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1. INTRODUCTION

The Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (SAP BIO) was adopted on 14 November 2003 in Catania by the Contracting Parties to the Barcelona Convention to cope with the complex threats to which marine and coastal biodiversity is subject in the Mediterranean. It took 3 years to elaborate, starting from 2001, as part of a wide-ranging process based on consultations with the countries to diagnose the state of marine and coastal biodiversity, to identify national priorities and to craft a National Action Plan for each of the priority themes. The results of the national consultations were compiled to craft a regional SAP BIO element that would back up and coordinate the National Action Plans.

The actions identified by SAP BIO as having priority concerned seven main axes:

1. inventorying, mapping and monitoring Mediterranean marine and coastal biodiversity
2. conserving sensitive sites, species and habitats
3. assessing and mitigating the impact of threats to biodiversity
4. developing research to improve knowledge and fill in gaps regarding biodiversity
5. developing skills to ensure technical assistance and coordination
6. information and participation
7. increasing awareness.

In the SAP BIO context, about fifty National Action Plans have been crafted to handle the priority issues identified by the national process carried out by each of the countries.

In 2008-2009 an action to update the SAPBIO on Climate Change issues was conducted. The action was implemented through a bottom-up interactive participative approach with Parties expert representatives and lead to an Addendum to the SAPBIO focused on biodiversity and climate change issues. The addendum was adopted on November 2009 by the Contracting Parties to the Barcelona Convention.

At their Seventeenth Ordinary Meeting (Paris, France, 8-10 February 2012), the Contracting Parties to the Convention on the Protection of the Mediterranean Marine and Coastal Environment (Barcelona Convention) and its Protocols invited the Secretariat to assess the progress made in applying SAP BIO and defining its options at national and regional level over the coming years. The Parties stressed the importance of taking into account the Ecological Objectives adopted for the Mediterranean and the Aichi Biodiversity Targets adopted by the CBD in SAP BIO's new options.

The present document presents:

- an analysis of how SAP BIO has been implemented since it was adopted in 2003, and
- proposals for future SAP BIO orientations.

2. Evaluation of the SAP BIO implementation

The analysis of SAP BIO's implementation was made by a group of 6 experts set up by RAC/SPA. It was done in a first stage by examining the information provided by the countries in the National Reports submitted to the following pertinent Agreements and Conventions:

- the Protocol on Specially Protected Areas and Biological Diversity in the Mediterranean
- the Convention on Biological Diversity
- the Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean and the Adjacent Atlantic Area (ACCOBAMS)
- the Convention on Migratory Species
- the Ramsar Convention

The first analysis also considered the thematic reports submitted to the CBD (theme-based reports related to invasive species and to the implementing of Work Programmes on Protected Areas and the Taxonomy Initiative).

In a second stage a questionnaire, already filled in, was produced and sent to each of the National Focal Points for SPAs to be checked and for additional information to be added.

The results of these two stages are given in the Table below. The two first columns of the Table deal respectively with priority actions and their aims as defined in SAP BIO. The third column presents, for each priority action, an analysis of the state of implementation, describing what has been achieved as well as the main difficulties encountered in implementation. Furthermore, given that SAP BIO has an important regional element, an analysis of back-up by international and regional organisations also appears.

As the Table below shows, many of the actions advocated by SAP BIO have been achieved since 2003. However, implementation is far from being homogeneous for all the countries. The Table also shows that many actions have not yet been carried out or have been carried out in a way that is not yet satisfactory.

The lack of financial resources and limited human ones were often mentioned by the National Focal Points as being one of the main reasons for the non-achievement, or partial achievement, of SAP BIO's priority actions.

It should be noticed that at the level of RAC/SPA, and of the MAP in general, the approach for implementing SAP BIO has been harmonised with MAP's work on the ecosystem approach started in 2009, particularly the work of the Group of Experts appointed by the Governments on applying in the Mediterranean the ecosystem approach road map

CATEGORY	TARGET
<p>I. INVENTORYING, MAPPING AND MONITORING OF MEDITERRANEAN COASTAL AND MARINE BIODIVERSITY</p>	<p><u>General objective</u> “Contribute to achieving the WSSD targets concerning establishing by 2004 a regular process under the United Nations for global reporting and assessment of the state of the marine environment, including socio-economic aspects, both current and foreseeable, building on existing regional assessments¹”</p> <p><u>Specific targets</u></p> <ul style="list-style-type: none"> ✓ GIS-based mapping of sensitive habitats by 2008 (relevant objective/s: 1a) ✓ Mediterranean Checklists of species by 2006 (1b,d) ✓ Standard monitoring protocols for socio-economic impacts, global trade, endangered species, effectiveness of protected areas by 2004 (2a; 3a; 4a; 5a) ✓ SAP BIO indicators by 2006 (6 a,b,c,d,e)

Activity (priority actions)	Aims	Assessment of implementation
<p>1) Make a complete and integrated inventory (by sub-region) of Mediterranean coastal, wetland, and marine sensitive habitats</p>	<p>a) Description and GIS-based mapping of the spatial distribution of the sensitive habitats:</p> <p>b) Complete checklist of species associated with each sensitive habitat</p> <p>c) Long-term routine monitoring programmes, in order to define temporal variability of abundance, biomass and other assemblage variables within sensitive habitats</p> <p>d) Elaborate national checklists for marine and coastal species for all the Mediterranean countries</p>	<p>Achievements: Use of GIS technologies has made great strides in many Mediterranean countries, but much still remains to be done to obtain a satisfactory mapping of the distribution of sensitive habitats. The best covered habitats are the Posidonia meadows, wetlands, and marine turtle nesting sites. Efforts have been made in the north-western Mediterranean to map coralligenous beds and canyons.</p> <p>The checklists of species associated with each sensitive habitat are still lacking.</p> <p>Some general checklists for marine and coastal species were developed by a few countries. These available lists should be used as starting point to define the national checklists for all Mediterranean countries.</p> <p>The MedWet Initiative of the Ramsar Convention on Wetlands has developed (through the MedWet Scientific and Technical Team) a standard methodology</p>

¹ Extract from Paragraph 34b, Plan of Implementation of the World Summit on Sustainable Development – Johannesburg, September 2002.

	<p>and associated tools for the inventory of Mediterranean wetlands. The methodology and tools include: inventory data collection forms (at different scales: catchment, site, habitat), a habitat classification system, guidelines for remote sensing and GIS mapping, a computer database for data storage. The first version of the methodology was published in a series of five manuals in 1996 by Wetlands International and ICN, and in 2008 a new series of manuals and tools were produced by the Greek Biotopes & Wetland Centre (EKBY), Tour du Valat, the Tuscany Agency for Protection of Environment (Italy) and the Institute for Nature Conservation and Biodiversity (Portugal). Innovations included relevant legal frameworks (e.g. the EU Water Framework Directive) and the latest technological tools for remote sensing and GIS and for database management (through an internet online Web Information System). Also the methodology for a Pan-Mediterranean Wetland Inventory was developed as a tool for carrying out easy and low-cost inventories of wetlands (www.medwet.org/medwet-inventory). A number of countries have carried out inventories using or adapting the standard MedWet tools, while others have tested the methodology in the framework of different international projects.</p> <p>Main difficulties for implementation: Some countries do not have the financial and human means needed for crafting and running GIS systems, but the main difficulty regarding mapping the spatial distribution of sensitive habitats remains the lack of field data. SAP BIO's recommendation to undertake drives on board seagoing vessels to map sensitive habitats has only been partially implemented. In certain cases, habitat inventories are not considered a high priority at national or regional level (and therefore they are not included in national or international projects/initiatives) despite they are among the main objectives of major international conventions and protocols (Ramsar, Mediterranean SPA/BD, etc.)</p> <p>Support from international and/or regional organisations: Certain organisations have helped countries via training courses on the use of GIS systems to map habitats. Furthermore, in the context of projects to develop</p>
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		<p>Marine Protected Areas a small number of field surveys to map habitats were carried out, with the support of international backers and organisations.</p> <p>RAC/SPA has set up a GIS system compiling the data available on the spatial distribution of habitats. The MedWet Initiative has supported (through the members of the MedWet Scientific and Technical Team) the testing and the implementation (either complete or partial) of wetland inventory in certain Mediterranean countries and regions. It has also contributed to the SAP BIO as a member of the Advisory Committee since its inception. Also members of the MedWet Scientific and Technical Team have participated in several RAC/SPA meetings and have provided technical support on the implementation and/or adaptation of the MedWet Inventory methodology and tools (e.g. the habitat classification for coastal wetlands).</p>
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Activity (priority actions)	Aims	Assessment of implementation
<p>2) Establish of a monitoring system of endangered and threatened species</p>	<p>a) Implement a monitoring system for endangered species at regional level</p> <p>b) Establish and update the health and risk status of endangered populations</p>	<p>Achievements: Several initiatives for monitoring endangered or threatened species have been launched in the Mediterranean, but most focus on particular species and are not integrated within coordinated regional approaches. For example, drives to monitor marine bird populations, and monitoring networks for the upper or lower edges of Posidonia beds, have been carried out in certain sites.</p> <p>Since 2003, assessments of the conservation status of certain groups of species have been made using the IUCN's Red List methodology (categories and criteria). These assessments have concerned cetaceans of the Mediterranean and Black Sea (13 species have been regularly assessed), Mediterranean cartilaginous fishes (71 species assessed), Mediterranean marine fishes (513 species and 6 subspecies assessed)</p> <p>Main difficulties for implementation:</p> <ul style="list-style-type: none"> - lack of field data and of financial resources for carrying out study drives - lack of standard methodologies for monitoring certain groups of species <p>Support from international and/or regional organisations: Most of the assessments of the conservation status of species done in the Mediterranean were carried out with the support of IUCN, and ACCOBAMS and other organizations for cetaceans, turtles, fishes, algae.</p>
<p>3) Promote the adequate monitoring and survey of the effectiveness of marine and coastal protected areas</p>	<p>a) Implement sound scientifically-based monitoring programmes on the effectiveness of marine and coastal protected areas</p> <p>b) Improve methods of management planning, implementation and</p>	<p>Achievements: Monitoring programmes have not yet been set up for most of the Marine and Coastal Protected Areas in the Mediterranean; the main gaps are linked to a lack of regularity. Only few pilot initiatives were conducted mainly in the ASPIMs. An analysis of the situation of the Marine Protected Areas done in 2012 by MedPAN and RAC/SPA shows that monitoring of MPAs does not reach the required level and does not permit their efficacy to be assessed. For the case of protected wetlands, the MedWet Initiative and the</p>

	monitoring	<p>Tour du Valat launched in 2009 the Mediterranean Wetlands Observatory as a major regional tool for the long-term assessment of the conservation status and trends of these ecosystems</p> <p>Main difficulties for implementation:</p> <ul style="list-style-type: none"> - lack of financial and human resources to carry out the monitoring <p>Support from international and/or regional organisations: Except for training managers on certain monitoring methods and producing methodological guides for monitoring, there is still not much support from international and regional organisations in the Mediterranean.</p>
Activity (priority actions)	Aims	Assessment of implementation
4) Identify, develop, and validate adequate biological and socio-economic indicators to assess the ecological health of sensitive habitats and species, and to evaluate the effectiveness of management measures	<ul style="list-style-type: none"> a) Elaborate a regional strategy on SAP BIO indicators b) Elaborate a list of useful SAP BIO indicators c) Existing and new data collected to construct selected SAP BIO indicators d) Construct SAP BIO indicator set starting from the collected data e) Validate selected SAP BIO indicators 	<p>Achievements: Very little work has been done on specifically SAP BIO-related indicators. However, as part of the Ecosystem Approach promoted in the context of the Barcelona Convention, a set of ecological objectives and indicators was crafted and adopted, of which 26 indicators have a link to the conservation of habitats and species. A similar exercise was carried out in the context of implementing the European Directive on Marine Strategy. Furthermore, ongoing work on the development of climate change impact indicators for monitoring in MPAs is being led by RAC/SPA (see UNEP (DEPI)/MED WG.382/Inf.13. 2013. Current Status of Climate Change Impact Indicators on Marine Biodiversity in the Mediterranean Marine Protected Areas)</p>

CATEGORIE	TARGET
<p>II. CONSERVATION OF SENSITIVE HABITATS, SPECIES AND SITES</p>	<p><u>General objective</u> Contribute to achieving the WSSD targets concerning the establishing of Marine Protected Areas consistent with international law and based on scientific information, representative networks, by 2012, and time/area closures for the protection of nursery grounds and periods, proper coastal land use²</p> <p><u>Specific targets</u></p> <ul style="list-style-type: none"> ✓ Effective protection of endangered species by 2012 (relevant objectives 7a, b; 8d) ✓ Increase (50%) by 2012 the surface area covered by MPAs (10 a, b, c, f) ✓ Attain the protection of 20 % of the coast as marine fishery reserves by 2012 (10 e) ✓ Set up a representative Mediterranean network of marine and coastal protected areas by 2012 (11 a, b)

Activity (priority actions)	Aims	Assessment of implementation
<p>5) Update, coordinate and enforce legislation to conserve biodiversity</p>	<p>a) Fill in existing gaps in national legislation about the protection of such habitats, species and areas</p> <p>b) Ensure the completion, enforcement and implementation of existing and updated legislation</p>	<p>Achievements: Most of the countries in the region have passed laws to protect biodiversity. This is obvious from the national reports the countries submit in the context of the Barcelona Convention and other pertinent agreements or conventions. Measures related to the application and execution of the existing legislation are, however, less evident.</p> <p>As regards the legislation on the coastal area, only a few countries have promulgated laws that deal specifically with the coast.</p> <p>Main difficulties for implementation: Overlapping competences between different governmental bodies and the weight of certain sector-based lobbies with a strong impact on biodiversity constitute the main difficulties for application.</p> <p>Support from international and/or regional organisations: Guidelines and other tools to help craft national laws on protecting the constitutive elements of biodiversity have been produced in the context of regional organisations such</p>

² Extract from Paragraph 31c "Plan of Implementation" of the World Summit on Sustainable Development - 4 September 2002, Johannesburg.

Activity (priority actions)	Aims	Assessment of implementation
6) Develop actions to conserve threatened and endangered (coastal and marine) Mediterranean species	<p>a) Coordinate the implementation of National Action Plans (NAPs) for threatened and endangered species elaborated within the SAP BIO Project</p> <p>b) Increase knowledge on these species</p> <p>c) Establish a monitoring system for these species</p> <p>d) Harmonise, update, implement and enforce adequate legislation</p> <p>e) Protect Habitats on which selected protected species depend</p>	<p>as RAC/SPA, ACCOBAMS and the GFCM.</p> <p>Achievements: The species which have most benefited from protection actions are those for which the regional action plans have been adopted. Basically, attention is paid to beacon species, with data collection and awareness actions. Furthermore, actions to protect habitats of threatened or endangered species have been recorded. In many countries NGOs made a significant contribution to the actions being carried out. Implementation of NPAs has not been satisfactory for all countries.</p> <p>Main difficulties for implementation: The great expectations aroused by SAP BIO have not been followed with the granting of funds to implement the NAPs. At regional level, the GEF contribution was very small for biodiversity-related actions. At RAC/SPA level, the funds allocated to implement the regional Action Plans for the conservation of species were drastically cut after 2012.</p> <p>Support from international and/or regional organisations: Thanks to the financial support of several organisations concrete species protection actions have been able to be carried out in the Mediterranean over the past decade: European Commission, FGEF, AECID, MAVA Foundation, Total Foundation, Albert II of Monaco Foundation, etc.</p>
7) Protect marine and coastal sites of particular interest	a) Develop and coordinate protection actions for priority sites and areas identified by National Reports	<p>Achievements: Since 2003, three major regional projects have been implemented in the Mediterranean to step up the protection and management of marine and coastal sites of particular interest. These are the MedMPA, MedPAN South and MedMPAnet Projects. These Projects aim at backing up the national authorities concerned in improving planning of Protected Areas.</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>8) Declare and develop new coastal and marine protected areas including in the high seas</p>	<ul style="list-style-type: none"> a) Identify of new areas deserving protection measures in the south and eastern Mediterranean b) Set up of new protected marine and coastal areas in the south and eastern Mediterranean c) Increase the number of C&MPAs or reserves to conserve sensitive, highly endangered species d) Identify and protect of new areas offshore (including the high seas) deserving protection measures 	<p>Achievements: In the southern and eastern Mediterranean, most countries have introduced programmes to identify sites on which they intend to create Marine and Coastal Protected Areas. These sites were included in the national programmes to develop protected areas.</p> <p>The number of Marine and Coastal Protected Areas has increased in the Mediterranean. A recent analysis done in 2012 by MedPAN and RAC/SPA showed that since 2008, 23 new Marine Protected Areas have been created in 10 Mediterranean countries, and 55 others are planned.</p> <p>To identify the sites that deserve out-at-sea protection measures, in all 11 Marine Areas of Ecological or Biological Importance (EBSA) were identified in the Mediterranean. Moreover, a total 4 areas were declared by the GFCM as Regulated Fishing Areas. They cover open sea areas.</p> <p>Main difficulties for implementation: Procedures to set up Protected Areas are relatively lengthy in most of the countries in the region. For marine areas that lie outside the national jurisdiction, processes of negotiation between the states concerned are necessary. Coordination between the international bodies concerned is also necessary. In 2012, to facilitate such consultations, the Parties to the Barcelona Convention introduced the possibility of making preliminary declarations of proposals for SPAMIs presented in accordance with Article 9, Paragraph b or c, of the SPA/BD Protocol.</p> <p>Support from international and/or regional organisations: Direct assistance was given by RAC/SPA and IUCN to some countries of the southern and eastern Mediterranean to help them identify marine and coastal sites that required protection measures. ACCOBAMS has identified sites of particular interest to cetaceans in the Mediterranean where it is desirable to</p>

Activity (priority actions)	Aims	Assessment of implementation
9) Develop existing Marine and Coastal Protected Areas	a) Enhance the management of existing Protected Areas b) Establish and support protected area networks	<p>create Marine Protected Areas.</p> <p>Achievements: Despite the efforts of the countries and organisations concerned, the level of management of the Marine and Coastal Protected Areas is still weak. However, most of the countries state that they have crafted management plans for their Marine and Coastal Protected Areas.</p> <p>The MedPAN network has been strengthened and it now functions as a network between the managers of Mediterranean marine areas. It has the means to encourage exchanges between managers. In 2012, in collaboration with RAC/SPA, MedPAN made an assessment of the Mediterranean network of Marine Protected Areas.</p> <p>Main difficulties for implementation: Lack of financial resources.</p> <p>Support from international and/or regional organisations: Since 2003, three regional projects have been implemented by RAC/SPA, the WWF MedPOL and MedPAN to help the countries of the southern and eastern Mediterranean improve the management of Marine and Coastal Protected Areas. These projects, which enjoyed financial support from the European Commission, the FFEM, the AECID and the MAVA Foundation, gave support for the crafting of zoning and management plans and for training managers.</p>

CATEGORY	TARGET
<p>III. ASSESSING AND MITIGATING THE IMPACT OF THREATS ON BIODIVERSITY</p>	<p><u>General objective</u> Contribute to achieving the WSSD targets concerning significant reduction by 2010 in the current rate of loss of biological diversity³;</p> <p><u>Specific targets</u></p> <ul style="list-style-type: none"> ✓ Updated assessment of the potential impact of threats on Mediterranean marine and coastal biodiversity by 2008 (12a, b; 13a) ✓ Maintain or restore fishery stocks to levels that can produce the maximum sustainable yield with the aim of achieving these goals for depleted stocks on an urgent basis and where possible not later than 2015²⁰ (21 a, b, c, d, e, f, g, h, i) ✓ Urgently develop and implement national plans of action, to put into effect the FAO international plans of action, in particular the international plan of action for the management of fishing capacity by 2005 and the international plan of action to prevent, deter and eliminate illegal, unreported and unregulated fishing by 2004 (relevant objective/s: 21f). Establish effective monitoring, reporting and enforcement, and control of fishing vessels, including by flag states, to further the international plan of action to prevent, deter and eliminate illegal, unreported and unregulated fishing²⁰ (21a, c, e, f, h, i) ✓ Control and regulate the urban development of coastal area, land use planning and aquaculture practices within a wider management plan by 2010 (16a; 17a; 20a, b, c) ✓ Legal regulation of recreational activities by 2008 (18 b) ✓ Reinforce control and mitigation of the introduction and spread of alien species by 2006 (15 a, b, c)

Activity (priority actions)	Aims	Assessment of implementation
<p>10) Monitor of global trade and economic policies and trends from a Mediterranean perspective, to analyse their scope and probable effects on biodiversity</p>	<p>a) Implement monitoring systems for consequences of global trade and economic policies</p>	<p>No significant activities mentioned for implementing this priority action but UNEP/MAP started to address the issue in the frame of the Ecosystem Approach through BLUE PLAN</p>

³ Extract from Paragraph 42 Plan of Implementation of the World Summit on Sustainable Development - 4 September 2003 – Johannesburg.

Activity (priority actions)	Aims	Assessment of implementation
11) Establish a regional monitoring programme following up the socio-economic impact of changes in biodiversity	a) Implement monitoring systems for socio-economic impacts of changes in biodiversity	No significant activities mentioned for implementing this priority action but UNEP/MAP started to address the issue in the frame of the Ecosystem Approach through BLUE PLAN
12) Assess the potential impact of climate change and rise in sea level on Mediterranean coastal and marine biodiversity	<p>a) Inventory and monitor of biodiversity elements and/or areas likely to be impacted by climate change</p> <p>b) Acquire the necessary knowledge to model and forecast likely effects of climate change</p>	<p>Achievements: Projects have been started in some countries to monitor the variation in sea level (e.g. monitoring the sea level in Italy by ISPRA).</p> <p>Main difficulties for implementation: Availability of data, analysis, models and scenarios are due to the limited financial, technical and human resources.</p> <p>Support from international and/or regional organisations: RAC/SPA supported a regional study on the impact of climate change in the marine environment; international reports (IPCC suggest vulnerable sights likely to be impacted by climate change.</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>13) Assess the potential impact of threats on Mediterranean coastal and marine biodiversity</p>	<p>a) Inventory of biodiversity elements and/or areas likely to be impacted by each of the following threats on biodiversity:</p> <ul style="list-style-type: none"> o Pollution o Fisheries and other resource exploitation o Introduction and spread of non-indigenous species o Uncontrolled recreation at activities o Changes in land use o Effects of water management schemes 	<p>Achievements: Most of the countries of the region have identified in their territories those marine areas that are undergoing major pollution (hot spots). For the other types of threat, the inventory of vulnerable areas has only been made on limited parts of the coast, often as part of the coastal management programmes. Furthermore, in the initial assessment made as part of implementing the Ecosystem Approach in the Mediterranean, RAC/SPA assessed the main threats to marine biodiversity in the Mediterranean. The Mediterranean countries that are members of the European Union have carried out, for waters under their jurisdiction, assessments of the state of their marine environment as part of implementing the European Directive on Marine Strategy (2008/56/EC).</p> <p>Main difficulties for implementation: Lack of financial resources to make the inventories.</p> <p>Support from international and/or regional organisations: The MedPOL programme in the context of the SAP MED helps countries to identify priority categories-targets of polluting activities and substances that the Mediterranean countries will have to eliminate or control, according to a predetermined timetable (by 2025), by implementing specific measures and actions to reduce pollution. The European Space Agency (ESA) launched the GlobWetland I (2003, completed) and GlobWetland II (2010, in progress) projects to support the implementation of the Ramsar Convention. The GlobWetland II project aims principally at developing a G-WOS pilot information system, also called the GlobWetland II information system. The system includes maps and system software, using remote sensing, indicator computation and a Web-GIS for the permanent access to the maps and information data that have been produced by the project. The GlobWetland II will produce of a number of wetland related</p>

		geo-information maps and indicators, over 200 coastal wetlands from the Southern and Eastern part of the Mediterranean basin, extending from Morocco to Turkey less than 100 km from the coastline (http://dup.esrin.esa.it/prjs/prjs123.php).
14) Mitigate the direct impact of international trade in endangered species	<ul style="list-style-type: none"> a) Improve research and control on the impact of harvesting wild species b) Adopt market and awareness measures targeting stakeholders in the chain of catching and trade in alien species (from harvesters to consumers) 	<p>Achievements: Considerable research results have been published mostly by Northern Mediterranean countries. Most of the Mediterranean countries have bodies to enforce the CITES measures concerning the checking of imports and exports of endangered species.</p> <p>Main difficulties for implementation: Lack of means of checking and lack of training for the agents of the checking authorities at ports, airports, and other border crossing points.</p>

Activity (priority actions)	Aims	Assessment of implementation
15) Control and mitigate the introduction and spread of alien and invasive species	<ul style="list-style-type: none"> a) Develop appropriate institutional measures to fight against particular sources of alien species b) Implement a regional coordination network to mitigate introduction and spread of alien species c) Fill in existing gaps in knowledge about alien species 	<p>Achievements: One of the 4 regional projects recommended by SAP BIO concerning controlling the introduction of invasive non-native species has been started; this is GLOBALLAST project (2007-14), funded by the GEF. It aims to help countries gain the necessary tools and knowledge for integrating within their national systems measures to prevent and control invasive species transferred by ships' ballast water and sediments.</p> <p>In 2012, the Contracting Parties to the Barcelona Convention adopted a Regional Strategy on managing ships' ballast water and invasive species. The strategy was crafted by REMPEC in collaboration with RAC/SPA.</p> <p>To fill in the gaps in knowledge about exotic species, several Mediterranean</p>

		<p>scientists are monitoring the appearance and propagation process of non-native marine species in the Mediterranean.</p> <p>Some countries have undertaken initiatives at national level to elaborate guidelines to mitigate introduction and spread of alien species.</p> <p>Main difficulties for implementation: For the 3 other regional projects recommended by SAP BIO, no organisation has taken the initiative of developing them. For RAC/SPA, budgetary restrictions explain this lacuna.</p> <p>Support from international and/or regional organisations: REMPEC and RAC/SPA have been able to persuade the IMO and the GEF to extend the GLOBALLAST project to the Mediterranean and ensure its implementation in a concerted way.</p> <p>The CIESM has undertaken to prepare an Atlas of exotic species with the participation of several of the region's scientists. Four volumes of the Atlas have been produced (fishes, crustaceans, molluscs and macrophyta).</p> <p>In collaboration with the HCMR (Greece), RAC/SPA has set up a database of sightings of non-native marine species in the Mediterranean.</p>
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Activity (priority actions)	Aims	Assessment of implementation
16) Control and mitigate coastal urbanization and construction of coastal infrastructure	a) Insert urban development of coastal areas into wider integrated management plans	<p>Achievements: For most of the countries of the region, controlling coastal development remains a major challenge. Since 2003, more countries have passed national laws on the use of space in the coastal area. Integration of the urban development of the coastal regions within wider integrated management plans has only been done in certain countries</p> <p>Main difficulties for implementation: The strong pressure on the coastal area and the overlapping of competence of the administrative bodies concerned</p> <p>Support from international and/or regional organisations: In the context of the Barcelona Convention, RAC/PAP has coordinated the crafting of a new Protocol on the integrated management of the coastal area. The GIZC (IMCA) Protocol was signed in Madrid on 21 January 2008 and came into force on 24 March 2011 (8 countries and the European Union have already ratified this Protocol).</p> <p>RAC/PAP coordinates coastal development projects (CDPs). Since 2003, its CDPs have been achieved in Algeria, Lebanon, Malta, Montenegro, Morocco and Slovenia. These CDPs can be added to those implemented before 2003 in Albania, Croatia, Egypt, Greece, Syria, Tunisia and Turkey.</p> <p>As part of the SMAP Programme, some projects to craft integrated management plans for coastal areas have been funded since 2003.</p>
17) Control and mitigate the effect of changes in land use	a) Promote the integration of land used planning into wider integrated management plans.	See Activity 16 above

Activity (priority actions)	Aims	Assessment of implementation
<p>18) Promote eco- and soft tourism, control and mitigate impact of recreational activities</p>	<p>a) Increase sustainable tourism, including non-consumptive and eco-tourism taking into account the spirit of the International Year of Eco-tourism 2002, the United Nations Year for Cultural Heritage in 2002, the World Eco-tourism Summit 2002 and its Quebec Declaration, and the Global Code of Ethics for Tourism as adopted by the World Tourism Organization</p> <p>b) Control and mitigate the impact of recreational activities on coastal and marine Mediterranean biodiversity</p>	<p>Achievements: The promotion of ecotourism is a priority in several countries of the region. Thus, many actions have been implemented over the past few years, including the revision of categories of tourist facilities by introducing ecotourism-specific categories.</p> <p>The introduction of labels linked to sustainable tourism and ecotourism remains limited in the Mediterranean.</p> <p>Main difficulties for implementation: The strong pressure of mass tourism developed in many Mediterranean coastal areas.</p> <p>Support from international and/or regional organisations: The Plan Bleu, as part of its 'Tourism' activities programme, has organised several workshops and crafted several documents on sustainable tourism in the Mediterranean.</p> <p>REMPEC has crafted guidelines for pleasure boating and marinas in the Mediterranean.</p> <p>ACCOBAMS, with financial support from France, has provided Morocco and Tunisia with help to do feasibility studies on whale watching as an ecotourist activity.</p> <p>ACCOBAMS is collaborating with the Pelagos Sanctuary to set up a label for the practice of whale watching.</p> <p>Several organisations (IUCN, WWF, MedPOL, MedPAN) help Mediterranean Protected Areas develop sustainable ecotourism activities.</p> <p>In 2006, the European Commission launched the EDEN (European Destinations of Excellence) project. This project encourages development models of sustainable tourism in the European Union. All the Mediterranean countries that are members of the European Union are participating in this project.</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>19) Assess and elaborate of strategies to prevent the environmental impact of sources of pollution</p>	<p>a) Assess and prevent the impact of desalination techniques b) Control the proliferation of floating plastic objects and debris c) Achieve non-pollutant marine transport and navigation techniques; pay special attention to noise and hydrocarbon pollution</p>	<p>The issue of the environmental impact of seawater desalination operations is handled in many countries through the national legislation on environmental impact studies.</p> <p>The issue of plastic debris is handled by some international organisations (MedPOL, ACCOBAMS etc.), but very few actions are mentioned at national level in the countries' National Reports. A few countries have banned the selling and use of plastic bags.</p> <p>The issue of noise at sea is not yet given sufficient attention in the Mediterranean, but international organisations are working on the issue (guidelines, etc.). In addition this issue is treated in several countries by national legislations within environmental impact assessments framework.</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>20) Control and regulation of aquaculture practices</p>	<ul style="list-style-type: none"> a) Integrate of aquaculture practices into wider integrated management plans b) Develop research and measures to minimise the impacts of aquaculture practices on the marine and coastal environment c) Adopt measures to avoid the impacts of aquaculture on the marine and coastal environment 	<p>Achievements: The widespread development of fish farming in the Mediterranean has been accompanied in most of the countries by measures to control the harmful effects of this activity on the environment, while encouraging this sector of activity to develop.</p> <p>In the Mediterranean countries of the European Union, environmental monitoring of fish farming is subject to the provisions of the Framework Directive on Water. In most of the Mediterranean countries, the setting up of fish farms is subject to an environmental impact study.</p> <p>Only some countries have integrated the setting aside of sites for fish farming in the context of integrated spatial planning of the marine area.</p> <p>Main difficulties for implementation: The strong pressure of the sector, and managing clashes of use with other activities.</p> <p>Support from international and/or regional organisations: IUCN has trained a group of experts in fish farming in the Mediterranean and has crafted environmental guidelines and sustainability indicators for this activity.</p> <p>GFCM has set up a Fish Farming Committee and launched several initiatives on indicators.</p> <p>In 2012, GFCM adopted guidelines for setting aside areas for fish farming.</p>

Activity (priority actions)	Aims	Assessment of implementation
21) Assessment, control and elaboration of strategies to prevent impact of fisheries on biodiversity	<ul style="list-style-type: none"> a) Improve fishing statistics b) Mediterranean strategy for the conservation and sustainable management of vulnerable fish and invertebrates, including sustainable related fisheries c) Improve inter- and intra-specific selectivity of gear and fishing practices, addressing particularly the problems of by-catch, discard, and ghost-fishing d) Mediterranean strategy to reduce fishing-related mortality of marine mammals, turtles and sea birds e) Mediterranean strategy to reduce the impact of trawling and other towed gear on critical habitats f) Mediterranean strategy to eliminate particularly harmful fishing practices g) Develop and refine "traditional" control measures h) Develop new management techniques i) Increase the number of marine fishery reserves to manage fishery stocks to attain the protection of 20% of the coast j) Control recreational fishing activities 	<p>Achievements: Since 2003, few new measures have been taken at national level to mitigate the impact of fishing on biodiversity. Nevertheless several European countries have carried out a few initiatives within the EU common fishery policy. Some research programmes (e.g. MEDITs) have increased the knowledge the status of vulnerable fish. A few countries undertaken projects on fishing technology to avoid/reduce by-catch.</p> <p>One of the gaps still not filled is the control of recreational fishing activities.</p> <p>However, recent recommendations made by GFCM could soon be followed by national measures (see the section on 'Support from international and/or regional organisations' below).</p> <p>Main difficulties for implementation: Great reticence by stakeholders in the fishing sector as to introducing restrictions aimed at protecting biodiversity. Difficulty in the implementation of controls by in charged national authorities/institutions.</p> <p>Support from international and/or regional organisations: In the context of this priority action, SAP BIO has provided for several specific actions that at present are the resort of the GFCM.</p> <p>GFCM being the body most concerned by fishing in the Mediterranean, RAC/SPA has since 2008 started collaboration with it to get measures adopted to reduce the impact of fishing on biodiversity. Thus, in 2011 GFCM adopted recommendations to mitigate bycatch of marine turtles and birds and in 2012 a recommendation on bycatch of cetaceans. It also launched activities for the conservation of elasmobranchs.</p>

CATEGORY	TARGET
<p>IV. DEVELOPING RESEARCH TO COMPLETE KNOWLEDGE AND FILL IN GAPS ON BIODIVERSITY</p>	<p><u>General objective</u> Improve the scientific understanding and assessment of marine and coastal ecosystems ⁴</p> <p><u>Specific targets</u> ✓ Launch research programmes before 2006 in order to fill in identified gaps (22a, b) ✓ Increase by more than 50 the number of PhD taxonomists in the Mediterranean region by 2010 (23 a, b, c)</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>22) Improve and coordinate research on biodiversity</p>	<p>a) Convene a workshop (under UNEP MAP coordination) to identify gaps in knowledge of Mediterranean coastal and marine biodiversity (at genetic, species and community/ecosystem level)</p> <p>b) Create and fund research programmes at regional level, aiming at filling in gaps and completing knowledge of coastal and marine biodiversity, as well as transferring knowledge between countries</p>	<p>Achievements: In the context of implementing the Ecosystem Approach (EcAp), an integrated assessment of the state of the Mediterranean Sea was done by a group of experts. This assessment, <i>inter alia</i>, permitted gaps to be identified regarding knowledge of Mediterranean biodiversity.</p> <p>Despite the scientific programmes implemented to get a better knowledge of Mediterranean biodiversity, several areas in the Mediterranean are still little studied. Since 2003, a considerable contribution was made by techniques of acoustic prospecting (side sweep sonar and broadband), which in many countries have enabled important areas with meadows and coralligenous to be prospected. The use of satellite monitoring means has also been started recently in the Mediterranean to study the movements of certain species such as the marine turtles, Marine birds and the fin whale.</p> <p>Among many other scientific institutions, Tour du Valat and the Greek Biotope and Wetland Centre (EKBY) carry out scientific research applied to the conservation of Mediterranean Wetlands and their biodiversity</p>

⁴ From paragraph 34 of “ Plan of Implementation “ of the World Summit on Sustainable development – Johannesburg, September 2002

		<p>The main gaps concern the southern and eastern Mediterranean, the sizes of the populations of certain species and their distribution (like the cetaceans) and the biodiversity of the deep sea areas.</p> <p>Main difficulties for implementation: As regards scientific research, the main difficulties are linked to the lack of financial resources and of expertise.</p> <p>Support from international and/or regional organisations: Support from international organisations for scientific research linked to marine and coastal biodiversity in the Mediterranean remains limited at financial level.</p>
Activity (priority actions)	Aims	Assessment of implementation
23) Improve taxonomic expertise in the region	<p>a) Implement training programmes for modern taxonomists covering all groups, in order to increase the number of specialists</p> <p>b) Gather and circulate taxonomic bibliographic information</p> <p>c) Creation of sub-regional biodiversity centres to store representative collections of Mediterranean biodiversity, coupling published work, Internet-available descriptions and pictures of both preserved and live specimens, publication of genetic sequences identifying the species, etc.</p>	<p>Achievements: Some training courses on taxonomy were organised with the support of RAC/SPA. They were practical courses and rather short. The Masters and Doctoral programmes on taxonomy recommended by RAC/SPA have not yet been introduced.</p> <p>Since 2003, some taxonomical works have been crafted in the Mediterranean on invertebrate and algal groups.</p> <p>Main difficulties for implementation: Taxonomy does not seem to attract students. Taxonomy is not among the priorities when attributing Masters or Doctoral grants.</p> <p>Support from international and/or regional organisations: Little support from these organisations for taxonomy.</p>

CATEGORY	TARGET
<p>V. CAPACITY BUILDING –</p> <p>COORDINATION AND TECHNICAL SUPPORT</p>	<p>Strengthen cooperation and coordination among global observing systems and research programmes for integrated global observation, taking into account the need for building capacity and sharing of data from ground-based observations, satellite remote sensing and other sources between all countries⁵(23a, b; 24 a, b)</p>

Activity (priority actions)	Aims	Assessment of implementation
<p>24) Achieve 'clearing-house' mechanism to focus on marine and coastal conservation activities</p>	<p>a) The available clearing-house mechanisms (national, CBD, RAC/SPA, etc.) reinforced and developed within the framework of UNEP MAP</p> <p>b) Ensure permanent updating of the Mediterranean clearing-house mechanism</p>	<p>Achievements: Clearing House Mechanisms (CHM) on biodiversity were set up in several countries. The following Parties to the Barcelona Convention have portals as part of the CBD's CHM: Egypt, France, Italy, Morocco, Spain, Tunisia, Turkey and the European Union.</p> <p>RAC/SPA has developed a CHM for the Mediterranean.</p> <p>Main difficulties for implementation: Lack of financial resources. Dispersal of information on biodiversity between several administrations, research centres and other actors.</p> <p>Support from international and/or regional organisations: Most of the Exchange Centres on biodiversity in the countries of the southern Mediterranean were set up with the support of the UNDP in the context of GEF funding.</p>
<p>25) Coordinate and develop of common tools to implement National Action</p>	<p>a) Coordinate the implementation of NAPs elaborated within the SAP BIO Project (regarding the NAPs on</p>	<p>This priority action has not been implemented mainly because of the non-availability of financial resources.</p>

⁵ From Paragraph 119a Plan of Implementation of the World Summit on Sustainable Development - 4 September 2002, Johannesburg.

Plans (NAPs)	threatened and endangered species cf. priority # 8) b) Common tools for implementing NAPs developed	
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CATEGORY	TARGET
VI. INFORMATION AND PARTICIPATION	Increased public participation in conservation initiatives

Activity (priority actions)	Aims	Assessment of implementation
26) Facilitate the access to information for managers and decision-makers, as well as stakeholders and the general public	a) Enhance capacity building to ensure free access to Mediterranean environmental information b) Update and encourage right of access to environmental information	Very little has been recorded since 2003 for this priority action
27) Promote public participation, within an integrated management scheme	a) Promote public participation	<p>Achievements: Under the urging of the Civil Society Organisation, in many Mediterranean countries the public has stepped up its participation in decisions concerning the environment. This has been seen in NGO participation in managing or decision-making on Protected Areas. In some countries public consultation is a phase in an Environmental Impact Study.</p> <p>But much remains to be done to reach a satisfactory level of public involvement in decision-making on the environment generally and the conservation of biodiversity in particular.</p> <p>Main difficulties for implementation: The difficulties encountered are not specific to environmental actions and are rather linked to the systems of</p>

		<p>governance in place in the countries of the region.</p> <p>Support from international and/or regional organisations: Most international or regional organisations, as well as backers, play a favourable part for public consultation and involvement, requiring steps in this direction for projects that they are funding or to which they are giving technical support.</p>
<p>28) Conserving the traditional knowledge of the various actors</p>	<p>a) Conserving, as a heritage, traditional knowledge about marine and coastal elements</p>	<p>Very little has been recorded since 2003 for this priority action, except for the case of wetlands</p> <p>The MedWet Initiative has launched a MedWet Culture Network which will enable different Mediterranean actors to exchange practices and information. The Mediterranean Institute for Culture and Anthropos (Med-INA) aims to promote cultural values that benefit both man and nature and has published in 2011 the book “Culture and wetlands in the Mediterranean: an evolving story” (http://www.med-ina.org/PUBLICATIONS.aspx).</p> <p>In 2010 Med-INA started a project, supported by the MAVA Foundation and the MedWet Initiative, on the potential use of cultural values in catalysing and strengthening wetland restoration efforts, through better public sensitisation and attraction of visitors.</p>

CATEGORY	TARGET
VII. AWARENESS RAISING	Increase awareness raising on marine and coastal biodiversity conservation

Activity (priority actions)	Aims	Assessment of implementation
29) Develop international collaboration in order to enhance regional public awareness	a) International cooperation and coordination on educational and awareness programmes	Very little has been recorded since 2003 for this priority action.

Activity (priority actions)	Aims	Assessment of implementation
<p>30) Organise coordinated Mediterranean-level campaigns focusing on specific regional biodiversity issues (addressed both to specific stakeholders and to the general public)</p>	<p>a) Raise awareness on key themes b) Main issues discussed in SAP/BIO brought to the attention of a wide public, including decision-makers, NGOs, scientists and researchers, tourist operators, fishing industry</p>	<p>Achievements: Public awareness and environment education are some of the most implemented actions for the conservation of species, habitats and biodiversity in general. Local and national NGOs are the main actors in this field.</p> <p>Main difficulties for implementation: Lack of coordination between the actors and therefore a lot of duplication of effort and unbalanced distribution of the themes handled. A interesting exception provided on wetlands issues by MedWet, a forum of 27 Mediterranean countries, specialized wetland centres and international environmental organizations which collaborate for the conservation of Mediterranean wetlands through local, national, regional and international collaborations. Promoting and facilitating the implementation of activities that contribute to the conservation of Mediterranean wetlands, within the framework of the Ramsar Convention.</p> <p>Flagship species attract more attention, taking it away from the other species. Lack of training on communication and pedagogy.</p> <p>Support from international and/or regional organisations: A large proportion of the awareness actions are carried out with the support of international or regional organisations. These also produce environment education and awareness material that they put at the disposal of local NGOs and other actors. They thus make a contribution to the training of environment education and awareness specialists and journalists.</p>

3. Implementation of the National Action Plans (NAPs)

In addition to the identified Priority Actions, The adopted SAPBIO included 38 National Action Plans (NAPs) addressing issues of particular relevance for the countries:

Albania

1. Action Plan for the proclamation of the Marine National Park of Karaburuni area
2. Action Plan for the rehabilitation of the Kune-Vain lagoon system
3. Action Plan for the Dalmatian pelican in Albania
4. Action Plan for building and exploitation of artificial reefs for the fisheries along
5. the Albanian coast.

Algeria

1. Action Plan for setting up a network for monitoring of *Posidonia oceanica* meadows
2. Action Plan for setting up a programme to the collect of data on the Monk seal
3. Action Plan for reducing fishing activity pressure on coastal area biodiversity hot spots
4. Action Plan for inventorying and setting up marine and coastal protected areas in Algeria

Bosnia and Herzegovina

1. Action Plan for the identification and preservation of endangered marine, freshwater and terrestrial habitats and plant communities in the Mediterranean zone of Bosnia and Herzegovina
2. Action Plan for the sustainable development of the marine and adjacent waters of Bosnia and Herzegovina: cross border co-operation issue.

Croatia

1. Action Plan for a network of Mediterranean wetlands in Croatia – management and restoration
2. Action Plan to combat negative Impact of hunting, poaching and commercial collecting on coastal zone biodiversity, including introduction of new game species on islands
3. Action Plan for mapping, assessment and protection of submerged karstic phenomena;
4. Action Plan on biodiversity conservation as a part of integral coastal zone management planning.

Egypt

1. Bio-resources assessment of Mediterranean coastal waters of Egypt, development of Mediterranean Bio-Diversity Database, and public awareness for bio-conservation
2. Development and maintenance of the Matruh Nature Conservation Sector (MNCZ)
3. Bedouin operated bio-diversity conservation and restoration programme

Israel

1. Action Plan for the conservation of marine and coastal birds in Israel

2. Action Plan for the conservation of fish along the Israeli coast of Mediterranean

Lebanon

1. Action Plan for organising awareness campaigns for the Lebanese coastal communities and the public sector;
2. Action Plan for updating of legislation and development of for marine and coastal conservation;
3. Action Plan for determining the physical parameters of the Lebanese marine environment;
4. Action Plan for establishing conservation strategies for coastal habitats
5. Action Plan for developing monitoring strategies for coastal and marine biodiversity;
6. Action Plan for Palm Islands & Tyre Coast Nature Reserves.

Libya

1. Action Plan for the conservation of marine and coastal birds in Libya
2. Action Plan on proposed new marine and coastal protected areas and national parks
3. Action Plan for the conservation of marine turtles and their habitats in Libya

Malta

1. Action Plans for the conservation of cetaceans in Maltese waters
2. Action Plan for estimating the sustainability of grouper fishing in Malta
3. Action Plan for the conservation of sharks, rays and skate in the Maltese Islands
4. Action Plan for the micro-cartography, mapping and surveillance of the *Posidonia oceanica* meadows in the Maltese Islands.

Morocco

1. Action plan for mapping Morocco's Mediterranean coast
2. Action Plan for a research programme on Morocco's Mediterranean biodiversity
3. Action Plan for elaborating programmes and projects on education and awareness, and elaborating a guide to Morocco's endangered species and ecosystems
4. Action Plan for improving the national legislation
5. Action Plan for making best use of the Mediterranean marine biodiversity
6. Action for protecting species threatened by traditional fisheries

Slovenia

1. Action Plan on Habitat cartography supported by the Geographic Information System with special emphasis on seagrass meadows
2. Action Plan for biological invasions and possible effects on biodiversity
3. Action Plan on the impact of alien populations used in mariculture on genome of wild populations of same species
4. Action Plan on Slovene commercial fishery by-catch
5. Action Plan for Sensitive ecosystems – *Posidonia oceanica* meadow(ecological conditions, cartography and monitoring based on the GIS Posidonie methodology)

Syria

1. Action Plan for the conservation of sea turtles along the Syrian coast

2. Action Plan for marine and coastal protected areas
3. Action Plan on invasive species and their impacts on marine biodiversity
4. Action Plan for determination of physical parameters of national marine waters

Tunisia

1. Action Plan for the impact of fishing activity on littoral biodiversity
2. Action Plan for a pilot monitoring of Posidonia meadows
3. Action Plan for Protecting coralligenous communities
4. Action Plan for the co-ordination and training on legal and institutional aspects
5. Action Plan for studying invasive species
6. Action Plan on awareness raising and education on biodiversity
7. Action Plan for establishing Centre for the protection of sea turtles

Turkey

1. Conservation of marine turtles in Turkey
2. Creation of marine protected areas along the Turkish coasts
3. Reducing the negative impacts of detrimental fishing practices (trawl, purse seine, spear fishing, use of explosives) on sensitive ecosystems and on vulnerable species;
4. Conservation of cetacean species in the Turkish water of the Aegean Mediterranean Sea

The incorporation of Montenegro to the Barcelona Convention was followed by the production of 5 SAP BIO National Action Plans for this country in 2004 as follows:

1. Inventory and mapping of sensitive areas
2. Action plan for the Dalmatian pelican in Montenegro
3. Assessment – revision of the status, regime and management practice of protected areas
4. Identification of the new protected areas needing appropriate status of protection on the coastal zone
5. Analysis of opportunities for and formulation of an appropriate funding strategy for biodiversity conservation

The assessment of the implementation of SAPBIO at national level, showed that the most important weakness in the implementation of the SAPBIO is related to the low rate of achievements regarding the 38 NAPs. Indeed, only few NAPs were implemented, mainly because of non-availability of financial resources and limited human ones. During their forthcoming meeting (Rabat, 1 July, 2013) the SAPBIO National correspondents will be invited to revise the list of NAPs taking into account the present needs and priorities of their countries.

4. Proposals for the future SAPBIO orientations

4.1 Background context

The orientations proposed hereinafter for the future implementation of SAPBIO were elaborated taking into account (i) the analysis of the achievements and main difficulties faced in implementing the SAPBIO during the past ten years (2003-2013) presented in Section 2,

(ii) the provisions of the priorities of the CBD's Strategic Plan (2011-2013) and (iii) the works being done under the Barcelona Convention for the implementation of the Ecosystem Approach (EcAp) in the Mediterranean. Furthermore, other recent works and initiatives of particular relevance for the conservation of the Mediterranean biodiversity were taken into account, in particular the work done at Mediterranean level for the identification of the Ecologically or Biologically Significant Areas (EBSAs) and the recommendations of the Roadmap "Towards a comprehensive, ecologically representative, effectively connected and efficiently managed network of Mediterranean marine protected areas (MPAs) by 2020" proposed by the MAP Forum held in Antalya (Turkey) in November 2012.

The Strategic Plan for Biodiversity 2011-2020

The 2011-2020 Strategic Plan for Biological Diversity adopted in Nagoya aims at promoting more efficient implementation of the CBD. It is based on a vision of strategic goals and targets. It provides a flexible framework for crafting national and regional targets and also acts as a communication tool to attract the attention of all the stakeholders and facilitating the integrating of biological diversity in wider context and national programmes. It is based on the 5 following strategic goals:

Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use

Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services

Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building

For each of these 5 strategic goals, targets were set, in total 20 targets: the Aichi targets on biological diversity. They derive from the vision of the Strategic Plan: Living in harmony with nature where by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.

Based in this vision, the Strategic Plan has the following mission: to "take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet's variety of life, and contributing to human well-being, and poverty eradication. To ensure this, pressures on biodiversity are reduced, ecosystems are restored, biological resources are sustainably used and benefits arising out of utilization of genetic resources are shared in a fair and equitable manner; adequate financial resources are provided, capacities are enhanced, biodiversity issues and values mainstreamed, appropriate policies are effectively implemented, and decision-making is based on sound science and the precautionary approach". This requires that:

- pressure on biological diversity is reduced
- ecosystems are restored
- biological resources are used in a sustainable way

- the advantages resulting from the use of genetic resources are shared justly and equitably
- sufficient financial resources are provided
- capacities are enhanced
- considerations related to biological diversity and the value of biological diversity are integrated and appropriate policies are effectively applied, and
- decision-making processes are based on solid scientific bases and the precautionary principle.

The EcAp process under the Barcelona Convention

The Contracting Parties to the Barcelona Convention adopted during their 15th Ordinary Meeting (Almeria, Spain, 2008) a roadmap composed by 7 steps for the application of the Ecosystem Approach in the management of human activities in the Mediterranean. In this context they adopted⁶ during their Ordinary meeting, held in Paris in February 2012, eleven Mediterranean Ecological Objectives (EOs).⁷

Although all these EOs are relevant for the conservation of the Mediterranean Biological Diversity, five of them have particular relevance since the operational objectives associated with them relate to conservation of species and habitats. These are:

EO1. Biological diversity is maintained or enhanced. The quality and occurrence of coastal and marine habitats and the distribution and abundance of coastal and marine species are in line with prevailing physiographic, hydrographic, geographic, and climatic conditions.

Operational objectives:

- 1.1 Species distribution is maintained
- 1.2 Population size of selected species is maintained
- 1.3 Population condition of selected species is maintained
- 1.4 Key coastal and marine habitats are not being lost

EO2. Non-indigenous species introduced by human activities are at levels that **do not adversely alter the ecosystem.**

Operational objectives:

- 2.1 Invasive non-indigenous species introductions are minimized
- 2.2. The impact of non-indigenous particularly invasive species on ecosystems is limited

EO3. Populations of selected commercially exploited fish and shellfish are within biologically safe limits, exhibiting a population age and size distribution that is indicative of a healthy stock.

Operational objectives:

- 3.1 Level of exploitation by commercial fisheries is within biologically safe limits

⁶ (Decision 20/4 "Implementing MAP ecosystem approach roadmap: Mediterranean Ecological and Operational Objectives, Indicators and Timetable for implementing the ecosystem approach roadmap").

⁷ The full list of Eos is annexed to this document

- a. The reproductive capacity of stocks is maintained

EO4. Alterations to components of marine food webs caused by resource extraction or human-induced environmental changes **do not have long-term adverse effects** on food web dynamics and related viability.

Operational objectives:

- 4.1 Ecosystem dynamics across all trophic levels are maintained at levels capable of ensuring long -term abundance of the species and the retention of their full reproductive capacity
- 4.2 Normal proportion and abundances of selected species at all trophic levels of the food web are maintained

EO6. Sea-floor integrity is maintained, especially in priority benthic habitats.

Operational objectives:

- 6.1 Extent of physical alteration to the substrate is minimized
- 6.2 Impact of benthic disturbance in priority benthic habitats is minimized

4.2 Proposed orientations

Considering the importance of having the SAPBIO harmonised with the Aichi Strategic Plan as well as with the process of the application of Ecosystem Approach to the management of the Mediterranean environment, it is proposed to:

- Extend the implementation period of SAPBIO to 2020
- Revise the objectives and the priority actions of SAPBIO

Extend the implementation period of SAPBIO to 2020:

Initially the implementation period of SAPBIO was set to 15 years starting from its adoption in 2003. The analysis presented in Section 2 (Evaluation of SAPBIO implementation) revealed that many activities are not yet implemented or were implemented partially. The remaining five years in the implementation period will not allow completing these activities. Extending the SAPBIO implementation period for two more years will give more time for implementing the priority actions and will provide for better harmonisation with the timeline set for the CBD's Strategic Plan for Biodiversity 2011-2020 and for the implementation of the Ecosystem Approach in the Mediterranean.

Revised objectives and the priority actions of SAPBIO

Harmonising the SAPBIO with the Aichi Strategic Plan and the EcAp process requires that:

- the priority actions identified in SAPBIO be streamlined with the Aichi Strategic Goals and the eleven Mediterranean Ecological Objectives adopted by the Contracting Parties
- the SAPBIO targets be reoriented to match those to be adopted by the Contracting Parties for the Ecological Objectives.

Most of the issues of relevance for the marine and coastal biodiversity covered by the Aichi Strategic Plan are also addressed by SAPBIO. However the compared analysis of both

instruments shows that the following issues from the Aichi Strategic Plan deserve to be addressed by priority actions under SAPBIO:

- The economic value of biodiversity and its mainstreaming into national policies. In this connection the Aichi Strategic Plan attaches great importance to awareness-creation amongst the decision-makers and recommends that awareness raising activities about the value of biodiversity and the services provided by the ecosystems be undertaken targeting high-level decision-makers, including governments and parliamentarians.
- The preservation of traditional knowledge and practices of local communities of relevance for the conservation and sustainable use of biodiversity. In this context Target 18 stipulates that, by 2020, such traditional practices should be respected and fully taken into account.

It is proposed that the SABIO be oriented during the period 2013-2020 towards achieving the five Strategic Goals of the Strategic Plan for Biodiversity 2011-2020 adopted within the framework of the CBD. The proposed Priority Actions presented in the following Table are grouped according to the proposed five Strategic Goals. They derive from both the Priority Action Categories I to VII of the SAPBIO (adopted in 2003) and the additional Priority Actions linked to climate change (adopted on November 2009) complemented/amended to adapt them to the Strategic Goals.

Three Priority Actions (items 9, 13 and 28 of the SAPBIO adopted in 2003) and 6 Priority Actions (items 2, 6, 7, 10, 13 and 14 of the SAPBIO climate change addendum adopted in 2009) were not inserted in the new updated version because already covered by similar Priority Action/s deriving from other initiatives or because already achieved.

Two Priority Actions (items 4 and 8 of the SAPBIO adopted in 2003) were maintained but updated according to new developments and countries implementation status.

In addition some of the Priority Actions deriving from the Aichi Strategic Plan, from the Mediterranean Ecological Objectives, from the Roadmap (Antalya 2012) and from the work done at Mediterranean level for the identification of the Ecologically or Biologically Significant Areas (EBSAs) were inserted in the Priority Actions for SAPBIO 2013-2020.

(I) to (VII) indicate the Priority Actions deriving from the Categories I to VII of the SAPBIO adopted in 2003⁸

(I-CC) to (IV-CC) indicate the Priority Actions deriving from the Categories I to IV of the SAPBIO addendum adopted in 2009

(A) indicates the Priority Actions deriving from the Aichi Strategic Plan

(EO) indicates the Priority Actions deriving from the Mediterranean Ecological Objectives

(R) indicates the Priority Actions deriving from "Roadmap: Towards a comprehensive, ecologically representative, effectively connected and efficiently managed network of Mediterranean marine protected areas (MPAs) by 2020" adopted by the Mediterranean MPA Forum (Antalya, 2012) (R)

⁸ When a SAPBIO 2003 priority action is slightly updated/modified it is indicated in the table adding "mod"

(EBSAs) indicates the Priority Actions deriving from the work done at Mediterranean level for the identification of the Ecologically or Biologically Significant Areas

**Proposed Strategic Objectives and Priority Actions for SAPBIO
for the period 2013-2020**

Strategic Goals	Priority Actions
<p>A. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society</p>	<ol style="list-style-type: none"> 1) Establish a regional programme for the monitoring of the socio-economic impact of changes in biodiversity (III) 2) Mitigate the direct impact of international trade in endangered species (III) 3) Strengthen national capacities to integrate the values of biodiversity in strategies and planning processes for development and poverty alleviation at national and local levels. (A) 4) Identify subsidies and other incentive schemes that are harmful to or may have adverse effects on marine and coastal biodiversity and implement measures to have them gradually reduced, eliminated or phased out. The inventory is to be performed at the national level and also at the international or bilateral aid systems.(A) 5) Develop guidelines and case studies for the reduction of negative effects subsidies and other incentive schemes.(A) 6) Interlink ICZM and CC impacts on Bd (I-CC) 7) Set national bodies/committees, (I-CC), develop a regional programme of training/capacity building and a multilateral monitoring programme (II-CC) on issues dealing with CC and Biodiversity (I-CC)

<p>B. Reduce the direct pressures on biodiversity and promote sustainable use</p>	<p>8) Assess the potential impact of climate change and rise in sea level on Mediterranean coastal and marine biodiversity (III)</p> <p>9) Control and mitigate the introduction and spread of alien and invasive species (III) including a regional early warning system for the identification of invasive species as a tool for managing pathways and preventing introduction and establishment of invasive species (A)</p> <p>10) Control and mitigate coastal urbanization and construction of coastal infrastructure (III)</p> <p>11) Control and mitigate the effect of changes in land use (III)</p> <p>12) Promote eco- and soft tourism, control and mitigate impact of recreational activities (III)</p> <p>13) Assess and elaborate strategies to prevent the environmental impact of sources of pollution (III)</p> <p>14) Control and regulate aquaculture practices (III)</p> <p>15) Develop pilot projects for the application to the marine environment of spatial planning of activities (aquaculture, tourism, fishing, etc.). (A)</p> <p>16) Assess, control and elaborate strategies to prevent impact of fisheries on biodiversity (III) and ensure that:</p> <ul style="list-style-type: none"> - commercially exploited fish and shellfish species are within biologically safe limits, exhibiting a population age and size distribution that is indicative of a healthy stock Sea-floor integrity is maintained, especially in priority benthic habitats (EO3) - Sea-floor integrity is maintained, especially in priority benthic habitats (EO4)
<p>C. Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity</p>	<p>17) Update, coordinate and enforce legislation to conserve biodiversity (II) and reinforce legislation on coastal land use by adapting it to CC predictions (I-CC)</p> <p>18) Develop actions to conserve threatened and endangered (coastal and marine) Mediterranean species (II)</p> <p>19) Protect marine and coastal sites of particular interest (II)</p> <p>20) Declare and develop new coastal and marine protected areas including in the (II-mod) Ecologically or Biologically Significant Areas referred to in Decision IG.20/7 (EBSAs)</p> <p>21) Encourage the implementation of the "Roadmap: Towards a comprehensive, ecologically representative, effectively connected and efficiently managed network of Mediterranean marine protected areas (MPAs) by 2020" adopted by the Mediterranean MPA Forum (Antalya, 2012) (R)</p>

<p>D. Enhance the benefits to all from biodiversity and ecosystem services</p>	<p>22) Develop awareness raising programmes targeting the general public and decision makers on the economic value of biodiversity, ecosystem services (A) and protected areas (R)</p> <p>23) Identify and implement measures for the preservation of knowledge, scientific information, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity and their customary use (A)</p> <p>24) Promoting pilot actions to safeguard and rehabilitate artisanal fisheries (A)</p> <p>25) Improve the integration of Marine and Coastal Protected Areas into their social and economic context (R)</p> <p>26) Promote, in Marine and Coastal Protected Areas and in their surrounding zones, the development of new sustainable income generating opportunities for local populations taking into account MPA objectives and zoning (R)</p>
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<p>E. Enhance implementation through participatory planning, knowledge management and capacity-building</p>	<p>27) Make a complete and integrated inventory using standardized methodologies (by sub-region) of Mediterranean coastal, wetland, and marine sensitive habitats (I-mod) and of more endangered sites and areas by CC in coastal and marine zones (II-CC)</p> <p>28) Establish monitoring programmes for endangered and threatened species and habitats (I- mod) and for species communities and habitats potentially responding to CC (I-CC mod)</p> <p>29) Promote the adequate monitoring and survey of the effectiveness of marine and coastal protected areas (I)</p> <p>30) Verify the suitability of the biological indicators already developed within the EcAp and European Directive on Marine Strategy to assess the ecological health of sensitive habitats and species, and to evaluate the effectiveness of management measures within SAPBIO(I-mod)</p> <p>31) Improve and coordinate research on biodiversity (IV)</p> <p>32) Improve taxonomic expertise in the region (IV)</p> <p>33) Coordinate and develop of common tools to implement National Action Plans (NAPs) (V)</p> <p>34) Facilitate the access to information for managers and decision-makers, as well as stakeholders and the general public (VI)</p> <p>35) Promote public participation, within an integrated management scheme (VI)</p> <p>36) Develop international collaboration in order to enhance regional public awareness (VII)</p> <p>37) Organise coordinated Mediterranean-level campaigns focusing on specific regional biodiversity issues (addressed both to specific stakeholders and to the general public) (VII)</p> <p>38) Prepare National CC and CC/Biodiversity Strategies and Action Plans (I-CC)</p> <p>39) Implement a regional raising programme on CC and Biodiversity (IV-CC).</p> <p>.</p>
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