management of transboundary water systems by supporting multistate cooperation through foundational capacity building, targeted research and portfolio learning and it also catalyzes the investments to balance competing water-uses in the management of transboundary surface and groundwater and to enhance multi-state cooperation. In addition, it enhances multi-state cooperation and catalyzes investments to foster sustainable fisheries, restore and protect coastal habitats, and reduce pollution of coasts and Large Marine Ecosystems.

187. Regarding **Land Degradation** GEF aims to maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods, generates sustainable flows of ecosystem services from forests, including in drylands, reduces pressures on natural resources by managing competing land uses in broader landscapes and finally maximizes transformational impact through mainstreaming of SLM for agro-ecosystem services.

188. Regarding **Sustainable Forest Management**, the GEF strategy aims to maintain the forest resources by reducing the pressures on high conservation value forests by addressing the drivers of deforestation enhances the forest management by maintaining flows of forest ecosystem services and improving

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<sup>63</sup> <http://www.thegef.org/>

<sup>64</sup> [https://www.thegef.org/sites/default/files/publications/GEF-2020Strategies-March2015\\_CRA\\_WEB\\_2.pdf](https://www.thegef.org/sites/default/files/publications/GEF-2020Strategies-March2015_CRA_WEB_2.pdf)

resilience to climate change through SFM. It aims to restore the forest ecosystems by reversing the loss of ecosystem services within degraded forest landscapes and finally it increases regional and global cooperation by enhancing the regional and global coordination on efforts to maintain forest resources, enhance forest management and restore forest ecosystems through the transfer of international experience and know-how.

189. As far as the distribution of the Fund is concerned, **Biodiversity and Climate change take 32% each, Chemicals and waste 14%, International Waters takes 11%** and the **Land degradation** project takes the **11%** usage of the GEF, with the **System for Transparent Allocation of Resources (STAR)** applicable for the GEF's resource allocation system for **biodiversity, climate change, and land degradation** focal areas.

**STAR Allocation System: Key for marine biodiversity protection in the Mediterranean and potential key source for Ecosystem Approach /IMAP implementation from 2018 on**

190. The allocations are determined in these areas based on transparent indicators reflecting country performance, country potential to achieve global environmental benefits and the Social Economic Development Index based on each country's GDP per capital.<sup>65</sup>

The main benefits of the STAR for eligible countries are predictability of funding and flexibility in programming. This will enhance planning and contribute to country ownership of GEF projects and programs. In addition, the STAR can incentivize eligible countries to maximize their investment benefits, so that they may get higher allocations in the next replenishment period.<sup>66</sup>

191. In the STAR model, the following parameter values have been used: (i) the weight of the GDP per capita index is at -0.08; (ii) the ceilings for all three focal areas are set at 10 percent of the total focal area allocations; and (iii) the aggregate floor for a country is \$ 6 million (\$3 million for climate change, \$2 million for biodiversity, and \$1 million for land degradation) for LDCs only.

192. Further, as agreed by the Council in May 2014, countries with total STAR allocations of less than US\$7 million will have full flexibility to program the allocation across the three focal areas. In GEF-6, four of the Barcelona Convention Contracting Parties are benefitting from this rule (Albania, Bosnia-Herzegovina, Croatia and Lebanon) Countries above this threshold have an allowed marginal adjustment of \$2 million.

193. With the current GEF6 Strategy cycle on the way a (2014-2018), new opportunities for Ecosystem Approach /IMAP implementation will open in 2018, when GEF eligible countries will draw up under STAR their project proposals. It is key thus for the GEF eligible Barcelona Convention Contracting Parties, to assess their Barcelona Convention implementation and reporting resource needs in 2018, with drawing up specific project concept notes. in these areas in early 2018.

## 5.2 GEF Country Eligibility

194. Countries may be eligible for GEF funding in one of two ways:

- a) if the country has ratified the Conventions the GEF serves and conforms with the eligibility criteria decided by the Conference of the Parties of each convention; or
- b) if the country is eligible to receive World Bank (IBRD and/or IDA) financing or if it is an eligible recipient of UNDP technical assistance through its target for resource assignments from the core.

195. The GEF projects are implemented through/with the assistance of GEF Implementing Agencies (IA). The GEF IA are the operational arm of the GEF. They work closely with project proponents - government agencies, civil society organizations and other stakeholders - to design, develop and implement GEF-funded projects and programs. They help eligible governments and non-governmental organizations (NGOs) to develop, implement and execute their proposal and projects. Often, several IA work together on GEF projects and Programmes.

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<sup>66</sup> [https://www.thegef.org/sites/default/files/publications/GEF\\_STAR\\_A4\\_april11\\_CRA\\_3.pdf](https://www.thegef.org/sites/default/files/publications/GEF_STAR_A4_april11_CRA_3.pdf)

196. Eighteen institutions act as GEF IA: Asian Development Bank (ADB), African Development Bank (AfDB), European Bank for Reconstruction and Development (EBRD), Food and Agriculture Organization of the United Nations (FAO), Inter-American Development Bank (IADB), International Fund for Agricultural Development (IFAD), United Nations Development Programme (UNDP) **United Nations Environment Programme (UN Environment)**, United Nations Industrial Development Organization (UNIDO), The World Bank Group (WBG), Conservation International (CI), Development Bank of Latin America (CAF), Development Bank of Southern Africa (DBSA), Foreign Economic Cooperation Office, Ministry of Environmental Protection of China (FECO), Brazilian Biodiversity Fund (FUNBIO), International Union for Conservation of Nature (IUCN), West African Development Bank (BOAD), World Wildlife Fund (WWF-US).

197. **The following Barcelona Convention Contracting Parties are eligible for GEF funding:** Albania, Algeria, Bosnia-Herzegovina, Bulgaria, Croatia, Egypt, Jordan, Lebanon, Libya, Morocco, Syria and Turkey.

### 5.3 GEF Project Types

198. There are four types of modalities to develop proposals for the GEF and submit them for the consideration of the GEF secretariat: enabling activities, medium-sized projects, full-sized projects, and programmatic approaches.

#### A. Enabling Activities (EAs) - Up to \$1 million

199. EAs aims to fulfilling essential reports to the conventions relevant to the GEF operations. They provide a basic level of information to enable policy and strategic decisions, or help identify priority activities within a country. EAs that go beyond their funding threshold are considered non-expedited, and would then follow the procedures for processing full-sized projects. There are two possible paths to develop proposals for EAs:

Direct Access (follow direct access policy):

- Country submits EA proposal for CEO approval;
- CEO and country sign Grant Agreement and implementation starts.

Follow existing procedures of applying EA grant through IA:

- IA submits EA proposal for CEO approval;
- IA follows its own internal approval procedure and implementation starts

#### B. Medium-sized Projects (MSPs) - Up to US\$2 million

200. The approval process of MSP proposal does not need the approval of the GEF Council which delegates this decision to the Chief Executive Officer (CEO). This normally make this process simpler, thus this modality is particularly indicated to targets specific priorities for the countries/regions because their development, and execution is generally faster. These projects increase the GEF's flexibility in allocating its resources thus a wide range of stakeholders can propose and develop project concepts. Main steps For Medium-sized Projects:

Single-step approval:

- CEO approval of final MSP document;
- IA's own internal approval and implementation starts.

Two-step step approval:

- If Project Preparation Grants are requested, submit a Project Implementation Form (PIF) for CEO approval;
- CEO approve the PIF and release the PPG
- The IA develop the full project document which fully builds on the structure proposed in the PIF
- CEO approval of final project document;

- Agency's own internal approval and implementation starts.

Review Criteria for MSP:

- Country eligibility and ownership
- Global Environment Benefits GEF Focal area strategy
- Agency's Comparative advantage
- Resource availability
- Project consistency
- Project design
- Project financing and co-financing (baseline)
- Monitoring and evaluation; and
- Agency's responses to comments and reviews.

**C. Full-sized Projects (FSPs) - More than US\$2 million**

201. The GEF provides funding for FSPs only to governments through proposals prepared by IA. Governments, in agreements with the IA decide on the executing agency (e.g. civil society organizations, private sector companies, research institutions). The GEF Council approves PIF for FSP proposals, which are then fully developed in a full project document over a period of max. 18 months. The GEF CEO endorses the fully developed FSP for subsequent approval by the GEF Partner Agency to start project implementation.

Main steps for for Full-sized Projects FSP:

- Council approval of the work program, consisting of PIFs cleared by the CEO;
- CEO endorsement of the final project document;
- Approval of the project by the GEF Agency and implementation start• Completion of implementation, terminal evaluation and financial closure:

**D. Programmatic Approaches (PAs)**

202. Programs are a strategic combination of FSPs and MSPs with a common focus to build upon or complement one another. In this way, they can produce results not possible through a single project. Programs maximize the impact of GEF resources by securing a larger scale and sustained impact on the global environment. They do this by implementing medium- to long-term strategies for achieving specific global environmental objectives consistent with the national or regional strategies and plans of recipient countries. There are two types of programs that may be implemented under the programmatic approach modality: thematic programs and geographical programs (country or regional). Two Types of programmatic approaches, depending on the type of GEF Agency submitting the program:

Qualifying GEF Implementing Agencies (QGA):

Those GEF Agencies meeting the criteria for delegated approval authority;

Non-qualifying GEF Agencies:

those GEF Agencies not meeting the criteria, such programs can be submitted by a Program Coordination Agency (PCA)

203. **Co-Financing Policy:** Co-financing for GEF-financed projects, is defined as resources that are additional to the GEF grant and that are provided by the GEF Partner Agency itself and/or by other non-GEF sources that support the implementation of the GEF financed project and the achievement of its objectives. Co-financing is required for all GEF full-size projects (FSPs), medium-side projects (MSPs), and GEF programmatic approaches. Co-financing is optional for GEF enabling activities.

204. *GEF-financed projects and programmatic approach proposals include co-financing as follows:*

- (a) All GEF FSP PIF list indicative co-financing in order to be included as part of a GEF Work Program. At this stage, indicative co-financing represents a best estimate by the GEF Partner Agency and is not yet a commitment.
- (b) FSPs provide evidence of confirmed co-financing prior to being considered for CEO endorsement.
- (c) All MSP concepts list indicative co-financing prior to being considered for CEO approval. Final MSP proposals provide evidence of confirmed co-financing prior to being considered for CEO approval.
- (d) All programmatic approaches list indicative financing prior to being included as part of a GEF Work Program.

Final co-financing commitments have to be made when the child projects to the programs are submitted to the GEF for CEO endorsement.

205. For project concepts and requests for CEO endorsement or approval, GEF Partner Agencies classify the co-financing included in their project submissions according to the type and source of the financing. Types of co-financing include grants, loans, guarantees, and in-kind resources.

**206. The GEF Secretariat will:**

- (a) review proposals for consistency with the requirements of this Policy;
- (b) establish and maintain standard project proposal formats to record co-financing data during the stages of the GEF project cycle;
- (c) enter information on co-financing into its project database and update such information during project preparation; and
- (d) engage in discussions with recipient countries and Partner Agencies to help develop programming approaches that, among other features, also aim at achieving higher co-financing.

The Secretariat will not impose minimum thresholds and/or specific co-financing sources in the review of individual projects or work programs, since co-financing may not always be achievable or relevant.

207. Project on-the-ground actions are implemented through collaboration between national and international stakeholders, under the coordination of the GEF Operational Focal Point (OFP) in each country.

#### **5.4 Additional Trust Funds supporting GEF Strategy implementation**

208. The GEF is also associated with other trust funds which are supporting the GEF strategy and follow the same procedures for the identification of the priorities and the allocation of the funds. These trust funds are:

##### **Special Climate Change Fund (SCCF)**

209. The Special Climate Change Fund (SCCF) supports adaptation and technology transfer in all developing country parties to the UNFCCC, supporting both long-term and short-term adaptation activities in water resources management, land management, agriculture, health, infrastructure development, fragile ecosystems, including mountainous ecosystems, and integrated coastal zone management.

##### **Least Developed Countries Fund (LDCF)**

210. The Least Developed Countries Fund (LDCF), established under the UNFCCC, addresses the special needs of the 51 Least Developed Countries (LDCs) that are especially vulnerable to the adverse impacts of climate change. The LDCF reduces the vulnerability of sectors and resources that are central to development and livelihoods, such as water, agriculture and food security, health, disaster risk management and prevention, infrastructure, and fragile ecosystems. Tasked with financing the preparation and implementation of National Adaptation Programs of Action (NAPAs). NAPAs use existing information to

identify a country's priorities for adaptation actions. The LDCF is the only existing fund whose mandate is to finance the preparation and implementation of the NAPAs.

### **Nagoya Protocol Implementation Fund (NPIF)**

211. The Nagoya Protocol Fund supports signatory countries, as well as those in the process of signing The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (the Nagoya Protocol) and that intend to ratify the Protocol in order to accelerate the ratification and implementation of the Protocol. The fund encourages engagement with private sector entities interested in exploring the economic potential of genetic resources and facilitate the transfer of appropriate technologies. Through the implementation of this type of project, countries should be generating additional information that can help to understand their capacities and needs on Access and Benefit Sharing (ABS), with focus on the provisions from existing policies, laws and regulations affecting genetic resources.

### **Adaptation Fund**

212. The Adaptation Fund (AF) was established to finance concrete adaptation projects and programmes in developing countries that are particularly vulnerable to the adverse effects of climate change. It was established under the Kyoto Protocol of the UN Framework Convention on Climate Change, and since 2010 has committed funds for localized climate adaptation and resilience activities. Initiatives are based on country needs and priorities. AF is one of the most innovative and unique climate funds, and has achieved impressive progress in just a few short years. It has proven its effectiveness as a highly efficient and transparent Fund for channeling adaptation finance to developing countries by pioneering Direct Access, in which accredited National Implementing Entities (NIEs) can directly access climate finance and manage projects from design through implementation while building the country's own local and national adaptive capacity. AF-funded projects are implemented around the world through accredited National Implementing Entities, Multilateral Implementing Entities and Regional Implementing Entities. The Fund also has a growing Readiness Programme that provides capacity building workshops, small technical assistance grants and south to south cooperation to facilitate accreditation of new implementing entities and reach more vulnerable communities with urgently needed climate adaptation solutions.

## **5.5 Potential GEF funding to support the implementation of Ecosystem Approach /IMAP in the Mediterranean**

213. In relation to the implementation of the Ecosystem Approach and more specifically of IMAP, the most important possible funding areas included in the GEF6 Strategy Integrated Vision are (i) biodiversity; (ii) chemicals and waste and (iii) international waters.

**Noting that the most important gap in the implementation of Ecosystem Approach /IMAP, is related to biodiversity, the most important funding instrument for, in line with point 4.1.1 is the STAR system.**

**Noting that all GEF eligible Barcelona Convention Contracting Parties (Albania, Algeria, Bosnia-Herzegovina, Bulgaria, Croatia, Egypt, Jordan, Lebanon, Libya, Morocco, Syria and Turkey) are also eligible for STAR funding and that under STAR the countries have great flexibility for prioritizing according to their country needs and that specific resources are available for biodiversity reporting to Conventions, STAR is a key opportunity to assist Ecosystem Approach /IMAP implementation, especially regarding their biodiversity needs under IMAP/Ecosystem Approach Roadmap needs.**

**Specific pilot projects for biodiversity data reporting could be foreseen here from the available outside of STAR reporting budget related to biodiversity and additional pilot projects for IMAP implementation in the field of biodiversity (possibly also as joint activities between countries) could be envisioned here, upon country interest.**

**It is important to note, that while in principle a country can keep its indicative allocation until the end of the respective GEF Strategy cycle; countries in practice, to ensure efficiency, usually develop**

**and submit project proposals for funding over the entire replenishment period, early in the beginning of the cycle.**

**As such, it provides a perfect timing for interested GEF eligible countries, to support their Ecosystem Approach /IMAP implementation needs, noting both the timeline of the Ecosystem Approach implementation cycle and the upcoming new GEF timeline, under which countries can start planning their own project proposals as early as in 2018.**

214. It is important to note however that the GEF funding aims to support measures, not monitoring as a principle rule, as monitoring is seen more as a country obligation. Thus, while implementation of IMAP could be part of many future project proposals and as such support the GEF eligible countries Ecosystem Approach /IMAP implementation needs and reporting obligations, the project proposals would also need to include measures relevant to the implementation of the Ecosystem Approach Roadmap and also in line with the future GEF Strategy priorities, to maximize the future proposals potential for successful application.

215. An alternative and innovative way of incorporating IMAP monitoring into GEF biodiversity related projects could be also to use the already regionally agreed IMAP biodiversity common indicators as indicators, as GEF project monitoring and assessment indicators. This approach could possibly improve the result-based monitoring and assessment of the country-level biodiversity STAR GEF projects and would ensure a regional overview, in line with already agreed common indicators. At the same time, it could provide also the Contracting Parties with very valuable data needed, to implement their obligations under the IMAP of UN Environment/MAP

216. It is also worth mentioning, that while Ecosystem Approach and IMAP both would aim to look at the climate change impacts on the marine and coastal ecosystem, but the methodologies of this are still in progress. Thus, while the climate change related GEF funding opportunities could be in theory also interesting, until the specific methodologies are not set in relevant expert meetings of the UN Environment/MAP Contracting Parties, this area cannot be specifically financed in relation to IMAP implementation needs.

217. In relation to size, GEF eligible countries can propose to assist the implementation of Ecosystem Approach and IMAP in all the possible project types (full-sized projects, medium-sized projects, enabling activities and programmatic approaches) and could use relevant IMAP indicators as monitoring and assessment indicators for GEF projects in all possible sized projects.

## **5.6 Key GEF programme in the Mediterranean in support for Ecosystem Approach and specifically of IMAP implementation**

### **Mediterranean Sea Programme (MedProgramme): Enhancing Environmental Security (GEF Programme, with budget 42,376,147 USD)**

218. Building on the achievements of the most recent, biggest GEF project in the Mediterranean, the Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem (MedPartnership Project, with 47.488.700 USD, co-financed by participating Contracting Parties, AECID, EU, FFEM, MAVA and UN Environment/MAP MTF). Which included 81 on the ground pilot demonstrations and aimed at testing the feasibility in the region and the effectiveness of management tools, practices and technical measures with very encouraging results, further GEF support was agreed by the GEF Council of October 2016, through a Programmatic Approach to assist GEF beneficiary countries of the Mediterranean Basin to rise to step up their efforts and commitments, including those financially related.

219. The term “environmental security”, used in the title of the Programme to capture its overall perspective and goal, embraces three categories of concerns:



- Concerns about the adverse impact of human activities on the environment - the emphasis here is on the security of the environment as a good in itself, for the sake of future generations, as the context for human life;
- Concerns about the direct and indirect effects on national and regional security of various forms of environmental change (especially water scarcity and degradation), which may be natural or human-generated - here the focus is on environmental change triggering, intensifying or generating the forms of conflict and instability relevant to conventional security.
- Concerns about the insecurity that individuals and groups (from small communities to humankind) may experience due to environmental change such as water scarcity, air pollution, climate variability and change.

220. The presumption underlying the Programme design is that overall environmental security, the sustainability of the livelihoods of growing coastal populations and their resilience to the adverse impacts of climate change and variability will be improved by addressing hot spots of coastal/marine pollution and habitat degradation, implementing ICZM and nexus planning, introducing conjunctive surface and groundwater management, protecting coastal groundwater related ecosystems and coastal/marine biodiversity.

221. The design of the Programme assumes that by launching a stimulus package of multiple focal area investments and interventions addressing priority concerns and hot spots, this added impetus will jump start the systematic implementation of protection and mitigation measures. In order to have a significant impact in reversing degradation trends affecting the Mediterranean Sea and its coastal areas and enhance resilience to climatic impacts.

222. In line with the above, the Global Environmental Objectives of the Programme are:

- restore the integrity of a globally significant transboundary large marine ecosystem and of its coastal areas through multi-country cooperative actions;
- prevent the exposure of humans and the environment to harmful chemicals and waste of global importance;
- maintain globally significant biodiversity and the ecosystem goods and services that it provides to society;
- increase resilience to the adverse impacts of climate change in vulnerable developing countries.

223. The key outcomes /performance indicators for the Programme are:

- number of transboundary coastal freshwater basins/aquifers with enhanced collective management and increased water security through conjunctive management of surface and groundwater;
- hectares of additional marine and coastal regions under effective management;
- number of tons of POPs/PCBs disposed of (directly and indirectly);
- number of tons of Mercury reduced (directly or indirectly).

224. While the whole of the programme is relevant to Ecosystem Approach implementation and to the achievement of its overall objective (healthy Mediterranean Sea and Coast), it is mainly measures focused, with the exemption of the Programme's planned Component 1, which specifically foresees the strengthening of IMAP implementation.

225. Component 1: Reduction of Land Based Pollution in Priority Coastal Hotspots, and Measuring Progress to Impacts (Child Projects: 1.1, 1.2 and 1.3) will focus on Mediterranean transboundary pollution hotspots to address (i) threats to the health of humans and of marine and coastal ecosystem posed by exposure to persistent toxic substances (POPs, Mercury); (ii) industrial wastes, excess nutrients from discharges of untreated urban and industrial wastewater; and (iii) the monitoring of progress towards expected impacts, and achievement of relevant SDGs.

226. The Component's design consists of national investments blended with complementary regional technical assistance and policy interventions aimed at allowing the monitoring of the progress to impacts, and at consolidating results at regional level across the Mediterranean. It will target two outcomes and will be developed through three Child Projects (CP) implemented/executed by UN Environment/MAP, EBRD, UNIDO and EIB. GEF IW and CW grant funding will support this Component.

227. This component foresees the updating the baseline situation (TDA) after over 10 years from the previous diagnostic, fully integrating the findings of the Climate Change and Variability project, the Coastal Aquifer Supplement and Action Plan, and other relevant findings and results of MedPartnership, and including a gender assessment, combined with a State of the Environment Report for the Mediterranean; as well as exploring the potential for systemic and transformational change at the horizon 2050 through cross-sectoral foresight scenarios.

228. In addition, it foresees the promoting the integration and harmonization of presently existing data platforms, monitoring protocols and indicators, in compliance with the newly established Integrated Monitoring and Assessment Programme for the Mediterranean (IMAP, 2016), and defining rationale and sites for offshore reference monitoring stations. Issues include pollution from harmful chemicals and wastes, nutrients, marine litter and microplastics, marine noise and climate change adaptation, marine and coastal biodiversity, offshore activities and management, coastal zones and freshwater resources, fisheries, and gender.

229. One of the specific outcomes of this component is fully in line with the objective of IMAP, ie that littoral countries are enabled to identify trends and progress to impacts, with the relevant indicator of updated baseline (TDA), including gender assessment and report on progress to impacts and proposal for a data sharing regional policy in compliance with IMAP to be developed.

## 5.7 Reflections on the GEF-7 Programming Directions and Policy Agenda

230. During its 51st meeting in October 2016, the GEF Council requested the Trustee, in cooperation with the Secretariat, to initiate discussions on the seventh replenishment of resources of the GEF Trust Fund, which was further discussed and developed in 2017-2018 during additional replenishment meetings, with the latest discussions undertaken at the time of finalization of this Funding Strategy, in Stockholm, Sweden, on 25 April.

231. The GEF 7 Programming Directions, Seventh Replenishment of Resources (GEF-7/ hereinafter GEF 7 draft) is currently being finalized and foreseen to be adopted still in 2018.

232. The following analysis builds on publicly available documents shaping the draft GEF, most heavily on the draft GEF7 Replenishment Programming Directions<sup>67</sup>, which sets out key frame of the new Strategy.

233. In line with the GEF7 Global Context and Strategic Priorities draft<sup>68</sup> GEF-7 seeks to achieve substantially more ambitious results than in the past. Based on lessons from independent evaluations, scientific evidence, and the GEF's past implementation experience GEF-7 investments will focus more explicitly on achieving multiple benefits and on addressing market barriers and enhancing the role of the private sector, with a stronger reporting framework, to better capture both environmental benefits and socio-economic co-benefits.

234. The GEF7 Impact Programs will be even more important to contribute disproportionately to global environmental benefits across the biodiversity, climate change and land degradation focal areas, but the

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<sup>67</sup>[http://www.thegef.org/sites/default/files/council-meeting-documents/GEF-7%20-%20Programming%20Directions%20and%20Policy%20Agenda%20-%20GEF\\_R.7\\_15.pdf](http://www.thegef.org/sites/default/files/council-meeting-documents/GEF-7%20-%20Programming%20Directions%20and%20Policy%20Agenda%20-%20GEF_R.7_15.pdf)

<sup>68</sup>[http://www.thegef.org/sites/default/files/council-meeting-documents/GEF-7%20-%20Global%20Context%20and%20Strategic%20Priorities%20-%20GEF\\_R.7\\_11.pdf](http://www.thegef.org/sites/default/files/council-meeting-documents/GEF-7%20-%20Global%20Context%20and%20Strategic%20Priorities%20-%20GEF_R.7_11.pdf)

overall lay-out of GEF funding will not change from GEF6 greatly, with big importance of STAR allocations to continue in biodiversity funding.

235. In line with the GEF-7 Programming Scenarios and Global Environmental Benefits Targets draft<sup>69</sup> allocation for the Biodiversity Focal Area will aim to further bolster GEF’s ability to help combat the precipitous decline in global biodiversity by funding priority objectives identified in the four-year framework agreed at COP13 of CBD.

236. Furthermore, in general, the draft reflects heavily on the 2030 Agenda and on the specific SDGs and their targets and as such aims to also ensure that the GEF7 can enhance progress towards the implementation of the SDGs.

**Table 5.7.1. Architecture of the GEF-7, as laid out in GEF-7 Replenishment Programming Directions Draft with highlighting programme areas most relevant for implementation of Ecosystem Approach in the Mediterranean<sup>70</sup>**

Focal Areas	Biodiversity	Climate Change	Land Degradation	International Waters	Chemicals and Waste
	<b>Programming Areas to be addressed through Focal Areas Investments</b>				
	<ul style="list-style-type: none"> <li><b>Biodiversity mainstreaming</b></li> <li>Global Wildlife Program</li> <li><b>Natural capital</b></li> <li>Agrobiodiversity</li> <li>Inclusive conservation</li> <li><b>Invasive species</b></li> <li><b>Protected areas</b></li> <li>Biosafety</li> </ul>	<ul style="list-style-type: none"> <li>Innovation and technology transfer for sustainable energy breakthroughs</li> <li>NDCC preparatory and</li> </ul>	<ul style="list-style-type: none"> <li>Creating Enabling Environments for LDN</li> <li>LDN Target setting</li> <li>Enabling Activities</li> </ul>	<ul style="list-style-type: none"> <li><b>Strengthening Blue Economy Opportunities</b></li> <li><b>Improve Management in ABNJs</b></li> <li>Enhancing Water Security in Freshwater Ecosystems</li> </ul>	<ul style="list-style-type: none"> <li><b>Industrial Chemicals</b></li> <li><b>Agricultural Chemicals</b></li> <li>LDC/SIDS support</li> <li>Enabling Activities</li> </ul>
	<b>Objectives to be addressed through Impact Programs that promote convention priorities</b>				
Food Systems, Land Use, and Restoration Impact Program	<ul style="list-style-type: none"> <li>Manage biodiversity in production landscapes</li> <li><b>Harnessing biodiversity for sustainable agriculture</b></li> <li>Secure high conservation value forest (HCVF)</li> </ul>	<ul style="list-style-type: none"> <li>Land-based and value chain GHG mitigation (<i>sequestration</i>)</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable land management</li> </ul>		<ul style="list-style-type: none"> <li><b>Replacement of POPs and relevant HHP’s used in the global food supply chain</b></li> <li>Disposal of obsolete agricultural chemicals that are POPs</li> </ul>
Sustainable Cities Impact Program	<ul style="list-style-type: none"> <li><b>Integrating biodiversity and ecosystem values in urban planning</b></li> </ul>	<ul style="list-style-type: none"> <li>Urban-related GHG emissions avoidan</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable management of production systems in urban and peri-urban areas</li> </ul>	<ul style="list-style-type: none"> <li>Shared water ecosystems (fresh or marine) under new or improved cooperative management</li> </ul>	<ul style="list-style-type: none"> <li><b>Reduction of POPs, ODS, and Mercury in built infrastructure, industry and products and materials used in</b></li> </ul>
Sustainable Forest Management Impact Program	<ul style="list-style-type: none"> <li>Protection of HCV forests</li> <li>Manage biodiversity in forest</li> </ul>	<ul style="list-style-type: none"> <li>Protection of carbon-rich stocks</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable management of dryland</li> </ul>	<ul style="list-style-type: none"> <li>Shared water ecosystems (fresh or marine) under new or improved cooperative</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate mercury in forests where ASGM that uses mercury</li> </ul>

<sup>69</sup> <http://www.thegef.org/sites/default/files/council-meeting-documents/GEF-7%20-%20Programming%20Scenarios%20and%20Global%20Environment%20Benefits%20Targets%20-%20..pdf>

<sup>70</sup> [http://www.thegef.org/sites/default/files/council-meeting-documents/GEF-7%20-%20Programming%20Directions%20and%20Policy%20Agenda%20-%20GEF\\_R.7\\_15.pdf](http://www.thegef.org/sites/default/files/council-meeting-documents/GEF-7%20-%20Programming%20Directions%20and%20Policy%20Agenda%20-%20GEF_R.7_15.pdf)

237. In line with the table above structure and objectives of GEF7, main points of analysis of GEF6 are still valid (with highlighting that STAR biodiversity allocations are main financial options for implementation of ecosystem approach on national level under GEF7 as well).

238. At the same time, the fact that the new draft GEF7 mirrors the SDGs and aims to foster the implementation of Agenda 2030 entails new opportunities for the implementation of the ecosystem approach, especially in areas of SDG14.

239. In addition, as laid out in Table 5.7.2, some unique new opportunities may be offered by the future GEF7 to implement some specific ecosystem approach needs, especially in relation to sustainable fisheries, mainstreaming biodiversity into key Mediterranean sectors and address non-indigenous species and marine litter.

240. Furthermore, the Strategy also underlines the importance of sustainable finance (on which also see more Chapter 7.3) which is an area, in which, in line with the Ecosystem Approach Funding Strategy there is great prospect for growth in the Mediterranean, specifically targeting needs of the ecosystem approach implementation and country priorities.

**Table 5.7.2 Indicative list of matching Ecosystem Approach implementation needs and action ideas under GEF7 draft Replenishment Programming Directions Draft <sup>71</sup>**

Objectives of FA of draft GEF7	Matching implementation needs/possible actions
<p><b>Objective 1 Biodiversity</b> <u>Ecosystem Approach implementation relevant:</u> Mainstream biodiversity across sectors, focus on sectors with biodiversity impacts</p> <p>Natural capital and accounting</p> <p>Link: International Waters/Sustainable fisheries, + Food and Sustainable Cities impact programs</p>	<p>Possible Actions</p> <ul style="list-style-type: none"> <li>• sustainable practices country pilots (changing production practices to be more biodiversity positive);</li> <li>• country specific natural capacity assessment (also building on UN Environment/MAP IMAP and GFCM DCRF<sup>72</sup> s;;</li> <li>• Identification and creation of conditions for green investments in mainstreaming biodiversity/ecosystem approach implementation to key sectors;</li> <li>• Identification and creation of conditions for green investments in marine biodiversity protection in line with the ecosystem approach;</li> </ul> <p>(possibly use outputs also for Marine Spatial Planning)</p>
<p><b>Objective 2 Biodiversity</b> <u>Ecosystem Approach implementation relevant</u> Reduce direct drivers of biodiversity loss, including:</p> <p>Management of Non-Indigenous Species; Enhancing effectiveness of protected areas; Combatting illegal and unsustainable use of species</p>	<p>Possible Actions:</p> <ul style="list-style-type: none"> <li>• Early detection framework development, strengthening first sub-regional level in line with IMAP/DCRF and outcomes of the Eastern Med Sub-Regional Pilot focusing on the highest risk invasion pathway (Suez Canal/Eastern Mediterranean);</li> <li>• Establishing regional NIS list (including NIS Fish) and establish early detection and warning mechanism for selected NIS list;</li> <li>• Identification and creation of the conditions for existing private finance to be invested in area based management, conservation measures;</li> <li>• Strengthening effectiveness of existing area based management systems (focus between FRAs and MPAs/SPAMIs) and monitoring of their monitoring in line with Ecosystem Approach common indicators</li> </ul>
<p><b>Objective 1 International Waters</b> <u>Ecosystem Approach implementation relevant:</u> Strengthen blue economy opportunities (Marine Spatial Planning, investment in long term sustainability, sustainable fisheries, marine litter)</p>	<p>Possible Actions:</p> <ul style="list-style-type: none"> <li>• Development, in line with MSSD, Blue Economy Strategies/to feed in national Marine Spatial Plans;</li> <li>• Establishment and support existing MPAs in biodiversity hotspots as key first step of Marine Spatial Planning;</li> <li>• Stimulating private sector engagement in blue economy development, through industry sectoral roundtables;</li> <li>• Building regional alliance on marine litter (strengthen Marine Litter Roundtable of UN Environment/MAP, develop Industry Action Plan to implement Marine Litter Regional Plan);</li> <li>• Identification and creation of conditions for private finance to be invested in circular economy solutions, with aim to eliminate marine litter, in line with Marine Litter Regional Plan;</li> <li>• Supporting Marine Litter/Fishing Gear Best Practices;</li> <li>• Strengthening sustainable fishing practices, including sustainable aquaculture, innovative production of marine algae;</li> <li>• Supporting policy reform development in interested CPs to end IUU, overfishing and sustainably manage capture fisheries;</li> <li>• Identifying and implementing market mechanisms (supported by global norms) to support sustainable fisheries value chains;</li> </ul>

<sup>71</sup> As GEF7 Draft mainly analyzing GEF7 Replenishment Programming Directions, as available by 30 March in following link: [http://www.thegef.org/sites/default/files/council-meeting-documents/GEF-7%20-%20Programming%20Directions%20and%20Policy%20Agenda%20-%20GEF\\_R.7\\_15.pdf](http://www.thegef.org/sites/default/files/council-meeting-documents/GEF-7%20-%20Programming%20Directions%20and%20Policy%20Agenda%20-%20GEF_R.7_15.pdf)

<sup>72</sup> <http://www.fao.org/gfcm/data/dcrf/en/>

	<ul style="list-style-type: none"> <li>• Setting standards for sustainable aquaculture;</li> <li>• Analysing how to address pollution caused by fisheries;</li> </ul>
<p><b>Objective 2 International Waters</b></p> <p><u>Ecosystem Approach implementation relevant:</u> Improve management in areas beyond national jurisdiction (to foster information sharing on sustainable practices and inform decision making by businesses and regional orgs, such as RFMOs and RSCs, with priority areas of addressing fisheries/IUU + facilitate cooperative frameworks between ABNJs and LMEs and “collaboration among LMEs, RSCs and RFMOs on area-based management in national waters and ABNJ”)</p>	<p>Possible actions:</p> <ul style="list-style-type: none"> <li>• Development of both legal and ecosystem based analysis of Mediterranean state of ABNJ, with analysis possible cooperation frameworks between ABNJ, LMEs and respective area based measures of GFCM and UNEP/MAP;</li> <li>• Establishment of a regional collaboration mechanism, between UNEP/MAP, GFCM, LMEs (and IMO?) on area based management in national waters (and ABNJ)?;</li> <li>• Development of regional policies to end IUU and overfishing, including in areas beyond national jurisdiction;</li> <li>• Development of regional framework on a Roadmap to phase out harmful fishing subsidies;</li> <li>• Specific regional action/policy development to reduce overexploitation of fish stocks, IUU (including through implementation of international agreements).</li> </ul>
<p><b>Program 1: Industrial Chemicals, Chemicals and Waste</b></p>	<p>Possible actions:</p> <ul style="list-style-type: none"> <li>• Further elimination/restriction/control of key chemicals listed by regional/international Conventions, with set targets/country/region;</li> <li>• Addressing chemicals/waste at the end of their life/which are emitted from or in processes and products/that are used in materials that are used for cities construction;</li> <li>• Managing waste, or waste containing key chemicals;</li> <li>• Special investments in circular economy</li> </ul>
<p><b>Program 2: Agriculture Chemicals, Chemicals and Waste</b></p>	<p>Possible actions:</p> <ul style="list-style-type: none"> <li>• Addressing agricultural chemicals listed as POPs or contain mercury or its compounds;</li> <li>• Targeting reduction of highly/severely hazardous pesticides that enter the global food supply chain;</li> <li>• Address usage of DDT</li> </ul>
<p><b>Program 4: Enabling Activities, Chemicals and Waste</b></p>	<p>Interested countries to take part in Integrated National Planning for MEAs and SDGs (including key relevant international MEAs, but also regional ones, i.e. Barcelona Convention)</p>
<p><b>Ecosystem Approach implementation related most relevant Impact Program:</b></p> <p><b>Sustainable Cities</b></p> <p>Strengthening global knowledge platform to advance urban sustainability planning and investments (GPSC) and Advancing innovative models for integrated urban planning and investments at city level and Evidence based Spatial Planning-national, regional, local and Cascade financing solutions for urban sustainability</p>	<p>Possible action:</p> <ul style="list-style-type: none"> <li>• Strengthening Integrated Coastal Zone Management (ICZM) Protocol implementation and linking implementation of Ecosystem Approach, ICZM Protocol, Marine Spatial Planning and Urban Planning together, to address all land-sea interaction aspects in planning in a sustainable manner, in line with the ecosystem approach principles;</li> <li>• Supporting evidence creation (including on implementation of coastal and hydrographic IMAP indicators) for spatial planning for cities;</li> <li>• Coordinating Mediterranean input, in line with MSSD implementation, building on expert knowledge of MCSD members, into the GPSC (populate GPSC web platform, list best practices of new tools and knowledge);</li> <li>• Developing a Mediterranean proposal for prioritized cities for integrated urban planning and investments, following up on current Mediterranean award approach (Istanbul Award);</li> <li>• Supporting the identification and mobilizing sustainable investments;</li> <li>• Supporting Urban Planning and Investments in City Level (cities to be identified within MCSD);</li> </ul>

## 6. FUNDING OPPORTUNITIES FOR THE IMPLEMENTATION OF ECOSYSTEM APPROACH /IMAP IN THE MEDITERRANEAN PROVIDED BY KEY IFIS

### 6.1 Key funding opportunities provided by key IFIs: World Bank

#### The World Bank: An Introduction

241. The World Bank Group consists of five organizations:

- The International Bank for Reconstruction and Development (IBRD), which lends to governments of middle-income and creditworthy low-income countries.
- The International Development Association (IDA), which provides interest-free loans — called credits — and grants to governments of the poorest countries.
- The International Finance Corporation (IFC) is the largest global development institution focused exclusively on the private sector. IFC helps developing countries achieve sustainable growth by financing investment, mobilizing capital in international financial markets, and providing advisory services to businesses and governments.
- The Multilateral Investment Guarantee Agency (MIGA) was created in 1988 to promote foreign direct investment into developing countries to support economic growth, reduce poverty, and improve people's lives. MIGA fulfills this mandate by offering political risk insurance (guarantees) to investors and lenders.
- The International Centre for Settlement of Investment Disputes (ICSID) provides international facilities for conciliation and arbitration of investment disputes.

242. The World Bank Group has set two goals for the world to achieve by 2030<sup>73</sup>:

- End extreme poverty by decreasing the percentage of people living on less than \$1.90 a day to no more than 3%
- Promote shared prosperity by fostering the income growth of the bottom 40% for every country

Highlighting, that the path to development and poverty reduction must be sustainable.

243. Together, **IBRD and IDA make up the World Bank**. As such, the World Bank is a vital source of financial and technical assistance to developing countries around the world.

244. The World Bank through IDA and IBRD provides low-interest loans, zero to low-interest credits, and grants to developing countries. These support a wide array of investments in areas including environmental and natural resource management. Some of the World Bank projects are co-financed with governments, other multilateral institutions, commercial banks, export credit agencies, and private sector investors.

245. The World Bank plays a key role also in environmental protection, both through its **key role in GEF** (the World Bank Group plays three major roles in the GEF: as the Trustee of the GEF and related trust funds; as one of the three original Implementing Agencies of GEF-funded projects; and providing administrative services as the host of the functionally independent GEF Secretariat) and as an International Financial Institution (IFI).

246. As such, environment and natural resource management activities are being integrated into projects across the World Bank Group. Over the past decade (2004-13), the World Bank committed loans for US\$31.8 billion, from which IDA's contribution was US\$7.7 billion, to support investment in environment and natural resource management.

#### World Bank work on Marine and Coastal Environmental issues

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<sup>73</sup> World Bank Group Strategy, available at:

[https://openknowledge.worldbank.org/bitstream/handle/10986/16093/32813\\_ebook.pdf?sequence=5](https://openknowledge.worldbank.org/bitstream/handle/10986/16093/32813_ebook.pdf?sequence=5)

247. The World Bank Group also specifically helps countries promote strong governance of marine and coastal resources to improve the contribution to sustainable and inclusive growth by supporting sustainable fisheries and aquaculture, establishing coastal and marine protected areas, reducing pollution, integrating coastal resource management and developing knowledge and capacity around ocean health.

248. The World Bank's active 'blue growth' portfolio is worth US\$6.4 billion. The Bank provides some \$1 billion in financing for sustainable fisheries and aquaculture, and for efforts to conserve and enhance coastal and ocean habitats. The Bank's engagement in fisheries and aquaculture is also supported by the PROFISH<sup>74</sup> program, which aims to improve the environmental, social, and economic sustainability of world's fisheries and aquaculture. The Bank also provides some \$5.4 billion for coastal infrastructure such as waste treatment, watershed management and other activities that help reduce coastal pollution.

249. Active projects include support for Pacific island region, West Africa and South West Indian Ocean fisheries management, a partnership to build governance for migratory fish stocks in areas beyond and between national jurisdiction, and a regional technical assistance program to combat coastal erosion in West Africa.

250. The Bank also contributes to knowledge around oceans and fisheries with publications such as Fish to 2030<sup>75</sup>: Prospects for Fisheries and Aquaculture; The Sunken Billions: The Economic Justification for Fisheries Reform<sup>76</sup> and more. In 2014, the World Bank released the Trade in Fishing Services Report, which discusses best practices for foreign fishing arrangements that benefit developing nations.

251. The Bank convenes partners and stakeholders to mobilize ocean investment, advocate for positive reforms and ensure that healthy oceans remain on the global development agenda. It works through partnerships including the PROFISH program, the Alliance for Responsible Fisheries, the Strategic Partnership for Fisheries in Africa and the Ocean Partnerships for Sustainable Fisheries and Biodiversity Conservation.

## CMI

252. As an arm of the World Bank Group in the Mediterranean, the Center for Mediterranean Integration (CMI), with a core team of World Bank staff<sup>77</sup>, is a multi-partner platform where development agencies, Governments, local authorities and civil society from around the Mediterranean convene in order to exchange knowledge, discuss public policies, and identify the solutions needed to address key challenges facing the Mediterranean region.

The CMI aims to address the following strategic challenges:

- Fragility and conflict;
- Violence;
- Unemployment and exclusion;
- Vulnerability to climate change.

**253. Ecosystem Approach /IMAP specific World Bank financing as such, may be available as a co-financing option for Mediterranean countries to implement Ecosystem Approach /IMAP, noting the specific financing mechanisms described above and that in general, World Bank practice is to finance larger scale, measures oriented projects. IMAP/ Ecosystem Approach implementation could be thus combined, integrated into already planned projects related to marine/water environmental protection.**

<sup>74</sup> <http://www.worldbank.org/en/topic/environment/brief/global-program-on-fisheries-profish>

<sup>75</sup> <http://documents.worldbank.org/curated/en/458631468152376668/Fish-to-2030-prospects-for-fisheries-and-aquaculture>

<sup>76</sup> <http://documents.worldbank.org/curated/en/546481468326710227/The-sunken-billions-the-economic-justification-for-fisheries-reform>

<sup>77</sup> CMI members are governments (Egypt, Greece, Jordan, Lebanon, Morocco, Palestinian Authority, Tunisia, France, Italy, and the European External Action Service EEAS as an observer), local authorities of France and EIB, next to the World Bank Group. For more see: <http://www.cmimarseille.org/center>



## 6.2 Key funding opportunities provided by key IFIs: EIB

### EIB Introduction

254. The European Investment Bank (EIB) is the European Union's bank. It is the only bank owned by and representing the interests of the European Union Member States. As such, it works closely with other EU institutions to implement EU policy.

As the largest multilateral borrower and lender by volume, the EIB provides finance and expertise for sound and sustainable investment projects which contribute to furthering EU policy objectives. More than 90% of its activity is focused on Europe but it also supports the EU's external and development policies

### FEMIP

255. The Facility for Euro-Mediterranean Investment and Partnership (FEMIP) is the EIB's instrument dedicated to the Euro-Mediterranean area, to stimulate the private sector in the Mediterranean partner countries.

A prominent objective of EIB-FEMIP is cooperation with the European institutions and international financial institutions, with a view to possible co-financing, capacity building and participation in regional initiatives.

In 2015, the EIB focused on supporting the economic and social development of the Mediterranean partner countries, which supports growth and job creation including environmental protection.

In relation to environment, the FEMIP mainly supports water and sanitation, solid waste disposal and treatment, pollution abatement, irrigation.

Since 2002, over EUR 19 billion has been invested through FEMIP and as such, FEMIP has become a key player in the partnership between the EU and the Mediterranean partner countries, part of a process encouraging economic renewal and openness. EIB cooperates with several national and multilateral actors and actively supports the goals of the Union for the Mediterranean<sup>78</sup>.

EIB mainly operates in **Algeria, Egypt, Gaza/West Bank, Israel, Jordan, Lebanon, Libya\*, Morocco, Syria\*** and **Tunisia**.

The EIB is also a key partner for climate action in the Mediterranean region (recently awarded grants of a EUR 19 million for climate action in Tunisia).

### EIB Partnerships

256. The cooperation between the EIB and the European Commission in the Mediterranean region is structured along the lines of the European Neighborhood Policy. In this context, the EIB cooperates with the European Commission through active participation in the **Neighborhood Investment Facility (ENI)**, which pools together grant resources from the European Commission and the EU Member States and uses them to leverage loans from European Finance Institutions as well as contributions from the partner countries.

The EIB enjoys a close relation with the French Agence Française de Développement (AFD) and German Kreditanstalt für Wiederaufbau (KfW) in co-financing operations as well as pooling resources for project appraisal and monitoring, information-sharing and consultation under the Mutual Reliance Initiative.

EIB has also a formal agreement to work with twelve European Development Finance Institutions on co-financing private sector projects, enhancing institution-wide coordination and joint technical work. The EIB signed a Memorandum of Understanding with the African Development Bank and the European Commission in 2005 to enhance cooperation particularly regarding support for the private sector, regional cooperation, the exchange of information on poverty reduction, macroeconomic reform and debt relief in the African continent, including North Africa.

Furthermore, the EIB also signed a memorandum of understanding with the World Bank and the European Commission aimed at enhancing donor coordination in the Middle East and North Africa / Southern Mediterranean region.

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<sup>78</sup> The EIB will start operating in Libya after it signs a Framework Agreement with the country – currently under preparation. Following EU sanctions in November 2011, the EIB has suspended all loan disbursements and technical advisory contracts for projects in Syria.

In addition, the EIB and the **Islamic Development Bank (IDB)** group signed a Memorandum of Understanding in 2012 with a view to strengthening our relationship and creating synergies between the two institutions.

Cooperation between the EIB and the Union for the Mediterranean (**UfM**) continued to grow in 2013, building on the Memorandum of Understanding signed with UfM Secretariat in January 2011.

Constructed as a multilateral platform, the Centre for Mediterranean Integration (CMI) aims at transforming research into sound public policy recommendations. The EIB has taken the lead in three CMI programmes: Sustainable Urban Development in the Mediterranean, Innovation and Public Private Partnerships.

International Finance Corporation (IFC), a member of the World Bank Group, recently joined a partnership comprising the EIB, the European Commission and the World Bank, to help create a favorable private sector environment in the Middle East and North Africa. The four multilateral institutions have agreed to share knowledge and training opportunities in innovation and new technologies, as well as urban development to promote private sector development.

### **EIB Funding Process**

257. Applications for the financing of small-scale projects should be sent directly to the financial institutions or commercial banks receiving EIB intermediated loans. A list of partner institutions in Mediterranean countries and other information on lending can be found here:

<http://www.eib.org/about/partners/>

- Investment is more than EUR 20-25m:

Direct loans and risk capital financing can be requested directly from the EIB. As a general rule, a comprehensive feasibility study should be submitted. Where such a study has not been prepared, the promoter may use its own discretion in compiling as detailed a dossier as possible to permit the technical, environmental, economic, financial and legal appraisal of the project. There is no standard documentation and the Bank does not require its borrowers to complete set forms or questionnaires;

- Technical assistance :

The beneficiaries of technical assistance are EIB borrowers include the governments of partner countries, the public utilities in the fields of infrastructure, water, energy, etc., the operators in the financial sector and private promoters.

Note: Technical assistance operations are subject to a tendering procedure which is open to all natural and legal persons. If the financing is provided exclusively by the European Commission, participation is restricted to natural and legal persons in the Member States of the European Union and partner countries from the region covered by the financial regulation<sup>79</sup>.

### **FTF as the think tank of FEMIP**

258. FTF is an "operational think tank" exploring new areas in which the Facility for Euro-Mediterranean Investment and Partnership (FEMIP) can operate. Established in 2004, it is a multi-donor, multi-purpose and multi-sector fund whose main objective is to support private sector development in the Mediterranean Partner Countries. It focuses on four priority sectors for 2014-2020:

1. Finance and MSMEs;
2. Infrastructure;
3. **Environment;**
4. Human Capital and Research Development and Innovation,  
with an enhanced support provided through dedicated Impact Investment Envelope and **CAMENA Climate Action Envelope**. It also supports the FEMIP Internship Programme and the FEMIP Secondment Programme.

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<sup>79</sup> [http://www.eib.org/attachments/thematic/procurement\\_en.pdf](http://www.eib.org/attachments/thematic/procurement_en.pdf)

FTF operations are available in three ways:

- Advisory services;
- Acquiring private equity holdings to support the private sector
- “Democratic transformation support” for SMEs and initiatives that act as an economic catalyst in the region

259. As of end 2014, the FTF has approved 60 operations (net of cancellations) for a total value of EUR 37.2m: 79% of the approved amounts are related to technical advisory operations while 21% are linked to risk capital operations<sup>80</sup>.

### **CAMENA Climate action envelope**

260. As endorsed in the FTF Strategy 2014-2020, CAMENA (Climate Action in the Middle East and North Africa), a dedicated "Climate Action Envelope" within the FTF, was created to support improved energy security, emission reductions and improved resilience to climate change through the identification and development of new climate action projects.

The initial funding for CAMENA is provided by the United Kingdom's Department for International Development (DFID) according to their decision made in late 2014 to make a significant contribution (GBP 15 million) to the FEMIP Trust Fund over a 4-year period (2015-2018).

**261. EIB financing as such, may be an interesting co-financing option for Mediterranean countries to implement Ecosystem Approach /IMAP, noting the specific financing mechanisms described above.**

## **6.3 Key funding opportunities provided by key IFIs: EBRD**

### **Background**

262. The European Bank for Reconstruction and Development (EBRD) is a multilateral developmental investment bank which supports countries to develop market-oriented economies and promote private entrepreneurial initiatives. The EBRD counts 65 countries and two EU institutions as its shareholders. The following Barcelona Convention Contracting Parties are eligible to receive support from the EBRD: Albania, Bosnia-Herzegovina, Croatia, Cyprus, Egypt, Greece, Lebanon, Montenegro, Morocco, Slovenia, Tunisia and Turkey.

263. To be eligible for EBRD funding, a project must be located in an EBRD country of operations, have strong commercial prospects, involve significant equity contributions in-cash or in-kind from the project sponsor, benefit the local economy and help develop the private sector and satisfy banking and environmental standards. The EBRD offers loan and equity finance, guarantees, leasing facilities, trade finance, and technical assistance through support programs. Direct investments range from €5 million to over €200 million. Smaller projects may be financed either directly by the EBRD or through EBRD's local partner banks.

### **Sustainable investment with the EBRD**

264. Preserving and improving the environment through investment is at the heart of the EBRD's mandate. EBRD's sustainable investments mitigate and/or build resilience to the effects of climate change and other forms of environmental degradation. Moving beyond its initial focus on energy efficiency and renewable energy development, the EBRD has recently scaled up its efforts in enhancing water security and materials efficiency. Sustainable investments have historically represented an average of 24 per cent of EBRD's annual business volume and in line with its Green Economy Transition (GET) strategy this share is targeted to grow to 40 per cent by 2020.

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<sup>80</sup> [http://www.eib.org/attachments/country/list\\_of\\_ftf\\_operations\\_en.pdf](http://www.eib.org/attachments/country/list_of_ftf_operations_en.pdf)

The GET approach supports a wide range of projects that promote the sustainable use of resources and the protection of natural assets, including investments whose primary purpose is the prevention of pollution or remedying of damage to ecosystems. EBRD GET investments may be delivered through both public and private delivery channels, and build on a tried and tested business model of combining investments with technical assistance and policy dialogue to maximise the impact of EBRD finance. Technical assistance can include market analysis and resource audits as well as training and awareness-raising. As part of its policy dialogue activities, the EBRD works with governments to support the development of strong institutional and regulatory frameworks as a prerequisite for sustainable investments.

### **EBRD partnerships in the region**

265. Donor funds play a crucial role in enhancing the EBRD's impact by enabling the EBRD to address barriers to investment. The EBRD is an implementing entity of all multilateral global climate and environment funds and manages donor funding from European Union funding instruments (including the Neighbourhood Investment Facility) and bilateral donors (including contributors to the EBRD Southern and Eastern Mediterranean Multi-Donor Account). In the case of environmental investments, donor funds enable EBRD clients to overcome a range of market barriers such as high upfront costs of advanced technologies, underdeveloped supply chains as well as information and capacity constraints and engage in policy dialogue to enhance regulatory frameworks. Since 2006, donors and shareholders have contributed over €1.4 billion to support the implementation of the EBRD's Sustainable Energy, Sustainable Resource and Green Economy Transition initiative, which over the same period have delivered €22 billion of investment in renewable energy, energy efficiency, water security and other environmental benefits.

266. EBRD works closely with other national, regional and international organisations to coordinate and enhance its impact through coordinated capacity building, policy dialogue and investment activities. EBRD's partners include the European Investment Bank, the World Bank, the African Development Bank, bilateral development institutions such as Agence Française de Développement (AFD) and Kreditanstalt für Wiederausbau (KfW), and regional organisations such as UN Environment, UN Environment/Mediterranean Action Plan, United Nations Development Programme and the Union for the Mediterranean.

### **Relevant EBRD initiatives to UN Environment MAP EcAP/IMAP**

267. EBRD leads or participates in a number of regional initiatives and investment programs focusing on water security and the prevention of water pollution. The GEF-supported UN Environment-EBRD Mediterranean Sea Programme accelerates the implementation of agreed upon priority actions to reduce the major transboundary environmental stresses affecting the Mediterranean Sea and its coastal areas while strengthening climate resilience and water security, and improving the health and livelihoods of coastal populations. The MedProgramme will work with the agriculture, manufacturing and water sectors to enhance the capacity of private sector entities and national and regional authorities to meet regional pollution reduction goals under the Barcelona Convention.

268. EBRD is also a founding member of the Mediterranean Sustainable Consumption and Production (SCP)/ Resource Efficiency models initiative, a four-year regional initiative to actively support the adoption of sustainable consumption and production patterns in the Mediterranean region – including as they relate to water use - through facilitating financing access for small and medium sized enterprises adopting SCP models in Egypt, Jordan, Morocco and Tunisia.

269. The improvement of water and wastewater systems is a key part of the EBRD's mandate, with a strong track record of investment in this sector across the region. This forms part of the EBRD's strategy to promote greater efficiency and higher quality in the provision of local authority services and improve the management of water in water-scarce regions of Northern Africa, the Middle East and Central Asia to enhance the resilience of communities to climate change. EBRD investments not only increase the number of people with access to high quality, affordable water, reduce losses from inefficient water supply infrastructure and decrease the run-off of untreated waste water, but also build the enforcement capacity of local regulatory authorities to improve the enabling environment for sustainable water infrastructure investment.

270. Through its Private Sector for Food Security Initiative, the EBRD also collaborates with the agriculture sector to improve resource efficiency and cut waste through investment and innovation to produce more food with fewer resources and support sustainable agribusiness value chains. Investments through this initiative promote the deployment of efficient water use technologies and practices and the reduction of water pollution from agricultural activities. The EBRD is one of the founding members of the MedAgri, a network based in the southern and Eastern Mediterranean region to promote the exchange of best agricultural practices amongst private banks, international financial institutions, governments and private sector entities.

271. EBRD is active in the maritime shipping industry, having financed the acquisition of bulk carriers, roll on and roll off vessels, port infrastructure and other marine logistics infrastructure in Russia, Turkey, Ukraine and more recently Morocco. Under the GEF-funded Green Logistics Programme, the EBRD is accelerating investments in green logistics to improve energy efficiency, introduce advanced sustainable technologies and increase access to finance for green logistics in the Black Sea and Mediterranean regions. Through these tools, the EBRD helps clients to go beyond local regulatory requirements and clients to improve their environmental performance in the absence of regulatory incentives.

272. EBRD was a partner of the GEF-UNDP-IMO GloBallast Partnerships Programme to improve the environmental and socio-economic sustainability of shipping and reduce its negative impact on marine ecosystems. This IMO-EBRD Marine Biosafety Initiative builds the technical capacity of investors, shipping operators and other stakeholders to identify, appraise and invest in infrastructure and practices to minimize the transfer of harmful organisms and pathogens by ships' ballast water and sediments.

273. Many of these initiatives and programmes present opportunities for government and private sector clients and other stakeholders to enhance the implementation of the EcAP/IMAP. While technical assistance and policy dialogue activities may be conducted as stand-alone activities, most such support is combined with loan investments. With donor support, EBRD actively explores opportunities for clients to introduce best practice technologies and practices in line with regional and international requirements into their investment plans. EBRD also undertakes environmental and social due diligence on all of its investments and where necessary requires clients to develop Environmental and Social Action Plans to ensure compliance with performance standards and relevant regulatory requirements.

#### **6.4 Key funding opportunities provided by key IFIs: ISDB**

274. The Islamic Development Bank Group (IDB Group) is a South-South multilateral development finance institution established in pursuance of the Declaration of Intent issued by the Conference of Finance Ministers of Muslim Countries held in Jeddah in Dhul Q'adah 1393H, corresponding to December 1973.

275. The purpose of the Bank is to foster the economic development and social progress of member countries and Muslim communities individually and collectively in accordance with the principles of Shari'ah (Islamic Law).

As per the decision of the 38th Annual Meeting of the Board of Governors, the authorized capital of the IDB was raised to Islamic Dinar (ID) 100 billion and its subscribed capital to ID 50 billion.

276. The IDB Group comprises five entities (Figure 1), namely:

- (i) Islamic Development Bank (IDB);
- (ii) Islamic Research and Training Institute (IRTI);
- (iii) Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC);
- (iv) Islamic Corporation for the Development of the Private Sector (ICD);
- (v) International Islamic Trade Finance Corporation (ITFC).

277. IDB Group is engaged in a wide range of specialized and integrated activities such as:

- Project financing in the public and private sectors;
- Development assistance for poverty alleviation;
- Technical assistance for capacity-building;
- Economic and trade cooperation among member countries;
- Trade financing;
- SME financing;
- Resource mobilization;
- Direct equity investment in Islamic financial institutions;
- Insurance and reinsurance, coverage for investment and export credit;
- Research and training programs in Islamic economics and banking;
- Awqaf investment and financing;
- Special assistance and scholarships for member countries and Muslim communities in non-member countries;
- Emergency relief; and
- Advisory services for public and private entities in member countries.

278. While, in line with the above, the main focus of the work and support of IDB is not environmental protection related, the IDB is set to increase its financial support to Sustainable Development Goals realization to more than US\$ 150 billion over the coming years. The bank is already a major player in the clean energy sector, with investments of around US\$ 1 billion between 2010 and 2012.

279. On 20 January 2016, UN Environment and IDB agreed on wide-ranging cooperation on environmental conservation in support of sustainable development and the fight against climate change. UN Environment Deputy Executive Director, Mr. Ibrahim Thiaw and the IDB President, Dr. Ahmad Mohammad Ali Al Madani signed the agreement in Jeddah, where the bank is headquartered.

280. The Memorandum of Understanding, set to run until June 2018 initially, covers objectives common to the two organizations in the areas of climate change, agriculture and food security, eco-innovation and green economy, and Islamic finance. Capacity building in member countries in all these thematic areas will be supported. The overarching goal is to facilitate the implementation of both the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change.

281. The IDB is set to increase its financial support to Sustainable Development Goals realization to more than US\$ 150 billion over the coming years. The bank is already a major player in the clean energy sector, with investments of around US\$ 1 billion between 2010 and 2012.

282. The agreement also aims to encourage broader involvement of the international financial sector in sustainable development, which will be crucial to finance the investments required to promote a green future.

## **7. SUPPORT TO FUND RAISING OPPORTUNITIES FOR THE IMPLEMENTATION OF ECOSYSTEM APPROACH /IMAP IN THE MEDITERRANEAN PROVIDED BY OTHER SOURCES**

### **7.1 Cooperation opportunities for ecosystem approach/imap implementation under the umbrella of UfM**

283. The UfM is the intergovernmental Euro-Mediterranean platform where political decisions are implemented and where concrete regional and subregional projects are developed with the support of an extensive network of partners, including governments, international organisations, financial institutions, civil society organisations, universities, foundations and the private sector.

284. The Secretariat of the UfM proactively promotes regional, sub-regional, transnational projects (or national projects with a strong replication potential in the framework of regional strategies or initiatives) in the sectors falling within its mandate, including environmental protection.

285. While size and scope of the projects may vary – including both “soft” as well as infrastructure projects- they all share a strong political and economic relevance for regional cooperation and integration in the Mediterranean region.

286. Projects can be submitted by national, regional and local authorities and public institutions, the private sector, international institutions, civil society organizations and consortia of such organisations. The UfM is not a donor per se but assists UfM labelled project with the related fund-raising activities.

287. Furthermore, the UfM Secretariat will only consider projects which<sup>81</sup>:

- Fall within a UfM priority area identified by the Heads of State and Government, EuroMediterranean ministers or covered by the UfM Secretariat’s Work Programme
- Are regional, sub-regional (involving at least three countries), transnational or national (implemented in one country) in the framework of a regional initiative.
- Demonstrate meaningful impact for the population of the region and contribute to progress in the region

288. Environment related project proposals, in addition must:

- Demonstrate added value- and complementarity to existing efforts and initiatives and be coherent with local, national, and/or regional strategies.
- Include effective community engagement and stakeholders’ consultations and adequate participatory processes.
- Ensure partnership and synergies with relevant organisations and institutions working in related and associated programs, project or initiatives.
- Demonstrate full commitment from participating countries (in this respect, a letter of endorsement of the project from the lead administration – sector ministry(ies), regional council, mayor - of each participating country is to be submitted by the project promoter).

289. Project proposals must:

- Be in line with the self-financing requirements of the UfM: In principle, a significant share of the budget will need to be covered (or secured from donor) by the promoter. As an indication, the share could be 10% for projects including an infrastructure component representing more than 50% of the budget and 20% for all other projects. If the promoter is not in a position to fulfil this requirement, a detailed justification should be submitted in the project template.

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<sup>81</sup> For full list of project criteria, please see: <http://ufmsecretariat.org/wp-content/uploads/2014/04/Annex-2.-UfM-General-Project-criteria.pdf>

- Include an appropriate project budget (total cost and breakdown of expenses) and an initial funding plan.

290. The length of the “labelling” process is minimum 6-8 months, any time can be submitted, with preference for concrete projects, with all projects to be approved not only by Environment Ministries, but also Foreign Ministries and by all UfM countries.

291. UN Environment/MAP and UfM has a strategic partnership and a Memorandum of Understanding in place. Furthermore, the 2015 UfM Ministerial Meeting on Environment and Climate Change specifically addressed the need to “undertake to take firm steps to ensure the full implementation and enforcement of policies supporting the H2020 Initiative goals, in line with the Ecosystem Approach (Ecosystem Approach) and the priorities included in the NAPs, and, when required, with the support of the capacity building component” and “undertake to address data needs by applying the principles of Shared Environment Information Systems (SEIS) in line with the commitments under the Ecosystem Approach Decisions of the Barcelona Convention, also contributing to its regional integrated monitoring programme”.

292. Ministers here also underlined the potential to fully exploit existing initiatives and mechanisms, such as “UfM to continue the labelling of projects in line with their recommendations” (including the one above, in relation to Ecosystem Approach /IMAP monitoring) and to recommend relevant IFIs and donors, including the GEF, to prioritise both existing and planned UfM-labelled projects for funding.

293. As such, the UfM process could be important for Ecosystem Approach /IMAP implementation for interested Contracting Parties of the Barcelona Convention, who aim to establish UfM labelled projects in support of their Ecosystem Approach/IMAP implementation needs, in line with criteria above.

For more information please visit: <http://ufmsecretariat.org/>

## **7.2 SDGs Fund: In support of the 2030 Agenda**

294. The Sustainable Development Goals Fund (SDG Fund) is an international multi-donor and multi-agency development mechanism created in 2014 by the United Nations to support sustainable development activities through integrated and multidimensional joint programmes.

295. Its main objective is to bring together UN agencies, national governments, academia, civil society and business to address the challenges of poverty, promote the 2030 Agenda for Sustainable Development and achieve SDGs. Convening public-private partnerships for SDGs is in the SDG Fund’s DNA.

296. As an inter-agency mechanism, the SDG Fund works across the UN system, currently with 14 agencies, implementing joint programmes around the globe. The government of Spain made the initial contribution to establish the fund, and more than 20 donors have donated since.

297. The SDG Fund is supporting joint programmes in 22 countries with an approximately US \$70 million budget. National and international partners, including the private sector, provide approximately 58% of the resources through matching funds. Each joint programme contributes to the achievement of several SDGs.

298. The SDG Fund is the first UN development cooperation mechanism specifically established to implement the 2030 Agenda.

For more information please refer to <http://www.sdgfund.org/>



### **7.3 Importance of National Funds, Green Investment Support Mechanisms, Sustainable Finance and bilateral funding for Ecosystem Approach/IMAP implementation**

#### **National Environmental Funds**

299. National Environmental Funds or Environmental Trust Funds are among the most popular and widely recognized tools to mobilize resources for biodiversity and ecosystem services, protection across the World and as such are important additional resource for environmental protection next to the dedicated governmental budgetary support, specially in developing countries.

300. National Environmental Funds are promoted as a force of co-financing and execution for attracting internationally-financed projects on biodiversity and ecosystem services. The most successful conservation funds in raising additional capital are those which have managed to start a "virtuous cycle" by attracting initial contributions from at least one or two key international donors, and demonstrating a high level of accountability and results during their start-up phase (i.e., their first one to five years of grantmaking)<sup>82</sup>.

301. Mostly, they are independent grant-making institutions that mobilize, blend and manage financial resources for environmental purposes, such as biodiversity conservation, protection of wildlife, forests, climate adaptation and mitigation. They can be a vehicle to mobilize additional resources from donors, national governments, the private sector as well as private citizens by providing assurance about the effective allocation of resources. Moreover, they can facilitate the alignment of strategies among stakeholders and reduce transaction costs for donors, government entities and implementing agencies.

302. Whatever legal form is chosen for them, to be credible National Environmental Funds should be private entities that are independent of government, such as a trust, with a clear governance structure. Similar to other private funds, their financial structure and scope can differ widely, depending on specific country needs, objectives. Conservation funds and parks funds primarily finances activities related to biodiversity and ecosystem services, protection, with specific geographic scope. Grants funds channel resources to target groups (typically non-governmental organizations and community-based organizations) for a broad range of conservation and sustainable development projects. Brown funds are financed mostly by pollution charges or fines, often allocate specifically their funds to different environmental (and climate change driven) concerns, aims. Other national sectoral funds may also contain special programmes on biodiversity and ecosystem services, as well as monitoring these. Endowment funds are invested with capital in perpetuity, and only use resulting investment income to finance grants and activities. Revolving funds receive income from taxes, fees, fines, payments for ecosystem services, etc., and are normally earmarked for several specified purposes.

303. As such, they do not carry out interventions (i.e. environmental projects) directly, but they manage a grant portfolio that is allocated to eligible implementing agencies such as NGOs, community-based organizations, government agencies, and in some cases private sector entities. Grants are allocated via calls for proposals or financing windows. Each call clarifies eligibility criteria (e.g. NGOs), thematic priorities (e.g. climate resilience), and deadlines. The governing body makes decisions on fund allocations or delegates this to a technical committee, an administrative secretariat or agent. The trustee then distributes the funds to the implementing agencies that have been awarded funds. The implementing agencies execute the projects as laid out in the grant agreement that is signed with the trustee and report on results. In addition to funding for projects, National Environmental Funds can also provide technical assistance and grants to strengthen the institutional capacity of the implementing agencies. They can also help to strengthen capacities for national ownership and management of environmental finance.

#### Some best practices/successful National Environmental Funds examples include:

304. In its 20 years of operations, Fumbio (Brazil) raised capital of over US\$500 million. The Mexican Fund for the Conservation of Nature holds a US\$120 million endowment and manages a number of parallel sinking funds. The Sangha Tri-national Foundation holds an endowment of approximately US\$28 million, and US\$8 million in sinking funds. The Bhutan Trust Fund for Environmental Conservation received an initial endowment of just over US\$21 million, which has since been expanded to US\$44 million. The Thai

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<sup>82</sup> <https://www.cbd.int/financial/0006.shtml>

Energy Conservation Promotion Fund, a revolving fund financed through levies on petroleum, has an annual income of approximately US\$225 million. The Madagascar Biodiversity Fund is a private Malagasy foundation with a capitalization of over US\$50 million that amid of the country's security and political situation remained operational for over a decade<sup>83</sup>.

305. Next to Latin America and Africa, they have been also key to further innovative investments in environmental protection in Central and Eastern Europe, combined with Green Investment Schemes, with the Polish system recognised as a model and recommended by many international institutions (OECD, World Bank, European Commission)<sup>84</sup>.

306. National Environmental Funds, as such have still great potential to grow in the Mediterranean countries, especially in the South, noting that they can be very useful instruments to mobilize further funding to environmental protection, following the priorities of the government and as such, also ecosystem approach/IMAP implementation.

### **Green Investment Support Mechanisms**

307. Governments can support investment in environmental protection (and as such marine and coastal protection, including the implementation of the ecosystem approach), through various Green Investment Support Mechanisms.

308. Mobilizing private finance at scale requires that the risks of green investments be reduced to about the same levels as those faced by alternative, conventional investments

309. Policy-related risks can be mitigated through regulatory risk insurance or guarantees. Loan guarantees and partial risk/credit guarantees are commonly provided by development finance institutions and have also proven useful in 'on-lending' arrangements where governments underwrite loans provided through intermediaries, such as commercial banks or state utility companies. In cases of default, the government agency or development finance institution can absorb some or all of the risk. This is particularly beneficial for new markets where private lenders are not initially comfortable or familiar with the technology in question.

310. Tunisia's Prosol Programme is an example of debt default risk being removed from suppliers of solar water heaters. Commercial banks provided loans to customers through accredited suppliers, which were repaid through customers' electricity bills. Customers' services were withheld when they did not pay. The state utility acted as debt collector, enforcer and loan guarantor, shifting the credit risks from lenders to borrowers. This has improved awareness and expertise of commercial banks for renewable energy lending<sup>85</sup>.

311. Creating the enabling context for environmental investments as such, is key also for fund mobilization for the implementation of the ecosystem approach in the Mediterranean countries, especially at the South. At the same time, it is important to note, that data to be collected and assessed on the state of the marine and coastal environment of the Mediterranean can be important source, basis for further green investment in the region and as such, can also seen as a specific green investment enabling mechanism.

### **Sustainable Finance/Green Financial Products and Services**

#### Sustainable Finance: Overview and best practices of Mediterranean Countries

312. The Inquiry into the Design of a Sustainable Financial System has been initiated by UN Environment to advance policy options to improve the financial system's effectiveness in mobilizing capital towards a green and inclusive economy—in other words, sustainable financing. Established in January 2014, the Inquiry published its first global report, 'The Financial System We Need' in October

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<sup>83</sup> <http://www.undp.org/content/sdfinance/en/home/solutions/environmental-trust-funds.html>

<sup>84</sup> <http://nfosigw.gov.pl/en/priority-programmes/>

<sup>85</sup> <http://reports.weforum.org/green-investing-2013/reducing-the-risk-of-investing/>

2015, with the second edition launched in October 2016. The Inquiry has worked in around 20 countries and produced a wide array of briefings and reports on sustainable finance.

313. The Inquiry contributed to the support of sustainable finance, together with ownership of the financial sector and academia as well. Over the past decade, there have been increasing efforts by financial institutions, as well as steps taken by central banks, financial regulators and market standard setters, to align the financial system with long-term sustainable development.

314. The UN Environment-World Bank Group Initiative “Roadmap for a Sustainable Financial System”, building on this work, as well as on the global consensus created by the 2030 Agenda for Sustainable Development along with the agreed measures to combat climate change and adapt to its effects that are part of the Paris Agreement, proposes an integrated approach that can be used by all financial sector stakeholders to accelerate the transformation toward a sustainable financial system.<sup>86</sup>

315. As such, it proposes the following three key types of initiatives, best practices to enable a transition into a sustainable financial system enabling the implementation of SDGs and the Climate Change Framework:

- Market-based initiatives: Through the development of collective initiatives such as the Sustainable Banking Network (SBN) and the United Nations Environment Programme – Finance Initiative (UNEP FI), private and public finance institutions have worked to integrate environmental and social risks and opportunities into their business lines and approaches.
- National initiatives: The initial momentum for sustainable finance has been driven by country-level initiatives that, in many cases, arose from national planning processes to implement climate change policies or other long-term strategic development initiatives
- International initiatives: Cooperative efforts carried out by the G20, the G7, the UN, and the Financial Stability Board (FSB) have all addressed different aspects of sustainable and green finance while at the same time increasingly involving the private sector. This effort has been complemented by the multilateral development banks (MDBs) and other international financial institutions (IFIs) that are continuing to actively promote sustainable finance with initiatives ranging from the adoption of sustainable practices in their core financial activities to the launching of new products aimed at driving capital to sustainable and green applications

316. Progress, or according to some analyses “a quiet revolution” is on its way in the financial sector, enabling more and more targeted sustainable investments. By October 2017 nearly 300 policy and regulatory measures targeting sustainability were in place in over 60 countries, roughly up with 30 percent just in one year, since July 2016. Green bond issuance hit a new record of USD 155.5 billion in year 2017, with more growth expected annually.<sup>87</sup>

317. The Mediterranean and the implementation of the Ecosystem Approach could also further benefit from this greener and more sustainable financial system and new options of funding environmental regeneration, building on the existing achievements of this “quiet revolution” of the financial system.

318. Recently (in 2017) two Mediterranean countries have participated in the sustainable finance dialogue lead by UN Environment Inquiry, Italy and Morocco and Italy shown further leadership on sustainable finance, as Chair of the G7 in 2017, Italy has made green finance a theme of its work.<sup>88</sup>

#### Key recommendations of the Report of “Financing the future, Italian National Dialogue on Sustainable Finance

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<sup>86</sup> [http://unepinquiry.org/wp-content/uploads/2017/11/Roadmap\\_for\\_a\\_Sustainable\\_Financial\\_System\\_ES.pdf](http://unepinquiry.org/wp-content/uploads/2017/11/Roadmap_for_a_Sustainable_Financial_System_ES.pdf)

<sup>87</sup> <http://unepinquiry.org/publication/annual-overview-2017/>

<sup>88</sup> UN Environment Executive Director Erik Solheim welcomed Italy’s international leadership, observing that more and more countries are taking a systematic approach to financing sustainable development. A UN Environment press release notes that in 2016, the Group of 20 (G-20) recognized the need to “scale up green finance,” and that the issuance of green bonds in 2016 almost doubled from 2015 levels, reaching US\$81 billion worldwide.

319. The Report of “Financing the future, Italian National Dialogue on Sustainable Finance”<sup>89</sup>, developed based on inputs from the National Dialogue on Sustainable Finance members, edited by Italian Ministry of Environment, Land and Sea<sup>90</sup>, highlights some key recommendations to make the Italian Financial System more sustainable, including some as follows:

320. Putting in place supportive policy frameworks

1. **Strategy:** The government could embrace the agenda set at the recent G20 summit and set a comprehensive national agenda that will enhance the role of finance as a driver for sustainable development. One of the three pillars of the Green Act (currently under discussion) focuses on this exact point, which presents a unique opportunity for structuring a national sustainable finance strategy, within the framework of the national sustainable development strategy, that would be capable of mobilizing the capital needed to deliver the SDGs and the Paris Agreement’s objectives.

2. **Public Finance:** The CDP could systematize its sustainable development mandate into consistent policies and processes, and strengthen its accountability towards all stakeholders. Specific attention could be devoted to the financing of energy efficiency and sustainable infrastructure. Local Authorities – the Regions in particular – should strengthen the importance of sustainability in their plans and policies and orientate their investments accordingly.

3. **Fiscal Policy:** Tax expenditures could be reviewed to remove progressively – but with speed and certainty – environmentally harmful subsidies in the energy sector. Italy could also promote a debate in Europe on how best to give the right price signals to consumers, producers and the financial system, building on experience with economic instruments (e.g. carbon markets).

4. **Systemic Review:** Banca d’Italia and other market regulators could use their databases and their knowledge to evaluate the implications of climate change for Italy’s economy and financial system and suggest measures to encourage good practice by financial institutions.

5. **International Cooperation:** Italy could include green finance as part of its cooperation activities with developing countries (as has been done through the microfinance green schemes) and ensure that the funding profile of the export credit agencies is consistent with goals for decarbonization and resilience.

321. Stimulating financial innovation in priority areas

6. **Green Bonds:** A green bond development committee including public and private entities could be formed to identify and deliver the critical steps needed to develop the market, particularly the provision of access for small issuers and savings opportunities for retail investors.

7. **Insurance:** The government and insurance companies could explore a national scheme to cover risks from climate-related natural catastrophes, in particular for residential properties, that adopts both traditional and non-traditional reinsurance structures (CAT bonds, ILS, collateralized, etc.).

8. **Clean Tech:** The government, along with financial institutions, could leverage the role of Italy in the Mission Innovation initiative to scale up private capital for breakthrough sustainable technologies.

322. Improving market infrastructure in terms of disclosure and governance

9. **Stock Market Disclosure:** Borsa Italiana – in addition to its new reporting guidelines to raise the level of disclosure on its markets, including flows of green revenues – could take further actions to increase the level of transparency and facilitate the engagement of responsible investors. The introduction of a voluntary certification scheme on the sustainability of funds (e.g. the LuxFlag model) could also help transparency and accountability on the issuers’ side.

10. **Corporate Reporting:** The EU’s non-financial reporting directive could provide a first step toward improving transparency, and prepare the way for responding to the recommendations of the FSB Task Force. A higher number of companies could be encouraged to disclose their ESG data by investors

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<sup>89</sup>[https://wedocs.unep.org/bitstream/handle/20.500.11822/16802/Financing\\_the\\_Future\\_Summary\\_EN.pdf?sequence=1&isAllowed=y,%20Italian](https://wedocs.unep.org/bitstream/handle/20.500.11822/16802/Financing_the_Future_Summary_EN.pdf?sequence=1&isAllowed=y,%20Italian) | [https://wedocs.unep.org/bitstream/handle/20.500.11822/16802/Financing\\_the\\_Future\\_Summary\\_IT.pdf?sequence=2&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/16802/Financing_the_Future_Summary_IT.pdf?sequence=2&isAllowed=y)

<sup>90</sup> The Report notes that proposals do not necessarily imply agreement by all members or institutional endorsement by any participating company, institution or organization involved in the analysis or proposals.

and others, with different expectations for SMEs, in line with traditional comparable transparent economic, capital and financial data.

11. Investor Disclosure: All institutional investors could publicly report on how ESG factors impact their portfolios and how they are supporting the climate transition. They could also disclose the extent to which their investment and voting policies cover ESG issues and identify the results that arise from their implementation.

12. Corporate Governance: The Italian Corporate Governance Committee could further strengthen the focus on the importance of sustainability issues – such as environmental and social issues – for long-term value creation, calling on boards to take on the responsibility of developing consistent strategies, establishing culture and values of the company setting the correct “tone from the top”, and encouraging specific measures on linking, for instance, executive pay to sustainability performance.

### 323. Building capacity, awareness and knowledge

13. Risk: A collaborative consortium of financial institutions, academics and public authorities could be established to pilot ‘environmental stress testing’ models and to make recommendations for improved analysis and data availability. Supervisors and surveillance authorities could push their European peers to evaluate the relevance of ESG factors at both the micro and macro level and consider the extent to which they are implemented in risk control models.

14. Public awareness: An information campaign could be launched in partnership with key financial institutions, civil society organizations, religious bodies, trade unions and banking foundations to highlight the importance of environmental threats and the role that consumers and investors can play in influencing the supply side in the market.

15. Capacity building: Financial institutions could identify the skills needed to make their professionals green finance literate, and incorporate these into training programs. In parallel, universities and academic bodies could enrich their educational offer on green finance sector reform and integrate these skills into professional curricula for continuing development.

16. Measuring progress: The government could – leveraging the competence and the data sets of the National Institute for Statistics (Istat) – encourage, the development of a model for measuring the progress of the financial system towards sustainable development, drawing on national and international expertise. The output of this monitoring activity should become a compass for orientating public policies.

### Moroccan Sustainable Finance Roadmap

324. Morocco invited the Inquiry to work with Morocco to move the Roadmap for a Sustainable Finance System to implementation in various sectors, including insurance. UN Environment thus have been supporting the effort to draup a Sustainable Insurance Strategy through international best practice examples and expertise in close cooperation with the Principles for Sustainable Insurance. In partnership with UN Environment, Morocco’s insurance regulator, ACAPS held the first Morocco Sustainable Insurance Day in Rabat on 6 December. This event brought together the CEOs of leading Moroccan insurance companies, the national insurance association and Moroccan government ministries to accelerate sustainable insurance in Morocco and implement Morocco’s national sustainable finance roadmap into the insurance sector. Major steps achieved included the signing of a Framework Partnership Agreement between the Ministry of Energy, Mines and Sustainable Development, ACAPS and FMSAR relating to the promotion of investments in the field of environment and sustainable development and the signature of the Principles for Sustainable Insurance between ACAPS, FMSAR and UN Environment.<sup>91</sup>

325. In addition, the government has already provided several types of green market-based instruments, such as:

- a) the subsidizing of certain plants and soil analysis;
- b) destination of the income generated by forest development to local authorities of the area when they reinvest 20% of the sum in the forest;
- c) taxation system (included in the law on water) whereby the polluting enterprises have to pay a tax serving to finance water purification;
- d) sectoral contracts have been prepared with some professional

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<sup>91</sup> <http://unepinquiry.org/publication/annual-overview-2017/>

associations working in chemistry, which have enhanced information exchanges and collaboration between administrations and private enterprises.<sup>92</sup>

Key Green Financial Products, which usage could be encouraged further in Mediterranean Countries, also as of support of the Ecosystem Approach

326. One of the most common forms of green financial product is a green bond. Green bonds can mobilize resources from domestic and international capital markets for climate change adaptation, renewables and other environment-friendly projects. They are no different from conventional bonds, their only unique characteristic being the specification that the proceeds be invested in projects that generate environmental benefits. In its simplest form, a bond issuer will raise a fixed amount of capital, repaying the capital (principal) and accrued interest (coupon) over a set period of time. The issuer will need to generate sufficient cash flows to repay interest and capital.

327. The UN Environment Finance Initiative's Green Financial Products and Services Report<sup>93</sup> summarizes green financial services and products, including green bonds, but also many other additional existing ones. While noting that most of these products are more related to climate change/energy efficiency/renewable investments, many of them still could be inspirational as a model and an innovative financial revenue for the implementation of the ecosystem approach in the Mediterranean on national level.

328. The Dutch Banks implemented, government led "green mortgage initiative" for example, which included 1% reduction of interest for loans that meet environmental criteria, could be mimicked for a government lead specific mortgage initiative for Mediterranean Countries, targeting shipping companies, which if implement specific ecosystem approach related action of the Barcelona Convention (and such support the country in meeting their obligations under the Convention), could have a small reduction on their interest.

329. Private equity investments in wind, solar and biofuels have been more widely established, but also interesting the recent Bank of America private equity investment with 100% financing, focusing on forest conservation and preserving biodiversity, with a discounted rate on the loan, to an NGO to acquire biologically sensitive land and implement sustainable forestry practices and management. Such a scheme could be established for marine protected areas, with a focus on sustainable management of marine resources (including sustainable fisheries) and with specific impact based monitoring, using IMAP indicators.

330. Interesting to note that many of the green financial products were developed by Dutch banks, who benefit from the government led Green Fund Initiative, under which citizens are exempted from paying capital gain tax and receive a discount on income tax, by purchasing shares in a green fund or investing money in a green bank.

Recommendations, conclusions in relation to sustainable financial finance/green financial products

331. Sustainable finance and green financial products is an extremely growing sector internationally, including in the Mediterranean, with some best practices showcased by Italy and Morocco above. The usage of green financial products however could be still further strengthened in the region, especially in the Southern Mediterranean and knowledge and capacity building in this area, could be beneficial also for environmental experts, including marine environmental experts.

332. Green financing products have been mainly employed in relation to climate change, energy efficiency, renewables, but they could be applicable also in certain circumstances to marine biodiversity, marine environmental issues. Further research would be beneficial on this, especially noting resource needs of the implementation of SDG14 and the important role Oceans and healthy marine ecosystems play in the economy.

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<sup>92</sup> Morocco Case Study Analysis of National Strategies for Sustainable Development:  
[https://iisd.org/pdf/2004/measure\\_sdsip\\_morocco.pdf](https://iisd.org/pdf/2004/measure_sdsip_morocco.pdf)

<sup>93</sup> [http://www.unepfi.org/fileadmin/documents/greenprods\\_01.pdf](http://www.unepfi.org/fileadmin/documents/greenprods_01.pdf)

333. As such, it can be concluded that development of country level enabling conditions are important tools with which governments can effectively support the development of innovative financial tools for environmental protection and as such receive additional support to specific environmental targets (including marine and coastal environmental protection, meeting SDG14 targets and implement the ecosystem approach/IMAP), while at the same time, further employment of sustainable financial products in the area of SDG14 would need further research (“demystifying”) as well as capacity building on their availability to Southern Mediterranean countries.

#### **Bilateral Funding for Ecosystem Approach Implementation**

334. Bilateral funding has been traditionally an important source of funding in the Mediterranean, including Southern Mediterranean, with some Mediterranean Contracting Parties to the Barcelona Convention also dedicating specific financial resources for promoting sustainable development outside of their own country.

335. Various environmental projects have been realized in the past, contributing to the implementation of the ecosystem approach with the support of bilateral funding, by agencies, such as the Spanish Agency for International Development Cooperation<sup>94</sup>, the French Facility for Global Environment<sup>95</sup> and the Italian Development Cooperation<sup>96</sup>.

336. Important to note that many times these bilateral funding opportunities follow next to national priorities, also goals set by these agencies in line with international agenda (such as implementation of Agenda 2030) and by regional obligations (such as ones under the Barcelona Convention).

337. Knowledge about these funding instruments and cooperation is rather well established in the Mediterranean and as such it is foreseen that will continue to play an important role in supporting the implementation of the Ecosystem Approach of the Barcelona Convention.

#### **7.4 Growing role of private foundations, philanthropic organizations: Possible Funding sources for Ecosystem Approach /IMAP implementation**

338. The recent decades have seen a strengthened role of philanthropists and their foundations in global development and environmental policy and practice. Today, there are more than 200,000 foundations in the world and while most of them, over 86,000 foundations are registered in the USA; the philanthropic sector is growing around the World, including the global South, where organized and institutionalized philanthropy has developed in the recent years, resulting into philanthropic associations such as the World Congress of Muslim Philanthropists in 2008 and the African Grantmakers’ Network in 2009.<sup>15</sup> The first African Philanthropic Forum 2014 also showed the emergence of philanthropic foundations in Africa, especially in South Africa, Kenya, Ghana, Nigeria and Egypt.<sup>97</sup>

339. There is no single valid definition of a philanthropic foundation. The Foundation Center<sup>98</sup> offers a typology, which distinguishes between four types of foundations:

- Independent Foundations: established by individual donors or donor families and engaged mainly in grant-making activities. The vast majority of foundations fall under this category, including the world’s two largest foundations: the US based Bill & Melinda Gates Foundation and the Wellcome Trust;
- Operating Foundations: run their own programmes, although some also make grants. They are generally established by individual donors or donor families;

<sup>94</sup> <http://www.aecid.es/EN/aecid>

<sup>95</sup> <http://www.ffem.fr/lang/en/accueil-FFEM>

<sup>96</sup> <https://www.lift-fund.org/italy-italian-development-cooperation>

<sup>97</sup> Jens Martens and Karolin Seitz: Philanthropic Power and Development, Who shapes the agenda? Bischöfliches Hilfswerk MISEREOR, 2015

<sup>98</sup> <http://foundationcenter.org/>

- Corporate Foundations: established by businesses ranging from major corporations to family-owned shops, but are legally separate entities. In the USA alone, there are more than 2,600 corporate foundations, such as the Coca-Cola Foundation and the Walmart Foundation;
- Community Foundations: raise funds from public and private sources and engage in grant-making primarily within a limited geographic area.

340. The following summary aims to list the most important philanthropic foundations active in the field of environmental and marine (and coastal) protection, with their support available for developing countries and/or specifically in the Mediterranean.<sup>99</sup>

341. Please note that most of these foundations are not giving grants to national governments, but rather to interested scientific institutions and/or NGOs, international organizations, which fall under their criteria, thus the following list is more interesting to the beneficiary country's stakeholders and to relevant international/regional organizations (possibly also to UN Environment/MAP for seeking further support of Ecosystem Approach /IMAP implementation, with a focus on the Southern Mediterranean). In addition, it is important to note that philanthropic organizations still only devote 0,55% of philanthropic dollars to ocean conservation globally.<sup>100</sup>

<http://sdgfinders.org/sdgs/goal/life-below-water/lang/en/>

342. The following list includes key foundations, which are active in marine environmental protection globally and/or specifically in the Mediterranean. The list builds on the following data-bases (both databases are publicly available):

Oceans Funding Map: <http://fundingtheocean.org/funding-map/>

Data base of the Foundation Center: <http://foundationcenter.org/>

## **LIST OF KEY PRIVATE FOUNDATIONS, PHILANTHROPIC ORGANIZATIONS WHICH MAY SUPPORT ECOSYSTEM APPROACH IMPLEMENTATION IN THE MEDITERRANEAN**

### **Adessium Foundation**

343. The Adessium Foundation aspires to a society that makes responsible use of nature and natural resources. Humanity's dependence on healthy ecological systems is a central focus. The Foundation helps protect important natural areas and combat environmental exhaustion and pollution. Adessium Foundation also specifically targets the responsible use and management of our oceans. They investigate continuously the charitable sector and make choices based upon their strategic framework, but they do not evaluate unsolicited proposals.

<http://www.adessium.org/>

### **Aga Khan Fund for the Environment**

344. The Prince Sadruddin Aga Khan Fund for the Environment activities include natural resource management and security against natural risks such as landslides, rural development in fragile natural environments and related programmes in the fields of health, housing and the built environment, education and the strengthening of civil society. The geographical focus of the fund is Africa and Asia. The Fund's activities highlight the linkages between poverty and the penury of natural resources. It promotes the management and development of sustainable natural resources through education, area development and related research that addresses existing issues in the developing world.

<http://www.akdn.org/our-agencies/aga-khan-foundation>

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<sup>99</sup> Following listing is in alphabetical order, not in order of relevance.



### **Bertarelli Foundation**

345. Established by the founders of Serono, the “Bertarelli Foundation's aim is to show global leadership in promoting marine conservation. Its belief is that if we are to use the seas as a source of food and recreation then it is also our responsibility to ensure their future is safeguarded.

The Foundation, working with the British Government, helped to create the largest Marine Protected Area (MPA) in the world, in the Indian Ocean. As such, it gives direct sponsorship of no-take marine reserves, but it has also commissioned research to prove just how urgent action on our seas has become.

<http://www.bertarelli.com/foundation/marine-conservation/>

### **Bloomberg Philanthropies**

346. The mission of Bloomberg Philanthropies is to ensure better, longer lives for the greatest number of people. The organization focuses on five key areas for creating lasting change: public health, environment, education, government innovation and the arts.

The program focuses on spurring change through: 1) C40 Cities Climate Leadership Group: a network of nearly 70 of the world's largest cities taking action to address climate change by developing and implementing policies and programs that generate measurable reductions in greenhouse gas emissions and climate risks; 2) Beyond Coal: in conjunction with the Sierra Club, the campaign is an effort to effectively end America's energy dependence on coal. The goal is to shut down one-third of the nation's aging coal plants by 2020 and move America toward cleaner, alternative energy sources; 3) Vibrant Oceans: working in key areas around the world to restore fish populations and help meet the dietary needs of a growing global population.

<http://www.bloomberg.org>

### **BNP Paribas Foundation**

347. Since 2010, the BNP Paribas Foundation has supported climate change research through its Climate Initiative program. The goal is to understand and anticipate the impact of climate change on our environment as well as local populations around the world.

It funds research on long-term effects of ocean acidification, also with experiments in the Mediterranean Sea.

<https://group.bnpparibas/en/group/bnp-paribas-foundation/environment>

### **Children's Investment Fund Foundation**

348. The Children's Investment Fund Foundation (CIFF) is a Foundation with robust resources aims to support organizations benefiting children in developing countries. Key areas of focus of the CIFF are climate change and urbanization.

<https://ciff.org/priorities/climate-change/>

### **Critical Ecosystem Partnership Fund (CEPF)**

349. The Critical Ecosystem Partnership Fund (CEPF) is a joint initiative of l'Agence Française de Développement, Conservation International, the European Union, the Global Environment Facility, the Government of Japan, the MacArthur Foundation and the World Bank.

CEPF welcomed proposals that target direct global environmental benefits and are located in an approved biodiversity hotspot, in a country that is not excluded by U.S. law, which supports a strategic direction outlined in the relevant CEPF ecosystem profile and investment strategy and where the grant applicant is authorized under relevant national laws to receive charitable contributions

Government-owned enterprises or institutions are eligible only if they can establish i) that the enterprise or institution has a legal personality independent of any government agency or actor, ii) that the enterprise or institution has the authority to apply for and receive private funds, and iii) that the enterprise or institution may not assert a claim of sovereign immunity.

Please note that the CEPF is currently aiming to update the Ecosystem Profile for the Mediterranean Basin.

<http://www.cepf.net/Pages/default.aspx>

### **David and Lucile Packard Foundation**

350. “For more than 50 years, the David and Lucile Packard Foundation has worked with partners around the world to improve the lives of children, families, and communities—and to restore and protect our planet.”

As one of the major private foundation’s, with robust resources dedicated to environmental protection, the Packard Foundation’s grantmaking is focused on ocean and land conservation, climate change mitigation, and scientific research. They invest in action and ideas that conserve and restore ecosystems while enhancing human well-being.

The David and Lucile Packard Foundation, based on the FoundingtheOcean research engine is the biggest philanthropic supporter of oceans/marine protection internationally.

<https://www.packard.org/what-we-fund/conservation-and-science/>

### **Global Fund for Women**

351. The fund awards grants ranging from \$500 to \$30,000 to women's groups working on many different issues. Priority is given to groups that address emerging or unconventional issues; have limited access to other donors; are based in especially disadvantaged countries or regions; or serve marginalized groups of women. Grants are also made to enable women's organizations to organize or participate in training seminars or conferences that promote women's human rights. Programmatic areas that are funded include: building peace and ending gender-based violence; advancing health and sexual and reproductive rights; expanding civic and political participation; ensuring economic and environmental justice; increasing access to education; and fostering social change philanthropy.

<https://www.globalfundforwomen.org/>

### **Gordon and Betty Moore Foundation**

352. The foundation fosters path-breaking scientific discovery, environmental conservation, improvements in patient care, and preservation of the special character of the San Francisco, CA, Bay Area. The Foundation’s Environment Conservatio Program balances long-term conservation with sustainable use. It protects critical ecosystems, establishes models for collaboration that can be replicated and expanded around the globe, seeks to create lasting change in how land, freshwater and coastal marine ecosystems are managed. There are currently three focus areas: 1) Andes-Amazon: Conserves the Amazonian forests by supporting the establishment of protected areas, transforming frontier economies and addressing the root causes of deforestation and forest degradation; 2) Marine Conservation: Supports healthy ocean ecosystems that can sustain food, jobs and recreation over the long term by aligning economic incentives with conservation goals; 3) Wild Salmon Ecosystems: Collaborates with partners from Alaska, British Columbia and Russia to protect a healthy habitat for wild salmon throughout the North Pacific .

<http://www.moore.org>

### **Liz Claiborne & Art Ortenberg Foundation**

353. The board of directors of the Liz Claiborne & Art Ortenberg Foundation has identified two primary program interests for the foundation: 1) Mitigation of conflict between the land and resource needs of rural communities and conservation of biological diversity; and 2) Implementation of field-based scientific, technical and practical training programs in conservation biology for local people. The foundation typically funds modest, carefully designed field activities--primarily in areas in which local communities have substantial proprietary interest.

[www.lcaof.org](http://www.lcaof.org)

### **MAVA Foundation**

354. Since 1994, MAVA has played a transformational role in driving forward innovative conservation across the Mediterranean, West Africa, the Alps and beyond.

MAVA’s final grant-making will be in 2022 – at which time the foundation will wind down its activities, until than the focus is funding in line with MAVA’s strategic plan for 2016-2022, which focuses on key

priorities, with continuing work on freshwater and coastal ecosystems in the Mediterranean and West Africa but through more focused strategies in both regions.

In the Mediterranean MAVA funds projects towards reducing the impact of water abstraction and coastal development on coastal wetlands; on limiting the negative impact of fishing on threatened species of marine mammals, sea turtles and sea birds, as well as on seagrasses and on coralligenous habitats; and on limiting the effect of fishing on high level trophic fish themselves. Funded approaches are participative, do balance ecosystem health with local livelihoods, and address the ecological and financial sustainability of results. In the framework of MAVA closing in 2022, great attention is given to existing and innovative financial mechanisms that could ensure the sustainability of results and partnerships past 2022

<http://en.mava-foundation.org/what-we-fund/strategy/>

### **OAK Foundation**

355. Oak Foundation is family-led and reflects the vision and values of its founders. It commits its resources to address issues of global, social and environmental concern, particularly those that have a major impact on the lives of the disadvantaged.

As such, it addresses specifically in its Environment Programme marine conservations. The OAK Marine Environment Strategy focuses on three key areas, industrial fisheries, small scale fisheries and plastic waste.

<http://www.oakfnd.org/>

### **Pew Charitable Trusts**

356. Informed by the founders' interest in research, practical knowledge and a robust democracy, the PEW Charitable Trusts' portfolio includes public opinion research; arts and culture; and environmental, health, state and consumer policy initiatives.

<http://www.pewtrusts.org/en>

The **Global Ocean Legacy**, a project of Pew and its partners (Bloomberg Philanthropies, The Lyda Hill Foundation, Oak Foundation, The Robertson Foundation, and The Tiffany & Co. Foundation), is working with local communities, governments and scientists around the world to protect and conserve some of our most important and unspoiled ocean environments. Together they are establishing the world's first generation of great marine parks by securing the designation of large, highly protected reserves. To date, their efforts have helped to safeguard 5.2 million square kilometers of ocean.

<http://www.pewtrusts.org/en/projects/global-ocean-legacy/about>

### **Planet Aid Foundation**

357. The organization is dedicated to improving the lives of people in developing countries; objectives include development, protecting the environment, and relief aid. Their focus currently is sustainable consumption and production and education and training in developing countries.

<http://www.planetaid.org/what-we-do/for-the-environment>

### **Prince Albert II of Monaco Foundation**

358. The Prince Albert II of Monaco Foundation focuses on funding research, technological innovation and fieldwork by NGOs and academic research institutes with priority given to Mediterranean, Polar regions and Less Developed Countries. Areas of focus are Biodiversity and conservation, Climate change and atmosphere, Coastal and marine ecosystems, Fresh water, Energy.

<http://www.fpa2.com/home.html>

### **Rockefeller Foundation**

359. As one of World's biggest foundations, the Rockefeller Foundation has a specific Oceans & Fisheries initiative, launched in development in 2013. The initiative aims to increase the health and productivity of local fisheries by decreasing unsustainable fishing pressures in a way that puts the needs of poor and vulnerable people at the center of innovative, equitable solutions.

The Foundation's interventions are focused on creating and scaling solutions that recognize the full value of marine ecosystems. This includes:

Catalyzing market-based partnerships in non-industrial fisheries

Boosting near-term benefits and reducing the costs of sustainable management

Expanding livelihood options for fishing communities

Ultimately, the Rockefeller Foundation's goal is to develop, test, and scale new business models to end dangerous overfishing in non-industrial fisheries, prevent further ecosystem damage, and enhance the socioeconomic, nutritional and environmental benefits that small-scale fisheries can provide.

<https://www.rockefellerfoundation.org/our-work/initiatives/oceans-fisheries/>

### **Save our Seas Foundation**

360. Sea Save Foundation strives to protect our oceans by raising awareness about the beauty of marine ecosystems and their fundamental importance to human survival. The Foundation seeks solutions, advance public policy, and drive advocacy.

<http://seasave.org/>

### **Schmidt Ocean Institute**

361. Schmidt Ocean Institute is a foundation established specifically to advance oceanographic research, discovery, and knowledge, and catalyze sharing of information about the oceans. The Foundation's Program is structured around the following key focus areas: (1) Commitment to Excellence in Oceanographic Research Operations; (2) Infrastructure, Platform, and Technology Development for Marine Sciences; (3) Collaborative Scientific Research Aboard; (4) Communications, Education, and Outreach Program and Open Sharing of Information, Data, and Research Outcomes.

<http://schmidtocan.org/>

### **Shared Earth Foundation**

362. The Shared Earth Foundation is committed to the tenet that all creatures have an enduring claim to sustainable space on this planet. To this end, the Foundation will fund organizations that promote protection and restoration of habitat for the broadest possible biodiversity, which foster respect for other species and individual creatures, which work to limit detrimental human impact on the planet, and which further the inherent right of all creatures to share the Earth.

The Foundation looks to fund primarily, though not exclusively, small organizations. It will provide administrative as well as project funds, with possibility for renewal or continuation, in the US and abroad, to groups working in the natural and political worlds.

<http://sharedearth.org/>

### **Synchronicity Earth**

363. Synchronicity Earth funds across three themes in relation to oceans with the aim to reverse some of these negative trends impacting our oceans: Putting conservation at the heart of fishery management; Campaigning to end destructive practices in the deep and high seas; and Reducing and preventing bycatch. To date they have supported partners in Africa, Southeast Asia, Melanesia and Micronesia, as well as partners working on international policies and initiatives.

<http://www.synchronicityearth.org/>

### **Waitt Foundation**

364. The mission of the Waitt Foundation is to protect and restore ocean health. The Foundation funds initiatives globally with a focus on marine protected areas and sustainable fishing policy and practice. We provide grants, technical assistance, strategic advice, and support innovative ocean science. For maximum impact, they partner with unique coalitions of governments, funders, NGO, academics, and businesses.

<http://waittfoundation.org/mission-vision/>

## **7.5 Importance of involvement of the private Sector: innovative options offered specifically for IMAP implementation**

365. Private funding for Ecosystem Approach /IMAP implementation, is a possibility not only through Private (philanthropic) Funds, but also through specific partnerships established with private companies.

366. The IMAP Guidance<sup>101</sup>: specifies some key monitoring activities, which can be undertaken through opportunistic monitoring (ie using a commercial vessel for example).

The following specific IMAP implementation needs, monitoring activities thus can be potentially undertaken in cooperation with some national and/or regional, international shipping companies and associations and with the fishing industry.

367. In line with the above and with the IMAP Guidance, some specific opportunistic monitoring options, in cooperation with relevant industry:

- Regarding elaborating species distribution range, opportunistic data may be obtained from whale-watching observations, fisheries sightings (logbooks), surveys on non-dedicated platforms (ferries, merchant marine ships or amateurs/yachts, use of citizen science), by-catch data (where dedicated research programs do not exist, for sea turtles and shearwaters in long-lines and other types of fishing gear, and small cetaceans in fishing various types of fishing gear);
- Opportunistic data may be also obtained from whale-watching observations, fisheries sightings (logbooks), surveys on non-dedicated platforms (ferries, merchant marine ships or amateurs/yachts, use of citizen science), by-catch data (where dedicated research programs do not exist, for sea turtles and shearwaters in long-lines and other types of fishing gear, and small cetaceans in fishing various types of fishing gear);
- Platforms-of-opportunity (POP) surveys are possible for IMAP Monitoring through trained observers to be placed on host ships and aircraft to survey remote pelagic waters;
- The opportunistic use of aerial surveys can be considered also for marine mammal observation/monitoring.
- The most common approaches to evaluate sea-floor litter distributions use opportunistic sampling. This type of sampling is usually coupled with regular fisheries surveys (marine reserve, offshore platforms, etc.) and programmes on biodiversity, since methods for determining seafloor litter distributions (e.g. trawling, diving, video) are similar to those used for benthic and biodiversity assessments. The use of submersibles or Remotely Operated Vehicles (ROVs) is a possible approach for deep sea areas although this requires expensive equipment. Monitoring programmes for demersal fish stocks, undertaken as part of the Mediterranean International Bottom Trawl Surveys (MEDITS), operate at large regional scale and provide data using a harmonized protocol, which may provide a consistent support for monitoring litter at Regional scale on a regular basis and within the Ecosystem Approach requirements;
- For shallow waters, the monitoring of litter on the seafloor may not be considered for all coastal areas because of limited resources. In these areas, the strategy is to be determined by each contracting Party at national level, depending on the priority areas to be monitored. Opportunistic approaches may be used to minimize costs. Valuable information can be obtained from on-going monitoring of benthic species in protected areas, during pipeline camera surveys, cleaning of harbours and through diving activities. Additional monitoring might have to be put in place to cover all areas creating a consistent monitoring network. The sampling strategy should enable the generation of good detail of data, in order to assess most likely sources, the evaluation of trends and the possibility of evaluating the effectiveness of measures. The TSG-ML proposes simple protocols based on existing trawling surveys and two alternative protocols based on diving and video imagery which fit with the Ecosystem Approach requirements and support harmonisation at Regional level, if applied trans-nationally;

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<sup>101</sup> UN Environment(DEPI)/MED IG.22/Inf.7 (IMAP Guidance Document)

368. A specific potential mechanism to build on: the IMO's Integrated Technical Cooperation Programme

**IMO's Integrated Technical Cooperation Programme (ITCP)**

369. IMO's technical cooperation programme began in the 1960s. During the late 1990s, IMO's Technical Cooperation Committee (TCC) comprehensively reformed the technical cooperation work of the Organization in order to increase its effectiveness. The reform provided a policy framework for the preparation, design and implementation of the ITCP, covering the following key principles:

- ownership of the programme development and implementation process rests with the recipient countries themselves;
- IMO's regulatory priorities are systematically integrated into the programme-building process;
- the ITCP promotes the development of human and institutional resources in the maritime sector, on a sustainable basis, including the advancement of women;
- the ITCP promotes regional collaboration and technical cooperation among developing countries;
- IMO builds partnerships with Governments, industry and international development aid agencies to ensure appropriate funding for the ITCP;
- IMO also seeks to mobilize regional expertise and resources for its technical assistance activities;
- the ITCP is coordinated with other development aid programmes in the maritime field in order to maximize the benefits of combined efforts and resources; and
- IMO ensures, through monitoring systems and impact assessment exercises, that programme targets are met and that lessons learned are transferred back to the programme-building process.

370. The Organization's strategic plan for the six-year period 2014-2019 identifies strategic directions for enabling IMO to achieve its mission objectives in the years ahead. One of these strategic directions requests IMO to strengthen its capacity-building programmes with a focus on:

- developing capacity-building partnerships with governments, organizations and industry;
- ensuring the long-term sustainability of the ITCP;
- contributing to the achievement of the Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs), including through the development of major projects targeting emerging issues;
- meeting the needs of its developing Member States; and
- further improving the delivery, utilization, efficiency and effectiveness of its technical cooperation programmes.

371. Following the 2005 World Summit which endorsed and re-affirmed the MDGs, the Organization has established a linkage between the ITCP and the MDGs. Through this linkage, the ITCP gives priority to those activities which not only promote early ratification and effective implementation of IMO instruments but also contribute to the attainment of the MDGs, taking into account the special needs of Least Developed Countries (LDCs) and the Small Island Developing States (SIDS), and the particular maritime transport needs of Africa.

372. As a result of Rio+20, the United Nations is taking an initiative to set Sustainable Development Goals (SDGs) which will eventually supersede and go beyond the MDGs. IMO has developed a concept paper on Sustainable Maritime Transportation System, which includes the following set of goals and actions, to highlight the importance of maritime transportation:

1. Safety Culture and Environmental Stewardship;
2. Education and training in maritime professions, and support for seafarers;
3. Energy efficiency and ship-port interface;
4. Energy supply for ships;
5. Maritime traffic support and advisory systems;

6. Maritime Security;
7. Technical cooperation;
8. New technology and innovation;
9. Finance, liability and insurance mechanisms; and
10. Ocean Governance.

373. IMO's Technical Cooperation Programme addresses the maritime needs of developing countries by focusing on three priorities that, together, can ensure sustainable maritime development, efficient and safe maritime transport services, as well as effective environmental protection.

374. In line with the above, opportunistic monitoring, especially for IMAP common indicators related to biodiversity and marine litter could be a useful tool and as such an in practice support of the private sector, to implement IMAP.

375. Specific cooperation arrangements with shipping companies, organizations, both through the IMO's ITCP and through specific bilateral arrangements with fishing and maritime vessels and organizations could be thus considered, to involve the private sector and get their support for IMAP monitoring on the country level.

376. In addition, UN Environment/MAP could also consider outreach for regional monitoring, with key private shipping companies, which showcase interest to support environmental protection and monitoring on the regional level and offer opportunistic monitoring on their ships.