CRITICAL ECOSYSTEM PARTNERSHIP FUND

Ecosystem Profile

MEDITERRANEAN BASIN BIODIVERSITY HOTSPOT

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EXECUTIVE SUMMARY

Humanity depends on Earth's ecosystems and their life-sustaining benefits, such as provision of clean air, supply of fresh water and delivery of healthy soils. Founded in 2000, the Critical Ecosystem Partnership Fund (CEPF) has become a global leader in enabling civil society to participate in and influence the conservation of some of the world's most critical ecosystems. CEPF is a joint initiative of l'Agence Française de Développement (AFD), Conservation International, the Global Environment Facility (GEF), the Government of Japan, the John D. and Catherine T. MacArthur Foundation, and the World Bank. As one of the founders, Conservation International administers the global program through a CEPF Secretariat. CEPF provides grants for nongovernmental and other private organizations to protect biodiversity hotspots, Earth's most biologically rich and threatened areas. The convergence of critical areas for conservation with millions of people who are impoverished and highly dependent on healthy ecosystems is more evident in the hotspots than anywhere else.

CEPF is unique among funding mechanisms in that it focuses on high-priority biological areas rather than political boundaries and examines conservation threats on a landscape scale. From this perspective, CEPF seeks to identify and support a regional, rather than a national, approach to achieving conservation outcomes and engages a wide range of public and private institutions to address conservation needs through coordinated regional efforts.

The Mediterranean Basin biodiversity hotspot is the second largest hotspot in the world and the largest of the world's five Mediterranean-climate regions. The hotspot covers more than 2 million square kilometers and stretches west to east from Portugal to Jordan and north to south from northern Italy to Cape Verde. The Mediterranean Basin is the third richest hotspot in the world in terms of its plant diversity (Mittermeier *et al.* 2004). Approximately 30,000 plant species occur, and more than 13,000 species are found nowhere else, or endemic, to the hotspot; yet, many more are being discovered every year (Plantlife International 2010, unpublished report).

Rivaling the natural diversity in the hotspot, the cultural, linguistic and socioeconomic diversity of the region is spectacular. The region contains some of the world's first and greatest civilizations, the world's oldest sovereign state and its first constitutional republic with San Marino dating back to 301 A.D. Many of the ecosystems reached an equilibrium long ago with human activity dominating the landscapes. However, this delicate balance is in a precarious state as many local communities depend on remaining habitats for fresh water, food and a variety of other ecosystem services. CEPF investment in the Mediterranean Basin Hotspot is essential to stem the threats, balance economic development with the needs of natural areas, and conserve biodiversity and ecosystem services in this vast region.

The Mediterranean Basin Hotspot Ecosystem Profile was developed under the leadership of Doğa Derneği (the BirdLife partner in Turkey) thanks to CEPF investment and the generous financial and technical support of the Prince Albert II of Monaco Foundation and MAVA Fondation pour la Nature. Twelve organizations worked collectively for the development of the profile, due to the exceptionally large size and complexity of the region. Key organizations within the profiling team, in addition to Doğa Derneği, include Conservation International, BirdLife International and its partners in the region, Tour du Valat, IUCN and Plantlife International.

The ecosystem profile presents an overview of the hotspot in terms of its biological importance in a global and regional context, potential climate change impacts, major threats to and root causes of biodiversity loss, socioeconomic context and current conservation investments. It provides a suite of measurable conservation outcomes, identifies funding gaps and opportunities for

investment, and thus identifies the niche where CEPF investment can provide the greatest incremental value. It also contains a five-year investment strategy for CEPF in the region. This investment strategy comprises a series of strategic funding opportunities, termed strategic directions, broken down into a number of investment priorities outlining the types of activities that will be eligible for CEPF funding. The ecosystem profile does not include specific project concepts as civil society groups will develop these for their applications to CEPF for grant funding.

Conservation Outcomes

Across the Mediterranean Basin Hotspot, a systematic conservation planning process identified the highest priorities for biodiversity conservation. A total of 1,110 key biodiversity areas were identified covering more than 40.7 million hectares, or approximately 19.5 percent of the total hotspot. Of the total, 512 contain coastal or marine habitat, highlighting the importance of these priorities for both terrestrial and marine conservation. In addition, 17 biodiversity conservation corridors were identified containing 435 of the key biodiversity areas. These corridors are essential for protecting the processes and linkages required to support threatened species, particularly in terms of long-term adaptation to climate change. Given the growing importance of ensuring resilience of ecosystem functioning for essential services to natural and human communities, the corridor outcomes are also the most important for achieving long-term conservation results.

Other Important Considerations

Despite the considerable, yet geographically disproportionate investments in conservation in the basin, many immediate and long-term threats to biodiversity persist, primarily because of the region's reliance on tourism. This will be exacerbated as tourism increases and as populations grow, causing further strain on the limited water, land and energy resources. Coastal and urban development for tourism, overexploitation of natural resources including water for commercial and subsistence purposes, and habitat degradation and loss from agriculture continue to degrade and destroy habitats at disturbing rates, making the entire region and its biodiversity more susceptible to negative impacts from anticipated climatic changes.

Underlying these direct threats are poverty, high population density, lack of a coordinated basin-wide response, poor knowledge and capacity, and changes in global climatic conditions. Improved management of the hotspot's landscapes and seascapes is essential for sustainable growth and development in the region. Government and nongovernmental capacity must be increased if conservation is to succeed in this hotspot in the long term.

CEPF Niche and Investment Strategy

Governments in the hotspot have devoted much effort to the designation and management of protected areas for conservation, tourism and recreation. While these efforts have helped to advance conservation locally, they do not always address strategically targeted on-the-ground priorities. As a consequence, there are significant gaps in terms of protected area coverage and mainstreaming biodiversity conservation in wider policies. The weakness in protected area management and insufficient enforcement of laws is another concern. Furthermore, governmental initiatives in different parts of the Mediterranean Basin Hotspot have often inadequately mobilized civil society participation, expertise and support.

The CEPF niche for investment in the Mediterranean has been formulated through an inclusive, participatory process that engaged civil society, donor and government stakeholders throughout the region. Based on the refinement of the full set of outcomes identified, CEPF investments will

focus on six biodiversity conservation corridors with 50 of the highest-priority key biodiversity areas. The remaining 218 key biodiversity areas in these six priority corridors will benefit from landscape-level interventions as they are critical for maintaining the integrity of ecosystem processes and services. In addition a further 20 key biodiversity areas represent highly irreplaceable and vulnerable sites in five other corridors will be the focus of site-level investments. A number of these sites also contain some of the last remaining pristine coastline in the Mediterranean Basin. In total, 15 countries will benefit from the investment.

CEPF's niche will be to work with all actors engaged in conservation and development activities in Mediterranean Basin countries to foster partnerships in priority corridors and sites. Such partnerships will seek to reduce impacts of these developments on natural resources and systems that the large communities are dependent on. In addition, opportunities to increase the benefits and reduce upland shifts in land use by the communities within these landscapes will be explored. These approaches will be based upon applying the experiences of unsustainable development in other parts of the Mediterranean Basin, as well as introducing new approaches. The ecological footprint in the northern part of the Mediterranean is significantly higher than in the South and therefore investment in the South presents an important opportunity to ensure areas with high biodiversity and high levels of threat but not yet as high of an ecological footprint can be effectively protected.

Currently, few funding organizations support civil society to play a vital role in the conservation of priority key biodiversity areas and the water basins where these areas are located. Most key biodiversity areas are inhabited by large numbers of people that closely rely on water and other natural resources in these areas. Therefore, civil society in the hotspot, in its own right, is crucially positioned to conserve and sustain biodiversity. Furthermore, civil society organizations can effectively stimulate partnership between the governments and the corporate sector toward conservation of biodiversity.

CEPF Strategic Directions and Investment Priorities

STRATEGIC DIRECTIONS	INVESTMENT PRIORITIES
1. Promote civil society involvement in Integrated Coastal Zone Management to minimize the negative effects of coastal development in three priority corridors (Southwest Balkans; Cyrenaican Peninsula; and Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia), and in 20 coastal and marine priority key biodiversity areas in other corridors	1.1 Support civil society involvement in the development and implementation of Integrated Coastal Zone Management (ICZM) and the advancement of best practices in integrating nature conservation with the tourism sector 1.2 Raise awareness and influence the choices of the European tourist market and tourism businesses in favor of tourism practices appropriate for nature 1.3 Support local stakeholders to advance and benefit from nature-based tourism through the diversification of tourism-related activities and generation of alternative livelihoods

2. Establish the sustainable management of water catchments and the wise use of water resources with a focus on the priority corridors of the (1) Atlas Mountains, (2) Taurus Mountains, (3) Orontes Valley and Lebanon Mountains and (4) Southwest Balkans	2.1. Contribute to and establish Integrated River Basin Management (IRBM) initiatives for pilot basins and replicate best practices, to reduce the negative impacts of insufficiently planned water infrastructures 2.2. Support IRBM policy and legislation development and implementation through capacity building and advocacy at all appropriate levels 2.3. Support innovative financing mechanisms for conserving and restoring freshwater ecosystems and traditional water catchments 2.4. Facilitate and support adaptation to climate change via improving water use efficiency in agricultural landscapes and allowing environmental flows for key biodiversity areas 2.5 Share and replicate the lessons learned and best practices from and with other river basin management experiences elsewhere in the Mediterranean
3. Improve the conservation and protection status of 44 priority key biodiversity areas	3.1. Establish new protected areas and promote improved management of existing protected areas by developing and implementing sustainable management plans 3.2. Develop financial mechanisms that support protected areas while enhancing sustainable livelihood and promoting community management of priority key biodiversity areas 3.3. Raise awareness of the importance of priority key biodiversity areas, including those that have irreplaceable plant and marine biodiversity
4. Provide strategic leadership and effective coordination of CEPF investment through a regional implementation team	4.1. Build a broad constituency of civil society groups working across institutional and political boundaries toward achieving the shared conservation goals described in the ecosystem 4.2. Act as a liaison unit for relevant networks throughout the Mediterranean to harmonize investments and direct new funding to priority issues and sites.

Through these four strategic directions, CEPF will help to reduce the negative impacts of the tourism industry before it becomes as problematic for the southern and eastern Mediterranean as it has been for the north. This will be complemented by supporting the wise use of one of the scarcest resources in the hotspot, namely, water. CEPF will address the ecological and economic aspects of water consumption primarily at the water basin scale, but also at local and national scales, if appropriate. Some key biodiversity areas within the hotspot will certainly require more indepth attention due to their high irreplaceability and vulnerability. CEPF will address this via supporting the enhancement of the existing protected areas network. Most of the actions will be targeted to six priority corridors and 70 key biodiversity areas.

Conclusion

The Mediterranean Basin Hotspot is one of the biological wonders of the world. CEPF will provide a source of funding in the hotspot that is designed to reach civil society in a way that complements funding from government agencies and other donors and inspires innovative conservation activities. The development of this comprehensive ecosystem profile and the CEPF investment strategy was made possible by extensive consultation with stakeholders. It also represents a landmark: Through this process, for the first time, there has been an attempt to assess threats throughout the Mediterranean Basin and develop a strategy to address these—a critical, first step for this important region of the world.

INTRODUCTION

There is growing evidence of the many functions and economic benefits of natural ecosystems to the human being. Nevertheless, the fast depletion of natural resources continues worldwide. The current rate of global extinctions of plants and animals due to human activities is more than 1,000 times higher than the average rates observed throughout life's history on Earth (Pimm *et al.* 1995). As a response to this dilemma, a range of tactics has been developed over the past 10 years toward sustaining the world's critical ecosystems and ecological services.

The "biodiversity hotspots" concept is one of the most successful tactics developed to safeguard the biologically richest and most endangered areas on Earth (Myers *et al.* 2000). A recent analysis documents and describes 34 biodiversity hotspots in the world, each holding at least 1,500 plant species found nowhere else, or endemic, and having lost at least 70 percent of its original habitat extent (Mittermeier *et al.* 2004). The biodiversity hotspots concept has united much of the world's conservation and sustainable development community, leading to action across the world's most threatened areas.

Humanity depends on Earth's ecosystems and their life-sustaining benefits, such as provision of clean air, supply of fresh water and delivery of healthy soils. Founded in 2000, the Critical Ecosystem Partnership Fund (CEPF) has become a global leader in enabling civil society to participate in and influence the conservation of some of the world's most critical ecosystems. CEPF is a joint initiative of l'Agence Française de Développement (AFD), Conservation International, the Global Environment Facility (GEF), the Government of Japan, the John D. and Catherine T. MacArthur Foundation, and the World Bank. As one of the founders, Conservation International administers the global program through a CEPF Secretariat. CEPF provides grants for nongovernmental and other private organizations to protect biodiversity hotspots, Earth's most biologically rich and threatened areas. The convergence of critical areas for conservation with millions of people who are impoverished and highly dependent on healthy ecosystems is more evident in the hotspots than anywhere else.

The CEPF Donor Council has approved the Mediterranean Basin Hotspot as a priority for CEPF investment as part of a major expansion of the global program. The hotspot is the second largest hotspot in the world and the largest of the world's five Mediterranean-climate regions. It covers 2,085,292 square kilometers and stretches west to east from Portugal to Jordan and north to south from northern Italy to Tunisia. It also includes parts of Spain, France, the Balkan States, Greece, Turkey, Syria, Lebanon, Israel, Egypt, Libya, Morocco and Algeria, as well as around 5,000 islands scattered around the Mediterranean Sea. West of the mainland, the hotspot includes a number of Atlantic islands: the Canaries, Madeira, the Selvages (Selvagens), the Azores and Cape Verde.

In terms of its plant diversity, the Mediterranean Basin Hotspot is the third richest biodiversity hotspot in the world (Mittermeier *et al.* 2004). Approximately 13,000 plant species are endemic to the hotspot; yet, many more are being discovered every year (Plantlife International 2010, unpublished report).

The hotspot is one of the most popular tourism destinations of the world, with 32 percent of the world's tourists (220 million per year) visiting the hotspot (Plan Bleu 2006). Species populations in the hotspot have become increasingly fragmented and isolated as a result of infrastructural development mainly triggered by the tourism industry. The pressure on scarce water resources resulting from major water investments as well as climate change has recently become the most important pressure on nature. The increasing number and

magnitude of water investments has caused irreversible damage to the fragile water cycle of small rivers basins in the hotspot.

Figure 1. Map of the Mediterranean Basin Hotspot

CEPF develops ecosystem profiles to identify and articulate an investment strategy for each hotspot that will receive funding. Preparation of the ecosystem profile is not simply a desk study but involves a regional participation process so that the final outcome is owned and used by stakeholders in the region. Each ecosystem profile reflects a rapid assessment of biological priorities and the underlying causes of biodiversity loss within particular ecosystems. The profile couples these two elements with an inventory of conservation-related investment taking place within the region and other key information to identify how CEPF funding can provide the greatest incremental value. Finally, each profile provides a clear picture of what the conservation priorities are, and specifically, which ones would be the most appropriate to receive CEPF investment.

Defining the "conservation outcomes" for a given hotspot is the most critical step in the ecosystem profiling process. These outcomes refer to the entire set of conservation targets in a hotspot to be achieved in order to prevent biodiversity loss. The CEPF funding niche and strategy is based upon these outcomes, firstly to ensure that CEPF investments are directed at relevant issues, and secondly to enable measurement of the success of investments, since these targets also represent a baseline for monitoring.

Conservation outcomes are identified at three scales representing (i) the globally threatened species within the region, (ii) the sites that sustain them (key biodiversity areas), and (iii) the landscapes necessary to maintain the ecological and evolutionary processes upon which those sites depend — the corridors. Respectively, these outcomes are: "extinctions avoided," "areas protected" and "corridors created." In defining outcomes at the species, site and corridor levels, CEPF aims to identify targets that are quantitative, justifiable and

repeatable. CEPF is not trying to achieve all of these targets in every hotspot, but its investment niche and strategy aims to address a priority subset of them.

Each ecosystem profile recommends broad strategic funding directions that can be implemented by the civil society to contribute to the conservation of biodiversity in the hotspot. To this end, CEPF provides civil society with an agile and flexible funding mechanism. An additional purpose is to ensure that those efforts complement existing strategies and frameworks established by local, regional and national governments. CEPF promotes working alliances among community groups, nongovernmental organizations (NGOs), government, academic institutions and the private sector, combining unique capacities and eliminating duplication of efforts for a comprehensive approach to conservation. CEPF targets transboundary cooperation when areas rich in biological value straddle national borders, or in areas where a regional approach will be more effective than a national approach. While biodiversity hotspots are identified based on their terrestrial biodiversity, ecosystem profiles include coastal and nearshore marine priorities.

This report follows the above discussed main principles of ecosystem profiling and presents the biological and thematic basis for CEPF investments in the Mediterranean Basin Hotspot.

BACKGROUND

The Mediterranean Basin Hotspot Ecosystem Profile was developed under the leadership of Doğa Derneği (the BirdLife partner in Turkey) thanks to CEPF investment and the generous support of the Prince Albert II of Monaco Foundation and MAVA Fondation pour la Nature. Twelve organizations contributed to the preparation of the profile, due to the exceptionally large size and complexity of the region. Key organizations within the profiling team, in addition to Doğa Derneği, include Conservation International (CI), BirdLife International and its partners in the region, Tour du Valat, IUCN and Plantlife International. The basis of this partnership was established at an informal stakeholder consultation meeting in France, at the headquarters of Tour du Valat on 4-5 December 2008.

Tour du Valat (TdV) in France led the conservation outcomes assessment in relation to freshwater ecosystems. The TdV team worked on identification and delineation of freshwater key biodiversity areas. Sociedad Española de Ornitología (SEO/BirdLife, BirdLife partner in Spain) carried out the marine assessment and prepared a report on existing conservation investments, institutional frameworks and policy and legislation in the hotspot. The BirdLife International Global Secretariat supported SEO for carrying out the marine assessment. The Royal Society for the Protection of Birds (the RSPB/BirdLife, BirdLife partner in the UK) made the threat analysis of the hotspot and conducted the socioeconomic analysis. The climate change assessment is carried out by the Cirrus Group. The assessment presents the predicted impacts of climate change in the region with specific emphasis on adaptation and mitigation opportunities. CI worked in close cooperation with Doğa Derneği and TdV for the identification of conservation outcomes — key biodiversity areas and corridors.

Furthermore, regional coordinators supported the CEPF profiling process and coordinated the data flow between individual countries and the profiling team. An organization was assigned for each of the four sub-regions: North Africa, Northern Mediterranean, Macaronesia and the Middle East. Association "Les Amis des Oiseaux" (AAO/BirdLife, BirdLife partner in Tunisia), SEO, Sociedade Portuguesa Para O Estudo Das Aves (SPEA/BirdLife, BirdLife partner in Portugal) and BirdLife International Middle East Division, respectively, worked as regional coordinators of these four sub-regions.

Two stakeholder consultation workshops were organized to enhance the information flow between project partners and national stakeholders. In Istanbul, Turkey, a stakeholder workshop was organized for key stakeholders in the Northern Mediterranean, Macaronesia and the Middle East, while stakeholders from North Africa met in Kénitra, Morocco. Both meetings were organized in the first week of December 2009 and each lasted two days. A wider consultation process was carried out with many other stakeholders through bilateral communications, before and after the stakeholder consultation workshops. Following this process, a final regional stakeholder workshop was held in March 2010, attended by key experts and stakeholders. At this workshop, input was received from participants and was incorporated into the final draft of the profile.

BIOLOGICAL IMPORTANCE OF THE MEDITERRANEAN BASIN HOTSPOT

The Mediterranean Basin Hotspot is one of the greatest areas for endemic plants on Earth and includes several epicenters of plant diversity. These factors combined make the Mediterranean Basin Hotspot the third richest hotspot in the world in terms of its plant biodiversity (Mittermeier *et al.* 2004).

Two main circumstances have contributed to the high diversity and spectacular scenery of the hotspot: (i) its location at the intersection of two major landmasses, Eurasia and Africa and (ii) huge topographical diversity and altitudinal differences ranging between the sea level and 4,165 meters in the west (Morocco) and 3,756 meters in the east (Turkey). Its climate is unique, characterized by cool, wet winters and hot, dry summers. Nevertheless, the rainfall ranges between 100 millimeters and 3,000 millimeters, resulting in high vegetation diversity within the region. The above mentioned reasons, collectively, resulted in an exceptionally high plant endemism and diversity. The Mediterranean Basin Hotspot is the third richest hotspot in the world in terms of its plant diversity (Mittermeier *et al.* 2004). Approximately, 13,000 plant species are endemic to the hotspot; yet, many more are being discovered every year (Plantlife International 2010, unpublished report).

Evergreen oak tree, coniferous and deciduous forests form the climax vegetation of large areas of the hotspot. Nevertheless, much of this has disappeared due to thousands of years of human settlement and habitat modification that has distinctly altered the climax vegetation (Tucker and Evans 1997). Today, the most widespread vegetation type is hard-leafed or sclerophyllus shrublands called maquis, maintained by grazing and sporadic fires. Many of the endemic and restricted-range plants depend on this anthropogenic habitat, thus, several species are threatened from land-use changes and rural abandonment (Tucker and Evans 1997).

Geography, Climate and History

The Mediterranean Basin Hotspot covers 2,085,292 square kilometers. It stretches across 34 countries and territories from Madeira and the Azores in the west to northern Iraq in the east. It includes northern Italy and the extreme south of Morocco. The majority of the Iberian Peninsula and all of the Atlas Mountains in Morocco are included in this hotspot. In the southern Mediterranean, only the narrow coastal portions (<200 square kilometers) of Algeria, Tunisia, Libya and Egypt lie within the hotspot. The Middle Eastern portions cover much of the mountains of Lebanon, Israel and Syria and stretch as far inland as northern Iraq. Nearly 30 percent of Turkey is covered. The hotspot stretches into the Balkan states, covering the karstic lakes and rivers extending from sea level up to 1,800 meters at Mount Dinara.

The altitudinal range is enormous with the Atlas Mountains towering at more than 4,000 meters and the Dead Sea as far as 420 meters below sea level, the lowest point anywhere on Earth. The two highest peaks are the High Atlas Mountains (4,165 meters) in Morocco and Taurus Mountains (3,756 meters) in Turkey.

The marine portion of the Mediterranean Basin Hotspot includes 2,500,000 square kilometers of sea, which extends from 5.5ºW to 36ºE along 4,000 kilometers, and from 30 to 46ºN. The name of the sea refers to *Mediterraneum,* which means "sea in the middle of land." The unique connections with the surrounding seas and oceans are through the narrow Strait of Gibraltar (14 kilometers wide and 320 meters deep) with the Atlantic Ocean, and the Channel of Dardanelles (even narrower and only 70 meters deep) including the beginning of the Black Sea, as well as through the artificial Suez Canal with the Red Sea since 1869 (Hofrichter 2001). The Straits of Sicily divides the sea into two main basins — the western Mediterranean Basin (with more Atlantic influence) and the eastern Mediterranean Basin — that remain to some extent disconnected (Cartes *et al.* 2004).

The climate of the Mediterranean Basin Hotspot is characterized by cool, wet winters and hot, dry summers. There are only five regions in the world characterized by this type of climate and the Mediterranean Basin is by far the largest among these regions. It covers more than three times the area of the other regions combined together. Rainfall in the region ranges from as little as 100 millimeters to more than 3,000 millimeters per annum. The Atlas Mountains and the Macaronesian Islands receive plentiful rainfall with the moisture pouring in over the Atlantic; while portions of the Cyrenaican peninsula in Libya abutting the Sahara receive very little precipitation.

The general ocean circulation of the Mediterranean Basin is dominated by the exchange of water masses at the Gibraltar Strait (Millot and Taupier Letage 2005), greatly affecting the climate. The warm Atlantic surface waters enter the Mediterranean Basin here, whereas cold, low-salinity, deep Mediterranean waters leave to the Atlantic. Within the Mediterranean Basin the overall circulation is cyclonic: the influx of Atlantic waters moves towards the east and eventually crosses the Straits of Sicily into the eastern basin. The return water flows along the European coast, increasing in salinity and temperature. Overall, the western basin is characterized by higher productivity than the eastern basin, and most of the primary production is concentrated over the continental shelf. The Macaronesian region largely covers an open oceanic area, characterized by relatively low productivity (for example, Davenport *et al.* 2002).

The Mediterranean Basin has given rise to some of the greatest civilizations on Earth. Dense human populations have been scattered across the hotspot for several millennia. Although the hotspot covers a vast area, much of the vegetation in the basin has been heavily altered by human habitation. The Mediterranean Basin Hotspot has the lowest percentage of natural vegetation remaining of any hotspot (approximately 5 percent). Many forests have been converted to agriculture.

It would be naïve to focus only on pristine habitats as there has been significant co-evolution across the hotspot with semi-transformed habitats holding many rare and threatened taxa. The present population of the basin is more than 300 million and it is increasing. The northern and eastern populations of the Mediterranean Basin are relatively stable but numbers are increasing rapidly in North Africa, with roughly 160 million today and a predicted 206 million by year 2025.

Sadly, less than 5 percent of the total land area of the hotspot is under some form of protection. The low level of protection, extremely low level of remaining habitat, high threat and exceptionally high endemism make the Mediterranean Basin Hotspot among the "hottest" of all biodiversity hotspots.

Habitats and Ecosystems

The collision of the African and Eurasian plates in the mid-tertiary has shaped the basin to yield huge topographic, climactic and geographic variability. This diversity has given rise to an astounding array of species and habitats. WWF has listed 32 ecoregions occurring in the hotspot and these can be classified as three broad vegetation types:

Maquis: This is the dominant vegetation type in the region and it is characterized by hard-leaved shrubland mainly consisting of *Cistus, Erica, Genista, Juniperus, Myrtus, Phillyrea, Pistacia* and other evergreens. Many of these vegetation types were once derived from forests.

Forests: Forests were once common but many have been converted into arable land or pastures since the onset of civilization here, some 8,000 years ago. Nevertheless, pine and deciduous forests still cover significant areas in the Northern and Eastern Mediterranean Basin, especially along the Taurus Mountains in Turkey. The rare cedar (*Cedrus*) forests are confined to the northeast area of the hotspot extending between Western Taurus Mountains in Turkey and Lebanon, mainly above 1,000 meters.

Garrigue: This habitat is restricted to the semi-arid, lowland and coastal regions of the basin and it is maintained by grazing and fires. These species make up the aromatic, soft-leaved and drought resistant taxa comprised mainly of *Rosmarinus*, *Salvia* and *Thymus*.

Natural and human-caused fires played a major role in shaping the Mediterranean Basin vegetation. Many of the plants are pyrophytes, or fire-loving, adapted or even depending on fire for reproduction and historically associated with herding of sheep and goats.

The Mediterranean has the two main basins (western and eastern) separated by the Strait of Sicily. However, at a smaller scale, the complex topography also allows some degree of isolation between areas within the two main Mediterranean Basins, thus contributing to the local marine biodiversity (Abelló *et al.* 2002). In spite of its relativly small size and isolation, the Mediterranean Sea is a rather deep (average depth 1,500 meters, maximum

depth around 5,000 meters), with overall narrow continental shelves that represent less than 25 percent of the total area. Local areas of relatively wide continental shelf are primarily sedimentary, and related to the most important rivers in the region (especially the Nile, Po, Rhone and Ebro rivers), with the exception of the Tunisian Plateau, which is a structural part of the continental shelf (Sardà *et al.* 2004).

There are five main habitat types which constitute Mediterranean Basin marine biodiversity. These include:

Seamounts: These are oceanic mountains that do not reach the sea surface. They are isolated from each other, forming undersea islands. These features result in different types of fauna and lead to a higher degree of endemism.

Submarine canyons: Steep-sided valleys on the sea floor of the continental slope. As in the case of seamounts, they can provide a very particular substrate for certain species, thus creating rich and isolated benthic communities. In the Mediterranean Sea, submarine canyons are particularly known for the interesting communities of plankton and hydromedusae that they hold (Gili *et al.* 2000).

Seagrasses: Marine flowering plants that usually form large prairies (or meadows) in shallow areas. These prairies constitute the habitat of a wide diversity of marine species, providing substrate, shelter and an ideal spawning and nursery site. They also play an important role in oxygenating the water, preventing coastal erosion by trapping sediments, and enhancing water transparency.

Maërl beds: Formed by an accumulation of unattached calcareous red algae (*Rhodophyta*), which grow in a superficial living layer on sediments within the photic zone. Maërl beds are extremely sensitive due to their very low capacity for regeneration. Maërls can be found all over the Mediterranean Sea and Macaronesia (Azores and the Canary islands), in relatively shallow waters (Barberá *et al.* 2003).

Coralligenous communities: These combine both plant and animal species, and are relatively coastal, but can be found deeper than maërl beds, down to around 200 meters. Coralligenous beds are widespread in the Mediterranean Sea, although human impact has made them largely disappear in many areas.

Species Diversity, Endemicity and Global Threat Status

High endemism in the western half of the basin is driven by the age of the geological platform with relictual endemics, while in the eastern portion of the basin species are driven by glacial events and underlying rock substrata.

The Mediterranean Basin is a center of plant endemism, with 10 percent of the world's plants found in about 1.6 percent of the Earth's surface. The hotspot has roughly the same plant diversity (approximately 30,000 species) as all of tropical Africa, albeit in a surface area one-fourth the size of sub-Saharan Africa.

The majority of the avian and mammalian fauna originate from outside the Mediterranean Basin, in particular from Eurasia and Africa. These species have higher dispersal abilities in contrast to the notable herpetofauna across the basin which has greater endemicity. There

are several ancient lineages and many endemic genera for reptiles, amphibians and freshwater fish (Table 1).

Table 1. Species Endemism in the Mediterranean Basin Hotspot

Taxonomic Group	Species	Endemic Species	Percent Endemism
Plants	30,000	13,000	43
Mammals	330	87	26
Birds	600	16	3
Reptiles	357	170	48
Amphibia	115	71	62
Freshwater Fish	400	253	63

While there is huge diversity across this vast region, there are 10 principal areas that serve as centers of plant diversity for the basin (Médail and Quézel 1997). These areas account for roughly 44 percent of the endemics in the basin. These 10 areas include: the High and Middle Atlas Mountains in North Africa; the Rif-Betique range in southern Spain and two coastal strips of Morocco and Algeria; Maritime and Ligurian Alps of the French-Italian border; Tyrrhenian Islands; southern and central Greece; Crete; southern Turkey and Cyprus; Israel and Lebanon; Cyrenaica in Libya; and the Macaronesian islands.

For the marine portion of the hotspot, the disconnect between the Mediterranean Sea and the Atlantic Ocean is only partial, with more than 50 percent of the Mediterranean taxa being of Atlantic origin (UNEP/MAP-Plan Bleu 2009), and intense gene flow still present in some groups (Patarnello *et al.* 2007). The Macaronesian islands are largely oceanic, with abyssal plains scattered with numerous seamounts (plus the islands) that act as biodiversity islands for marine biota (for example, deep-water coral reefs) (Mitchell-Thomé 1976, Scheidegger 2002). Biological marine values are primarily related to seamounts and the slope of the islands, which remain largely isolated from each other. This particularly applies to deep corals. The region is also important as stronghold for large pelagic fish, seabirds and cetaceans.

The Mediterranean Sea is a stronghold of marine biodiversity with 7.5 percent of the world's marine fauna and 18 percent of marine flora concentrated in this region. This remarkable diversity of species is found in only 0.8 percent of the surface area and 0.3 percent of the volume of the World's oceans (for example, Bianchi and Morri 2000, Hofrichter 2001). The isolation of the basin is reflected in the high degree of endemism, estimated to be roughly 28 percent. Most of the biodiversity is concentrated in shallow coastal areas, although there are key biodiversity elements associated with deep waters, as well as with offshore pelagic waters (Hofrichter 2001, UNEP/MAP-Plan Bleu 2009). Overall, the western Mediterranean is richer than the eastern part, in terms of both productivity and species richness.

Mammals

The mammal fauna of the Mediterranean Basin includes more than 330 species. Of these, 87 are terrestrial endemics, with rodents, shrews, moles and hedgehogs being the most numerous. None of the hotspot's 15 marine mammals are endemic. The terrestrial mammals in the Mediterranean Basin fall into 10 major groups: Carnivora, Cetartiodactyla, Chiroptera, Eulipotypla, Hyracoidea, Lagomorpha, Macroscelidea, Perissodactyla, Primates,

and Rodentia. The majority are small volant and non-volant mammals. The Muridae is the largest family, comprising 62 species of mice, gerbils and jirds.

Birds

The avifauna of the hotspot consists of 600 species, including 16 endemics. Three of the centers of endemism mentioned above (Cyprus, Madeira/Canary Islands and the Cape Verde) overlap with BirdLife International's Endemic Bird Areas (Stattersfield *et al.* 1998). There are a significant number of species that migrate from Europe to Africa crossing the Mediterranean Basin in Bosphorus, Rift Valley, Gibraltar, Sicily, the Balearics, Corsica, Crete, Sardinia and Cyprus.

Reptiles

Due to the predominantly arid nature of the basin, richness and endemism among reptiles is notably higher when compared with other taxa. There are 357 species of reptiles (including two species of marine turtle) of which 170 species, nearly half (48 percent), are endemic. Although the basin contains five orders of reptiles — Amphisbaenidae, Crocodylia, Ophidia, Sauria and Testudines — the great majority of the species are snakes (30 percent) and lizards (67 percent). Among the reptiles, there are four endemic genera, Algyoides, Trogonophis, Macroscincus, and Gallotia. Among testudines, five species occur here representing 16 percent of the world's total. Reptile richness and diversity is highest in the eastern part of the hotspot, particularly in southern Turkey, Lebanon, southwestern Syria, Israel, Palestinian territories and northern Egypt. There is also a peak of species endemism and diversity in the semi-arid mountainous regions of North Africa, particularly in the Atlas and Taurus Mountains and along the coastal portions of Morocco and Algeria.

Amphibia

Amphibian diversity and richness patterns are opposite of that for reptiles. First richness is very low overall and the species distribution patterns have highest richness for amphibians in areas of higher rainfall, notably western Spain, northern Italy, France, Slovenia and Croatia. A total of 115 species occur in the basin with 71 endemics. Despite richness being lower, endemism is relatively high with 64 percent of all species as endemics to the hotspot. The family of Discogolossid frogs is nearly endemic to the region with 11 of the 12 species in this family endemic to this hotspot. Additionally, two of the three species in the Pelodytidae family are endemic to the hotspot. The basin contains 54 percent of the world's species in the Salamandridae family including five endemic genera.

Freshwater Fish and Odonata

The freshwater fish in the region are derived from the rich faunas of Eurasia and Africa. Of the 400 species of freshwater fish in the hotspot, 253 are endemic. A total of 165 species of Odonates are found in the Mediterranean Basin Hotspot of which 61 belong to the Zygoptera suborder (damselflies) and 104 to the Anisoptera suborder (dragonflies). Diversity largely coincides with precipitation patterns; areas with relatively high rainfall, like the Alps and the mountains of the Balkans, Turkey and the Maghreb, have high diversity. Almost one in seven of the dragonfly species (22 species) found in the Mediterranean Basin are endemic to the region, with the highest numbers of endemic species found in the Maghreb and the Levant. The Southern Balkans, Crete and the Western Mediterranean are also important areas for endemic species of Odonates.

Plants

Plant diversity is enormous, with roughly 30,000 plant species and with almost half of these as endemics (13,000) to the basin. Many of the endemics in the region are site-specific endemics having highly restricted ranges. These single-site endemics are found on many of the 5,000 islands, high mountain peaks, peninsulas and rocky cliffs in the basin. Although species richness is extremely high, endemism at higher levels is greatly reduced with only two endemic families (Aphyllanthaceae and Drosophyllaceae), both holding only single species. The Mediterranean Basin has a high degree of tree richness and endemism with a number of these trees serving as flagship species, such as the famous cedar trees of Lebanon (*Cedrus libani*) and the oriental sweet gum (*Liquidambar orientalis*). The Cretan date palm (*Phoenix theophrasti*) occurring in Crete and the Datça Peninsula in Turkey is the only palm native to the hotspot.

Marine Species

Sharks, rays and allies represent important components of the marine ecosystem due to their role as top predators. Sharks are in a particularly worrying situation, with a drop of more than 97 percent in catches (by number and by biomass) over two centuries. It should be stressed, moreover, that this data is possibly under-estimated because of a lack of knowledge about the state of stocks and their distribution.

There are several species of tuna occurring in the Mediterranean Basin, though the largest and most emblematic is the Atlantic bluefin tuna (Thunnus thynnus), which is overexploited and on the verge of extinction. This species spends part of its life cycle in the Gulf of Mexico, while its spawning grounds are found in the Mediterranean around the Balearic Islands, Sicily and Cyprus (Rooker *et al.* 2007).

Two species of marine turtles are found in the Mediterranean Sea: the loggerhead turtle *(Caretta caretta)* and the lreen turtle *(Chelonia mydas)*. The green turtle is restricted to the eastern basin, and has a regional population of only a few hundred individuals. The loggerhead breeds in the central Mediterranean, migrates through the Strait of Gibraltar to the western Atlantic and numbers only a few thousand individuals.

The cetaceans are among the most studied marine organisms in the Mediterranean Basin (Notarbartolo-di-Sciara *et al.* 2002). The Macaronesia archipelagos are very important strongholds for cetaceans, with around 30 of the world's 81 species found there (Ritter 2001). This represents the most diverse area in Europe for marine mammals, although many of these are marginal or vagrant occurrences as they migrate through pelagic waters (UNEP-CMS 2008).

CONSERVATION OUTCOMES

This ecosystem profile includes a commitment and emphasis on using conservation outcomes — targets against which the success of investments can be measured — as the scientific underpinning for determining CEPF's geographic and thematic focus for investment. Conservation outcomes are the full set of quantitative and justifiable conservation targets in a hotspot that need to be achieved in order to prevent biodiversity loss.

Conservation outcomes can be defined at three scales — species, site and landscape — reflecting a simplification of a complex hierarchical continuum of ecological scales. The three scales interlock geographically through the presence of species in sites and of sites in landscapes. They are also logically connected. If species are to be conserved, the sites on which they live must be protected and the landscapes or seascapes must continue to sustain

the ecological services on which the sites and the species depend. As conservation in the field succeeds in achieving these targets, they become demonstrable results or outcomes: "Extinctions Avoided" (species level), "Areas Protected" (site level) and "Corridors Consolidated" (landscape level).

While CEPF cannot achieve all of the outcomes identified for a region on its own, the partnership is trying to ensure that its conservation investments are working toward preventing biodiversity loss and that its success can be monitored and measured. Therefore, the targets (hereafter "outcomes"), are the scientific underpinning for CEPF's geographic and thematic focus for investment in the Mediterranean Basin Hotspot.

Defining conservation outcomes is a bottom-up process with a definition of species-level targets first, from which the definition of site-level targets is based. The process requires detailed knowledge of the conservation status of individual species. Although this information has been accumulating in global Red Lists produced by IUCN-The World Conservation Union and partners for nearly 50 years, knowledge of the population status of most threatened species is still deficient. This is especially true for plants in the Mediterranean Basin Hotspot, where surveys and research on rare species are very limited (Cuttelod *et al.* 2008).

The IUCN Red List is based on quantitative criteria under which the probability of extinction is estimated for each species. Species classified as "threatened" on the Red List have a high probability of extinction in the medium-term future. These include the three IUCN categories Critically Endangered (CR), Endangered (EN) and Vulnerable (VU). Defining outcomes is a fluid process and, as data become available, species-level outcomes can be expanded to include other taxonomic groups that had not been assessed, as well as restricted-range species. Avoiding extinctions means conserving globally threatened species to make sure that their Red List status improves or at least stabilizes. This means that data are needed on population trends; for most of the threatened species, there are no such data.

The sheer size and scale of the hotspot, the large number of countries included, and the heterogeneity of the data meant that the volume of data gathered for defining outcomes was immense. A comprehensive database was developed to assist this process. Data sources included published scientific papers, species recovery plans, National Biodiversity Strategies and Action Plans (NBSAP), field guides and personal communications with many scientists. Key data sources for birds were the *Threatened Birds of the World* (Stattersfield and Capper 2000) and *Endemic Bird Areas of the World* (Stattersfield *et al.* 1998). Data on amphibian distributions was drawn from the *Global Amphibian Assessment* (Frost 2002), for mammals from the *Global Mammal Assessment* (Schipper *et al.* 2008) for reptiles from the Regional Mediterranean Red List for reptiles. Fish and Odonata data were obtained from the Regional Mediterranean Red List for freshwater taxa.

An important focus of the Mediterranean Basin Hotspot profiling process was the collection of data on plants and the definition of important plant areas. This task is being undertaken by IUCN and Plantlife International with additional support from AFD, and will provide a rapid assessment of important plant areas in North Africa, the Middle East and Albania. Initial results of this analysis have already been incorporated into the ecosystem profile with 118 priority sites for plant diversity within the south and east Mediterranean Basin (89 inside the Mediterranean Basin Hotspot) identified by experts working in each country and with the help of the Centre for Middle Eastern Plants (U.K.). This has ensured that at least some key biodiversity areas for plants are included in the profile from this important, but

least well known part of the hotspot. The complete results will be made available in mid-2010, providing further scientific integrity and rigor to the conservation outcomes. CEPF will take this information into consideration to ensure comprehensive coverage of emerging priority sites for plants.

Although the process of identifying conservation outcomes used the best available data, there are a number of limitations of the present analysis. Within the European Union (EU) there is a long history and body of existing scientific analysis with the Natura 2000 sites. Natura 2000 is an ecological network of protected areas according to the Birds and the Habitat Directives of the EU. It is composed of Special Protection Areas for birds and of Special Areas of Conservation for other species and habitats. The sites are proposed by the member states to the European Commission that is responsible for coherent and sufficient site designation in the EU. Despite its current gaps in designations and connectivity, Natura 2000 is the most comprehensive network of protected areas in the Mediterranean Basin, focusing not only in wilderness parks but also in semi-natural habitats.

Additionally, within the EU, Israel and the Palestinian Authority, there are extremely strong datasets on Important Bird and Important Plant Area assessments. Given this long history of analysis, it was not necessary to duplicate these efforts here. Thus from a geographic perspective, the data presented are limited to Important Bird Areas and Important Plant Areas that contain globally threatened, restricted-range, congregatory or biome-restricted species. Additionally, there are taxonomic limitations with the analysis, particularly for marine species, as this assessment was limited to those species occurring within 12 nautical miles of the shore. Pelagic and high seas species were not covered; only sea turtles and seabirds were included in the analysis. Further, data are limited on invertebrates with Odonata being the only taxonomic group covered across the Mediterranean Basin Hotspot. It is essential to note that despite some taxonomic gaps in coverage, several studies show that there is typically extremely high congruence among taxonomic groups (Eken *et al.* 2004).

Species Outcomes

Species outcomes in the Mediterranean Basin Hotspot include species that are globally threatened according to the IUCN Red List (2008). At present, there are 555 globally threatened terrestrial species in the countries and territories in the Mediterranean Basin Hotspot. However, 336 of these species are endemic to the ineligible portions of the hotspot and thus only 219 of these species were analyzed as species outcomes. Table 2 summarizes the taxonomic breakdown of the 555 globally threatened species in the hotspot while the full list of threatened species by political unit is available in the supplemental appendices available on www.cepf.net.

It must be stressed that there are deficiencies in the IUCN Red List in the region with respect to both the taxonomic and geographic representation. The taxonomic deficiencies are especially serious with respect to invertebrates and plants, while the geographic deficiency is especially true for the smaller, less wealthy countries of the hotspot. In response, IUCN, Plantlife International and WWF are helping to fill the gaps for the plant data. They are identifying important plant areas and when these data are available, they will become important supplemental information regarding emerging priority sites for plants. Given data limitations, the species data mainly cover terrestrial vertebrate species, but some plant and marine species are included here. The taxonomic groups that are covered as species outcomes are highlighted below.

Table 2. Summary of Globally Threatened Species in the Mediterranean Basin Hotspot

Taxa	Critically Endangered	Endangered	Vulnerable	Total
Amphibia	5	13	12	**30**
Aves	6	9	13	**28**
Fish	49	59	87	**195**
Gastropoda	4	3	22	**29**
Insecta	1	2	19	**22**
Invertebrate	1	-	45	**46**
Mammalia	3	15	25	**43**
Odonata	-	2	7	**9**
Plantae	61	25	14	**100**
Reptilia	15	24	14	**53**
Total	**145**	**152**	**258**	**555**

Mammals

Data on the conservation status of mammals in the hotspot are robust, as all mammal species have been assessed for the IUCN Red List of Threatened Species. There are 43 mammals facing a high degree of threat in the region. The Barbary macaque (*Macaca sylvans,* EN) is the only primate occurring in the Mediterranean Basin and is endemic to the hotspot.

Birds

For avifauna, widespread destruction of wetlands throughout the Mediterranean Basin threatens many widespread species that migrate across the region such as marbled teal (*Marmaronetta angustirostris,* VU) and the Dalmatian pelican (*Pelecanus crispus,* VU). The slender-billed curlew (*Numenius tenuirostris,* CR) which migrates between its breeding ground in Siberia and Africa has important wintering and migratory sites in the hotspot. Further degradation of these wetlands will increase the risk that these species face. There are several species that have highly restricted ranges, including the Raso Island lark (*Alauda razae,* CR) which only occurs on Raso Island in the Cape Verde and Zino's petrel (*Pterodroma Madeira,* EN) which has only 65 to 80 breeding pairs remaining in the world on the central mountain massif in Madeira.

Herpetofauna

For the herpetofauna, nearly all species in the hotspot have been assessed for inclusion in the IUCN Red List of Threatened Species. The only herpetofauna not covered are reptiles in Cape Verde, as no Red List analysis has been undertaken for reptiles occurring in this country. Reptile diversity in the region is greatest in the xeric North African and arid Middle Eastern portions of the Mediterranean Basin Hotspot, while amphibian diversity is greater in the more mesic portions of the region such as the Balkan states, the Balearics, Turkey and other mesic portions of Europe.

Freshwater Fish and Odonata

Freshwater fish represent the group of vertebrates most at risk with 56 percent of endemic species threatened with extinction: 17 endemic species are Critically Endangered, 23 endemics are Endangered and 40 endemics are Vulnerable, according to IUCN Red List. Centers of endemism include the Italian, Greek and Iberian peninsulas as well as western Turkey and some parts of the Middle East. The greatest concentration of threatened species

is in the Rio Guadiana (Spain and Portugal), the Orontes River basin (Turkey and Syria), Lake Kinneret and the Hula basin (Israel), the lower Neretva River (Croatia and Bosnia and Herzegovina) and Lake Prespa (Greece, Albania and FYR Macedonia).

For odonates (dragonflies) habitat loss and degradation caused by humans as well as water pollution are the main threats in the Mediterranean. Climate change is also a major concern as increased water demand together with a lower level of precipitation will result in the desiccation of brooks, a habitat on which many of the endemics are dependent.

Plants

Very few plant species in the Mediterranean Basin have been assessed for the IUCN Red List. Fortunately, current work with Plantlife International, IUCN and WWF is addressing this problem and will provide data on important plant species and their locations in the Mediterranean. The present key biodiversity area assessment takes into account all plant taxa for which data are available.

Marine Taxa

The IUCN Global Marine Species Assessment and the Centre for Mediterranean Cooperation are currently devoting significant efforts to assess the conservation status of the fauna and flora of the Mediterranean Basin. The marine groups completed to date include marine mammals, sea turtles, and cartilaginous marine fishes, cetaceans and seabirds. The ongoing assessments include marine fish, molluscs and aquatic plants. A striking result of this initiative is that data for marine biodiversity is much patchier than that existing for terrestrial environments, with around one third of the species being cataloged as Data Deficient. Sharks, rays and allies are among the groups of main concern, with 13 out of 71 species catalogued as Critically Endangered, and 18 species as Data Deficient. In the present assessment, 21 threatened marine species were used to identify marine key biodiversity areas. These include two species of marine turtles, 18 species of seabirds and one pinniped.

Marine Turtles

The Mediterranean Sea hosts two species of marine turtles, the loggerhead turtle (*Caretta caretta,* EN) and the green turtle (*Chelonia mydas, EN*). The latter, with a regional population of a few hundred individuals, is mainly restricted to the eastern basin, whereas the loggerhead turtle also breeds in the central Mediterranean and migrates through the Strait of Gibraltar to the western Atlantic, and numbers a few thousand individuals in the region. Marine turtles need sandy and undisturbed beaches to nest, thus concentrating in the less populated areas, especially in the south and eastern Mediterranean Basin and the Cape Verde.

Pinnipeds (seals)

The unique species of seal in the Mediterranean Basin Hotspot is the Critically Endangered Mediterranean monk seal (*Monachus monachus*), endemic to the region. It is scattered and primarily restricted to the Aegean Sea within the Mediterranean and to the Mauritania coast in the Atlantic, with minor sites in Algeria and Madeira. The species is deemed to be one of the 10 most threatened in the world by IUCN.

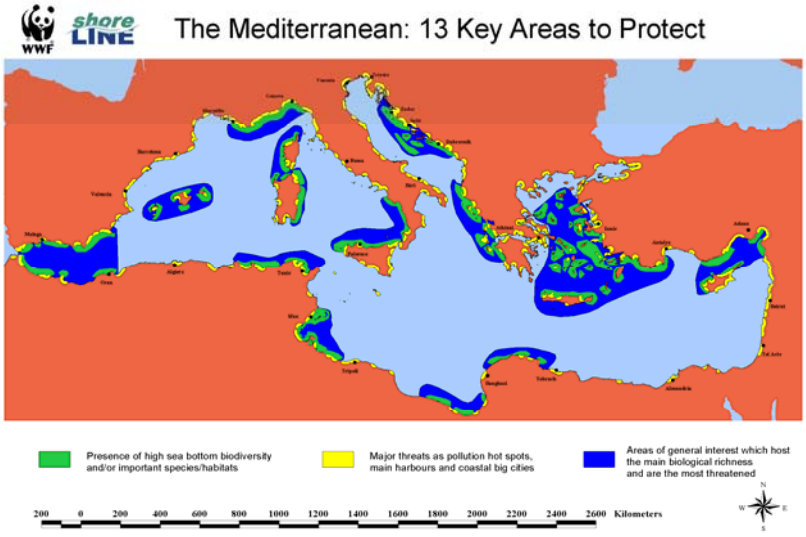
Site Outcomes

Recognizing that most species are best conserved through the protection of sites in which they occur, key biodiversity areas are defined as targets for achieving site-level conservation outcomes.

Key biodiversity areas were determined by identifying the sites that contain populations of at least one globally threatened species, restricted-range species, biome-restricted species or congregatory species. Key data sources for this analysis included published scientific articles, IUCN publications (Cox *et al.* 2006; Cuttelod *et al.* 2008; Riservato *et al.* 2009; Smith and Darwal 2006), a number of GIS data layers, data from the World Database on Protected Areas (IUCN-UNEP 2009), NBSAP reports, ecological survey data, sub-regional workshops, Important Bird Area assessments (BirdLife International 2009), Important Plant Area assessments (Plantlife International 2009 and Interuniversity Research Center "Biodiversity, plant sociology and landscape ecology," Sapienza, University of Rome), Natura 2000 sites, and communications with many scientists.

For marine sites of conservation importance, over the last 10 years, the WWF Mediterranean Program has devoted significant efforts in identifying the marine priority areas on the basis of morphological mapping and the presence of key threatened species (mostly turtles and monk seal; Franzosini *et al.* 2001). The analysis was coastal (to 200 meters depth) and did result in the identification of 13 priority marine areas (Figure 2). While these sites are too big to be taken as key biodiversity areas, there is a significant overlap between the regions identified here and the site outcomes presented in the ecosystem profile.

Figure 2. Location of 13 Priority Marine Areas in the Mediterranean Sea (Source: WWF Mediterranean Program Office)



Species data used to identify key biodiversity areas include 1,883 species (1,451 plants, 191 birds, 30 mammals, 106 freshwater fish, 64 reptiles, nine butterflies, 13 dragonflies and 19 amphibians) that are threatened, restricted range, congregatory or biome restricted. Data on restricted-range species were used for all species save invertebrates in the hotspot and data for globally significant congregations and biome restricted birds was also used. Precise data relevant to the distribution and status of plant species were in most cases insufficient in the North African and the Middle Eastern countries. The inclusion of a complete set of plant data will therefore lead to an increase in the number of key biodiversity areas delineated.

Given the vastness of the hotspot, data quality and availability across the region was highly variable. All of the Important Plant Area, Important Bird Area, Natura 2000 sites and the WWF marine sites formed the starting point for identifying key biodiversity areas, which CEPF uses as a global standard. The various Important Plant Area and Important Bird Area assessments have been conducted at different times, using different criteria and data across the regions. These sites were evaluated using the standard key biodiversity area criteria outlined in Eken *et al.* (2004). Those sites that meet the key biodiversity area criteria of having the presence of at least one globally threatened, restricted range, biome restricted or congregatory species were taken as key biodiversity areas and as site outcomes for the ecosystem profile. However, some of the Important Bird Area and Important Plant Area sites did not trigger key biodiversity area criteria, but are nonetheless vitally important. These sites were assigned the title of "regional priority conservation areas." However, it is important to note that the vast majority of the IBA and IPA sites qualified as key biodiversity areas.

In total, 1,110 key biodiversity areas were identified for the Mediterranean Basin Hotspot, each containing at least one trigger species with most of the sites containing several or many globally threatened species (Figure 3, Appendices 1 and 2). There were several species for which it was not possible to assign key biodiversity areas. These species are all widespread, but threatened across the hotspot. While not assigned to specific key biodiversity areas, these species will benefit from corridor-level interventions. In all cases, they are landscape-level species like the European eel (*Anguilla anguilla*), a species for which site-scale conservation is not appropriate. Key biodiversity areas occurred in all habitat types including forests, shrublands, semi-natural habitats, mountains, rivers, steppes, wetlands, lakes and karstic systems.

From the list above, a subset of top priorities was produced, based on an analysis of irreplaceability and vulnerability. If a site is deemed wholly irreplaceable, it contains one or more species that occur nowhere else. Whereas irreplaceability refers to the "where," vulnerability refers to the "when," and reflects the likelihood that a site's biodiversity value will be lost in the future. In the present analysis, irreplaceability was determined by the percentage of the global population of a species that is held in a site. Prioritization based on irreplaceability allows focus on sites that hold species likely to become extinct if highly irreplaceable sites are lost. Vulnerability was measured by the threat status of species according to the IUCN Red List. Thus, sites holding Critically Endangered species are more "urgent" conservation priorities than those holding Endangered and/or Vulnerable species, allowing investment to focus on the species at highest risk of extinction.

The full list and map of key biodiversity areas and other regional priority conservation areas including distribution by country are presented in Appendices 2 and 3, and a summary of the number of key biodiversity areas delineated in each country and territory present in the hotspot is given in Table 3. Many of the sites selected have also been identified as critical sites for conservation by other environmental organizations, including BirdLife International, WWF, Plantlife International and many other national and regional bodies. Among the eligible countries, Turkey and Morocco contain the highest number of key biodiversity areas owing to these regions being centers of endemism and species radiation in the hotspot. Additionally, the climatic and topographic diversity in these countries is in line with the biogeographic theory that allows for higher species richness and endemism in areas where many niches need to be filled.

Figure 3. Map of Key Biodiversity Areas in the Mediterranean Basin Hotspot

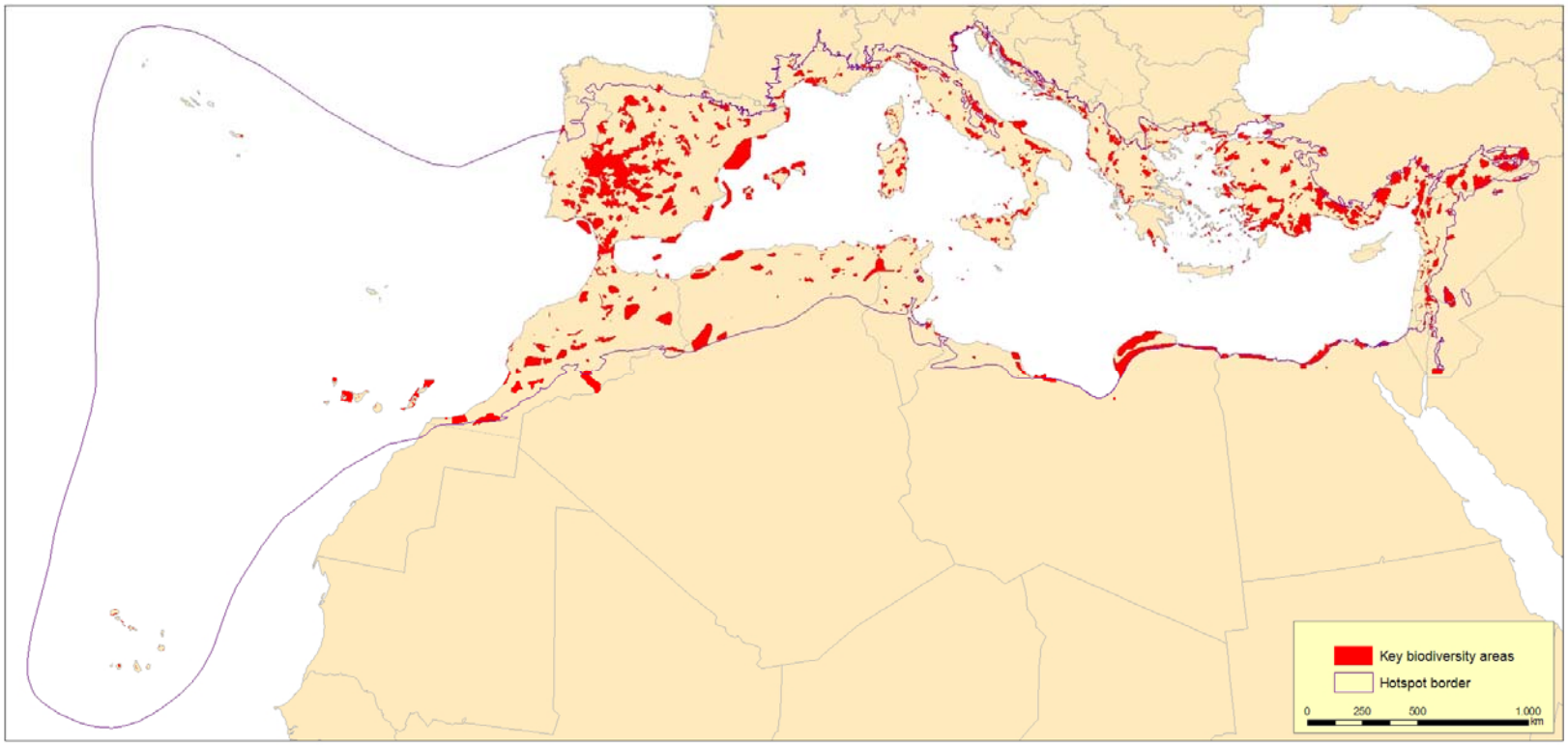


Table 3. Number of Key Biodiversity Areas Delineated in Each Country and Territory Present in the Mediterranean Basin Hotspot

#	Country	# of key biodiversity areas	#	Country	# of key biodiversity areas
1	Albania	16	**17**	Lebanon	29
2	Algeria	40	**18**	Libya	19
3	Bosnia and Herzegovina	9	**19**	Malta	0
4	Bulgaria	0	**20**	Monaco	0
5	Cape Verde	19	**21**	Montenegro	11
6	Croatia	37	**22**	Morocco	68
7	Cyprus	1	**23**	Palestinian territories	10
8	Egypt	12	**24**	Portugal*	55
9	France	33	**25**	San Marino	0
10	FYROM	14	**26**	Serbia	0
11	Gibraltar	1	**27**	Slovenia	0
12	Greece	103	**28**	Spain*	221
13	Israel	10	**29**	Syria	30
14	Iraq	0	**30**	Tunisia	62
15	Italy	156	**31**	Turkey	140
16	Jordan	14	**32**	Vatican City	0

** These figures include the Azores and Madeira Islands in Portugal, and the Canary Islands in Spain.*

Many key biodiversity areas in the basin support exceptionally high numbers of threatened and endemic species. Many of the sites in the Atlas Mountains in Morocco, the Taurus Mountains in Turkey and the mountains in Syria and Lebanon all support more than one-quarter of the globally threatened species occurring in the hotspot. The extremely high endemism and richness levels of key biodiversity areas in the region further supports that this is one of the most important biodiversity hotspots globally. Further, 79 sites in the region are wholly irreplaceable in that they contain the entire known range of a globally threatened species (see Appendix 3). Among these 79 sites, 72 contain the majority of the population of a Critically Endangered or Endangered species and thus qualify as Alliance for Zero Extinction (AZE) sites, the most urgent global conservation priorities at a site scale. The Amanos Mountains Key Biodiversity Area in Turkey contains 20 AZE species and is thus the highest conservation priority in the hotspot. This site holds the last populations of several Critically Endangered and Endangered species and is increasingly threatened by habitat encroachment, overgrazing and unsustainable water extraction. Also in the Taurus Mountains, the Ermenek River Valley contains the last remaining individuals of 14 threatened species. This site is gravely threatened by overgrazing and dam building. Ecosystem services abound at these sites at these sites and they are incredibly important for providing water to many of the communities in the region. They also regulate climate, sequester carbon and maintain nutrient cycles, for example.

Other notable key biodiversity areas in the hotspot include the Toubkal National Park in Morocco, the highest peak and key biodiversity area in the hotspot at 4,165 meters. This site contains important populations of many restricted-range and highly threatened reptile

species in addition to being a key site for the only endemic primate, Barbary macacque (*Macaca sylvanus,* EN). The other montane key biodiversity areas in Morocco, namely the Eastern High Atlas Mountains National Park Key Biodiversity Area, the Ifrane National Park Key Biodiversity Area and the Eastern Middle Atlas Key Biodiversity Area all hold significant numbers of threatened mammal, bird and reptile species. In addition, there are several coastal key biodiversity areas in Algeria, Morocco and Tunisia that support the hotspot's last remaining critical habitats for several threatened reptile and mammal species.

Key biodiversity areas in the Middle East hold significant populations of globally threatened freshwater fish and reptiles. Many of these species are highly restricted endemics, including the Critically Endangered fish *Pseudophoxinus syriacus*, which is restricted to a few kilometers of the Upper Litani River Key Biodiversity Area in Lebanon. The montane key biodiversity areas in Lebanon and Syria, including the Anti-Lebanon Mountains Key Biodiversity Area, serve as the main catchment areas for the Orontes River Basin Key Biodiversity Area. These sites offer excellent opportunities for transboundary conservation.

The key biodiversity areas in the Balkan states all have significant and rich endemic fish fauna. Lake Prespa National Park Key Biodiversity Area in Albania includes several threatened endemic fish in addition to providing many livelihood opportunities for local populations. A number of the key biodiversity areas in Croatia support several populations of endemic plants and offer excellent opportunities for nature-based tourism.

The Mediterranean Basin is extremely important for migratory birds and harbors several critical wetland sites. The basin lies at the heart of one of the world's major migratory bird flyways. It provides vital sites and habitats for species to stop-over and feed, with some species either breeding or overwintering. Of particular significance is the dependence of many species on a critical network of sites that are used at key stages on their migration route, and the loss or degradation of any one of these sites can have an impact of international significance. A subset of those key biodiversity areas supporting significant populations of globally threatened migratory birds is presented in Figure 4, with the species listed in the supplemental appendices available on www.cepf.net.

Additionally, the Mediterranean Basin Hotspot includes many hundreds of wetlands that are of international importance in accordance with the criteria agreed by the Convention on Wetlands (Ramsar Convention). BirdLife International has identified a subset of wetlands meeting some of these criteria, drawing on data from its Important Bird Area inventories. These are sites that support on a regular basis significant numbers of a globally threatened waterbird (or other species of global conservation concern), and/or 1 percent of a biogeographic population of a congregatory waterbird, and/or at least 20,000 waterbirds (BirdLife 1994, 2001 and 2002). From these reviews, and subsequent additional analysis, BirdLife has identified 422 Ramsar qualifying sites in the Mediterranean Basin Hotspot, many of which have yet to be designated as Wetlands of International Importance (to date, 226 Ramsar sites have been designated in the Mediterranean Basin Hotspot — see Figure 5 and supplemental appendices on www.cepf.net). There will of course be many other wetlands of international importance in the Mediterranean, in addition to those identified by BirdLife International, for example for other wetland fauna and flora, but to date this represents the most comprehensive list of qualifying sites in the hotspot.

There are several marine and coastal key biodiversity areas in the Mediterranean Basin Hotspot (Figure 6). Many of these key biodiversity areas are important for both terrestrial and marine species. Several key biodiversity areas in Cape Verde represent the last

remaining habitats for the Raso lark (*Alauda razae,* CR) in addition to supporting high numbers of loggerhead turtle nesting sites (*Caretta caretta,* EN). Additionally, there are several coastal, estuarine and marine key biodiversity areas in Morocco, Tunisia, Lebanon and Libya supporting coastal-restricted reptile species and marine turtles.

Corridor Outcomes

A total of 17 corridors covering 435 key biodiversity areas were identified across the hotspot (Figure 7). They were identified for the presence of highly threatened endemic species, key ecosystem services, importance in maintaining ecosystem resilience and their ability to safeguard the health and biological integrity of the hotspot. The corridors represent a range of terrestrial, freshwater and coastal ecosystems and as such, different conservation actions and approaches are required to safeguard the biodiversity found here.

The corridors were delineated using data on watersheds, river basins and areas for integrated coastal zone management in each region. Although they appear to encompass large areas, they are small relative to the vast size of the hotspot. The key biodiversity areas contained by the corridors account for only 8 percent of the terrestrial surface area of the hotspot. The principal goals in the montane and watershed corridors are to increase and maintain connectivity, strengthen protected area management, increase the number of hectares under protection, and ensure sustainable management of landscapes and ecosystems, with a particular focus on fresh water in the corridors. Furthermore the environmental and altitudinal gradients of the delineated corridors permit the species of conservation concern to persist and shift range distributions, and ultimately give them the means to adapt to climate change. These corridors cover 19 countries and all of the threatened and restricted range species identified in this analysis, including 95 Critically Endangered and Endangered species. Delineating corridors for the EU component of the hotspot was beyond the scope of the profiling.

Coastal Atlantic Plains, Morocco *(Corridor surface area: 1,265,656 hectares; 11 key biodiversity areas with a total surface area of 197,125 hectares)*

Located between the Atlantic Ocean and the Atlas Mountains, this corridor covers some of the broadest coastal plains in Morocco, comprising the backbone for agriculture. This area is densely populated with several large cities found in the corridor, including Casablanca (Morocco's largest city with a population well in excess of 3 million). Consequently, threats to biodiversity are the intensification of agriculture, development of housing areas and touristic resorts that particularly threaten coastal wetlands and dune ecosystems. Nevertheless, pockets of suitable habitat for a diversity of highly localized, endemic and globally threatened species are still found (a total of 12 globally threatened species). These core habitats will form the basis of zones where connectivity can be increased by linking these core zones together in the corridor. Wetlands, particularly, are home of rare aquatic plants (for example, *Lotus benoistii*, CR), amphibians (*Pelobates varaldii*, EN) and mammals (*Gerbillus hesperinus*, EN). They also hold five species of fishes of the *Barbus* genus, endemic to Morocco. The Sidi Bou Ghaba Key Biodiversity Area also represents one of the principal sites for the Marbled teal (*Marmaronetta angustirostris,* VU) in North Africa. This corridor also holds some of the last extensive cork oak forests in the hotspot. These cork forests will serve as source populations both for anchoring connectivity around these areas, as well as providing essential dispersal zones from which other regions can be propagated. Unfortunately, the protection level of key biodiversity areas in this corridor is very low, with only 0.49 percent of their total surface area currently protected.

Figure 4. Key Biodiversity Areas Supporting Significant Populations of Globally Threatened Migratory Birds in the Mediterranean Basin Hotspot (*Source: BirdLife International, 2009*)

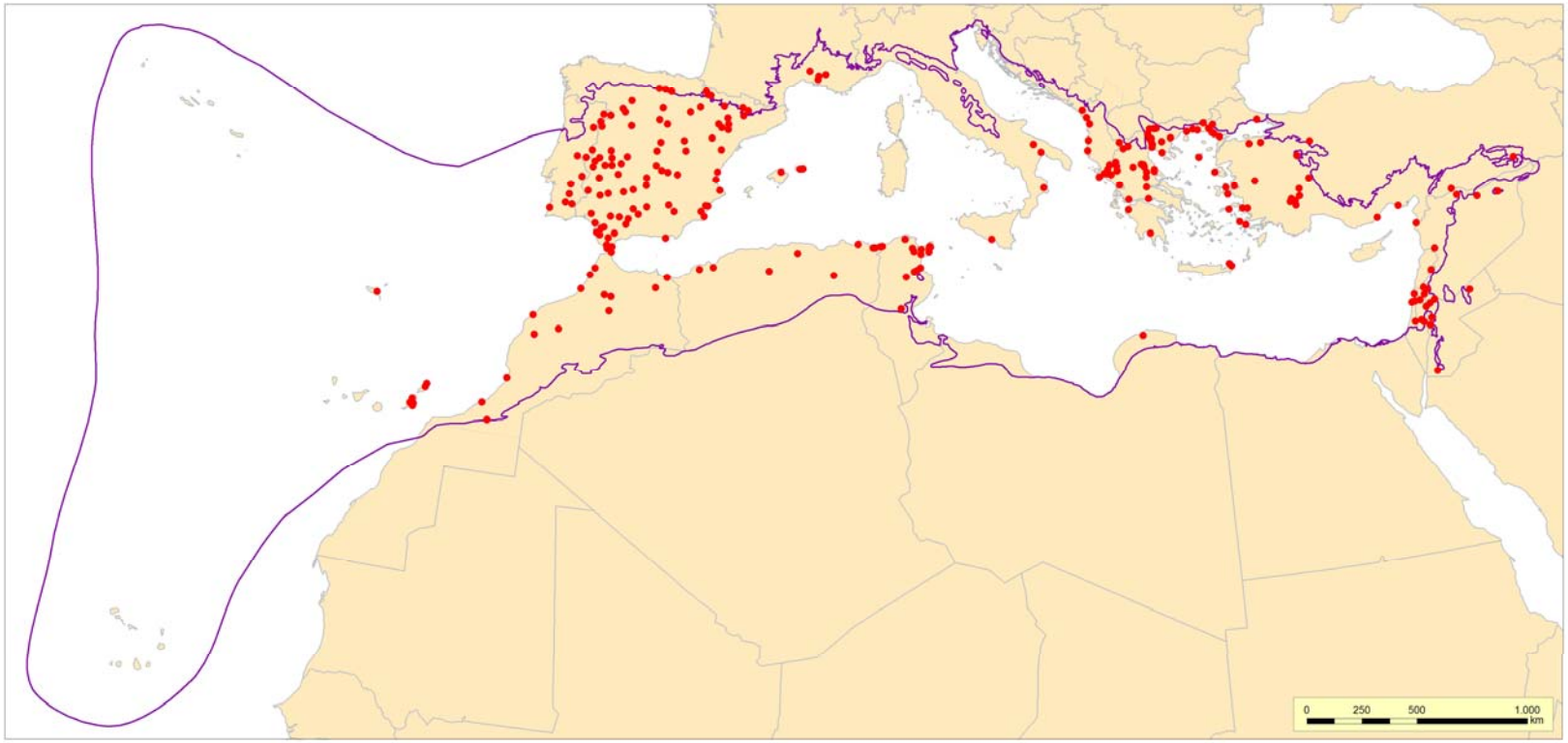


Figure 5. Key Biodiversity Areas Meeting the Criteria for Potential Designation as Ramsar Sites as Identified by BirdLife International (*Source: BirdLife International 1994, 2001 and 2002*)

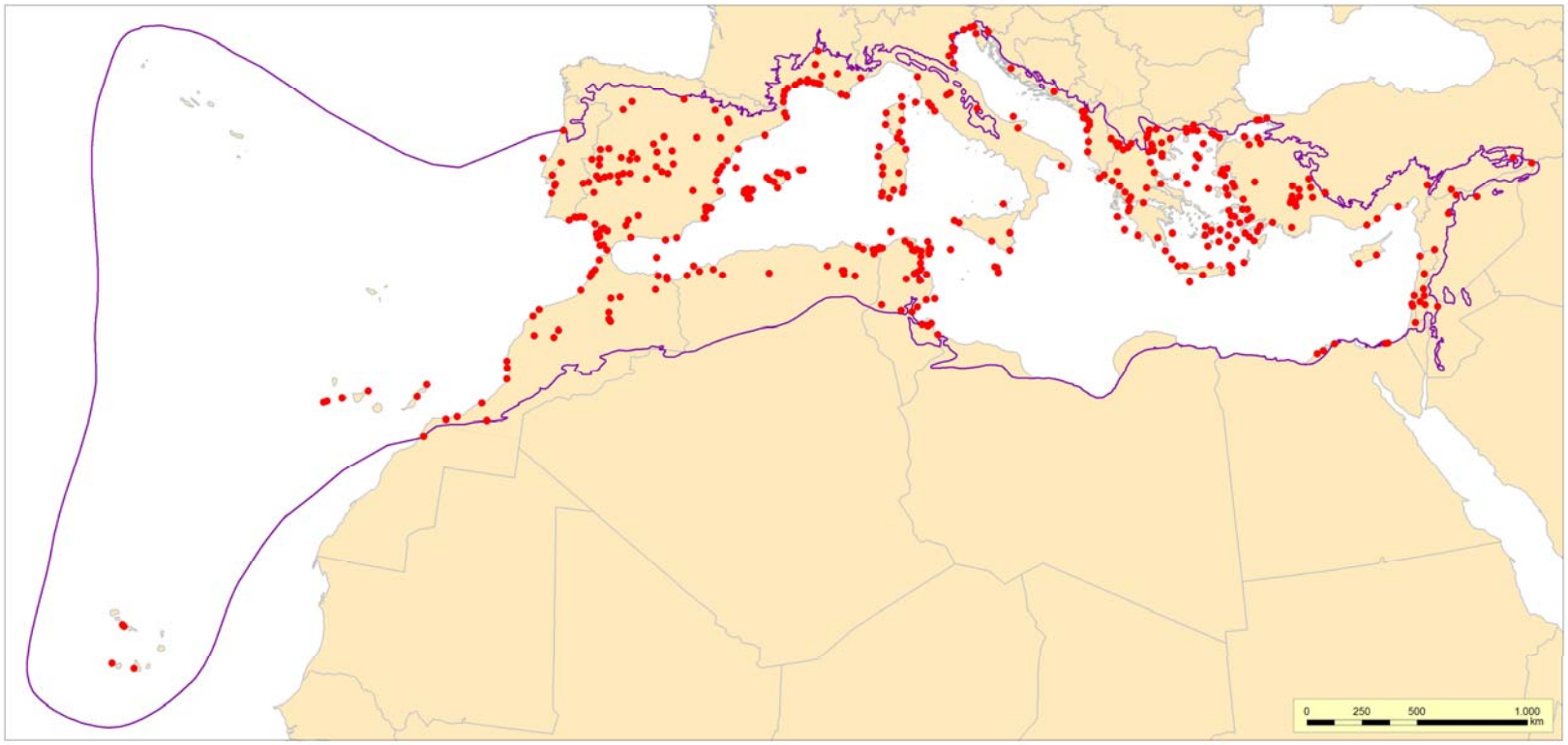
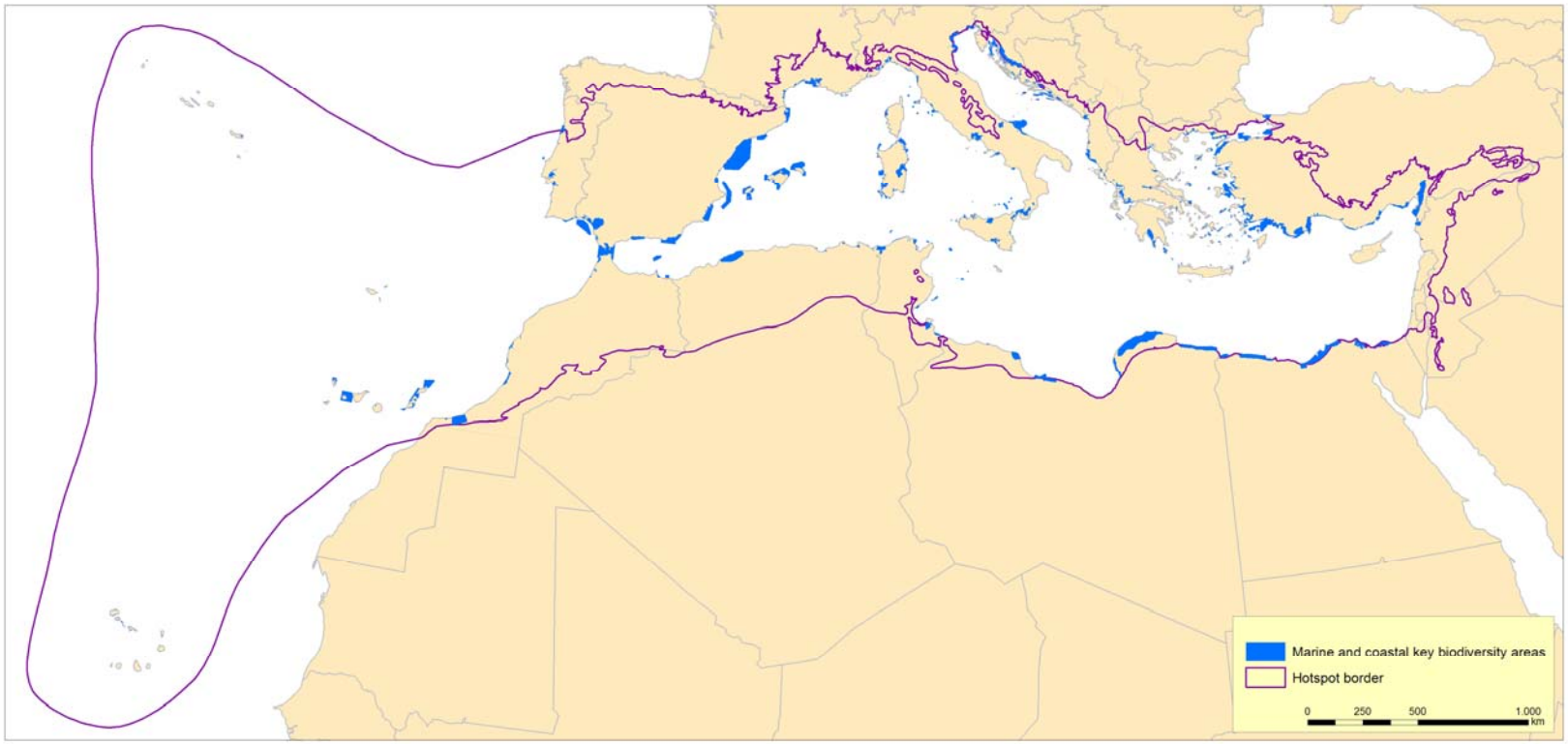


Figure 6. Marine and Coastal Key Biodiversity Areas of the Mediterranean Basin Hotspot



Cyrenaican Peninsula, in Egypt and Libya *(Corridor surface area: 3,037,789 hectares; 11 key biodiversity areas with a total surface area of 1,913,874 hectares)*
The Cyrenaican Peninsula is an area of historic importance in Libya, as the region was heavily colonized by the Greeks in antiquity. Although annual rainfall is generally low, the vegetation and climate is more Mediterranean than in the rest of the country and sharply contrasts with the desert landscapes of the Great Sahara found to the south. A diversity of habitats is found in the corridor including Mediterranean maquis and forest, arid steppe, coastal wetlands and dune systems. The area is of special importance for the Egyptian tortoise (*Testudo kleinmanni*, CR), now almost extirpated from this country. Five globally threatened species occur in the key biodiversity areas in the corridor. Furthermore, the Cyrenaican Peninsula contains almost 80 percent of the Libyan flora, with approximatively 100 species endemic to the peninsula itself including *Arbustus pavarii,* VU; *Cyclamen rohlfsianum; Libyella Cyrenaica; Arum cyrenaicum;* and *Orchis Cyrenaica*. These wetlands are also home to the extremely threatened sebkha (a smooth, flat plain, usually high in salt) vegetation and associated endemics such as *Frankenia syrtica*.

As the climate is more suitable for agriculture than in the rest of Libya, Cyrenaica is one of the most populated provinces. Consequently, existing plans for tourism development on the eastern boundary of the corridor and conversion of coastal wetlands into housing areas (Benghazi Key Biodiversity Area and Beghazi Coast Key Biodiversity Area) are serious threats. Traditional hunting is very popular in this part of the country and a severe threat to waterbirds. Finally, agricultural expansion, charcoal production and road building threatens the key biodiversity areas in the corridor. Few protected areas are present. Limited conservation initiatives exist, such as a sea turtle conservation program and a forest restoration project with plantations of native trees. A landscape-level approach is essential for this corridor as much of the endemic flora requires sufficient source areas that can serve as dispersal grounds and corridors linking the fragmented habitat in the corridor. In addition, as climate change will likely pose a threat to rainfall patterns here, connecting the remaining habitat fragments in a matrix of land uses is essential to the corridor's long-term viability.

Eastern Adriatic, in Bosnia and Herzegovina, Croatia and Montenegro *(Corridor surface area: 2,440,149 hectares; 37 key biodiversity areas with a total surface area of 606,797 hectares)*
This corridor covers a variety of habitat types from underwater karstic streams and caves to high mountain peaks to islands along the Croatian coast. This transboundary corridor covers Bosnia and Herzegovina, Croatia and Montenegro. The corridor ranges from sea level up to the lower slopes of Mount Dinara at 1,800 meters. Many of the key biodiversity areas in this corridor are important for threatened plants and many restricted-range and threatened fish and amphibians. Among the endemic and relict plant species are *Degenia velebitica*, *Viola elegantula* and *Sibiraea croatica*. The Krka River and Visovac Lake Key Biodiversity Area has a Critically Endangered fish species that is only found in the lake and the lower drainage of this river. This species and many key biodiversity areas in this hotspot are threatened from land abandonment and agricultural intensification. Along the coastal and island key biodiversity areas, tourism infrastructure poses a key threat to these sites. The key biodiversity areas in this corridor support 25 globally threatened species. Forty-six percent of the surface area of key biodiversity areas in the corridor benefits from formal protection.

Marmara Sea Basin, Turkey *(Corridor surface area: 6,063,670 hectares; 18 key biodiversity areas with a total surface area of 915,253 hectares)*
The Marmara Sea Basin Corridor covers marine, coastal, freshwater, wetland and terrestrial key biodiversity areas with both disturbed and intact patches of various Mediterranean and

Euro-Siberian habitats, these include maquis and shrublands, the last remaining heathlands of Turkey, Mediterranean forests, alpine ecosystems, riverine systems, Aegean and Marmara sea and coasts, and inner and coastal wetlands. As one of the most important forest regions in Turkey, the Istanbul Forests cover key biodiversity areas around Istanbul. Additionally, the Turkish straits (the Bosphorus and the Dardanelles) lie within this corridor as key migration routes for marine species and birds in the western paleartic region. The corridor covers a vast altitude range from Marmara deep sea up to the alpine peak of 2,542 meters in Uludağ Key Biodiversity Area. The global key biodiversity areas collectively support populations of 17 globally threatened species. The mountains of Kazdağları and Uludağ host most of the endemic species in the corridor. In total, 12.5 percent of the surface area of the key biodiversity areas in the corridor is legally protected under different categories. As the most threatened region of Turkey, natural resources have been exploited for years as the principal source of land and water for the main industrial, urban and tourist centers. Main threats in the corridor are: residential and commercial development for commercial, industrial, housing and urban areas; unsustainable water use; agriculture intensification; transportation and service corridors (including roads, utility lines, shipping lanes and flight paths); mining and extraction; and recreational activities. In the most populated region of Turkey, pollution is one of the main threats. The pollution problems are household sewage and urban waste water, industrial effluents, agricultural effluents, garbage and solid waste, airborne pollutants, and excess energy (heat, light, noise, etc.). Given that the threats to this corridor act at a landscape scale, the solutions to combating these threats also need to focus on the same scale. To preserve the ecological integrity of the corridor, it is essential to safeguared the key bottleneck sites along the Bosphorous and Dardanelles. Additionally, geological events like earthquakes and tsunamis are also key threats. Istanbul Forests Key Biodiversity Area in the corridor provides significant ecosystem services through drinking water provision and recreational activities (Dudley and Stolton, 2003), while Marmara Sea and coastal areas are important in terms of fisheries and tourism services.

Mountains of Ksour and Djebel Krouz, in Morocco and Algeria *(Corridor surface area: 1,762,216 hectares; 3 key biodiversity areas with a total surface area of 795,490 hectares)*
This is a transboundary corridor between Morocco and Algeria including two limestone massifs, located at the southern boundary of the hotspot abutting the Sahara. Under both Mediterranean and Saharan influences, this area offers unique landscapes in North Africa, being at the transition zone from mesic to xeric habitats. Groves of *Juniperus* trees alternate with alfa steppes that were originally used by a large range of pre-Saharan mammals (such as lion, cheetah, hartebeest). This corridor is still important for several medium-sized mammals, particularly the Barbary sheep (*Ammotragus lervia*, VU). Two globally threatened species occur in the key biodiversity areas present in the corridor. Threats include the development of infrastructures (roads and motorways) and illegal hunting, which cause major disturbances to large-range mammals occurring there. Overgrazing by livestock is also a problem as it prevents the regeneration of *Juniperus* forest and steppes. Protected areas are still to be defined in this area.

Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia, in Algeria and Tunisia *(Corridor surface area: 13,405,573 hectares; 75 key biodiversity areas with a total surface area of 1,152,800 hectares)*
This corridor covers terrestrial and marine key biodiversity areas of two North African countries: Algeria and Tunisia. The Tell range is a coastal mountain chain exposed to a typical Mediterranean climate allowing northern slopes to be covered with cedar, pine and cork oak forests. Portions of the high plateau (around 1,000 meters in elevation) located south of the Tell Atlas are included in the corridor. Large but temporary shallow salt lakes

are also found there. Important wetlands are found along the Algerian and Tunisian coasts with El Kala and Ichkeul, well known for the extraordinary congregations of wintering waterbirds. This corridor is home of threatened large mammals (Barbary macaque, *Macaca sylvanus*, EN; Barbary sheep, *Ammotragus lervia*, VU; and Cuvier's gazelle, *Gazella cuvieri*, EN) and many species endemic to this part of the Maghreb including the Algerian nuthatch (*Sitta ledanti*, EN). Twenty globally threatened species are present in the key biodiversity areas. The extensive mixed *Quercus canariensis* and *Quercus suber* forests of the Tellien Atlas and Kroumerie Mountains on the border between Algeria and Tunisia host the last existing populations of the only African endemic deer species, *Cervus elaphus barbarus*. These oak forests are also the last refuge for the serval (*Felis serval*), which has been almost extirpated in the Mediterranean region. The Tellien Atlas has 91 endemic plant species.The area is densely populated with two capital cities included in the corridor or situated in the vicinity (Tunis and Algiers). As a result, urban and tourism development and water pollution are among the main threats, along with summer forest fires, dam building and overgrazing. Although 10.6 percent of the surface area of key biodiversity areas of the corridor is protected and many wetlands are designated as Ramsar sites, very little management is in place. However, through the numerous initiatives led by NGOs in the past 10 years, there is a growing awareness about environmental issues, and there is already government support for restoration of certain sites, such as Ichkeul Lake and Korba Lagoon.

Nile Delta Coast; Egypt *(Corridor surface area: 1,391,775 hectares; nine key biodiversity areas with a total surface area of 638,379 hectares)*
This corridor covers the coastal part of the Nile Delta with a series of extensive freshwater and brackish lakes. One of the world's largest river deltas, the Nile Delta is home to hundreds of thousands of waterbirds in winter and hosts threatened and restricted-range small mammals and reptiles. The Nile Delta was once known for large papyrus (*Cyperus papyrus*) swamps, but papyrus is now largely absent from the delta. Five globally threatened species occur in the key biodiversity areas present in the corridor. People have lived in the Nile Delta region for thousands of years, and it has been intensively farmed for 5,000 years. Prior to the 20th century, the Nile River flooded on an annual basis, but this ended with the construction of the Aswan Dam. Today, almost 40 million people live in the delta, which has a huge impact on the ecosystem. Agricultural intensification is perhaps the main threat, as it includes the conversion of remaining wetlands and the excessive use of pesticides and fertilizers. Pollution is a major problem, with industrial effluents, garbage and solid waste contaminating the water. The development of tourist resorts and road infrastructures also threatens coastal ecosystems. There are concerns about erosion since the delta no longer receives an annual supply of nutrients and sediments from upstream due to the construction of the Aswan dams. While much of the work required here is upstream from the hotspot, there is still the possibility for conserving the wetland and lake key biodiversity areas at a landscape level to ensure gene flow and connectivity between the species found here. Among the urgent conservation actions to undertake is developing better management of existing protected areas (covering 32.71 percent of the key biodiversity areas surface in the corridor) and improving the law enforcement for wildlife protection, as hunting pressure is very high in the whole area.

Northern Mesopotamia; Turkey and Syria *(Corridor surface area: 6,060,376 hectares; 16 key biodiversity areas with a total surface area of 1,835,517 hectares)*
The Northern Mesopotamia Corridor covers semi-desert steppe habitats of Turkey and Syria, the Tigris and Euphrates rivers and their surroundings, and the Anti-Taurus Mountains in the northern part. The corridor covers a vast altitude range from the Euphrates Valley Key Biodiversity Area (310 meters) up to the alpine peak of 2,240 meters in Eruh Mountains Key

Biodiversity Area. The key biodiversity areas collectively support populations of 11 globally threatened species. Key biodiversity areas in the corridor have good examples of riverine and riparian habitats of the Euphrates and Tigris, dry plain steppes and semi-desert habitats, volcanic steppe, mountain steppes, grassland, wetlands, cultivation, pistachio and fruit orchards, and eastern Mediterranean maquis and dry coniferous forests (Welch 2004). This region is considered one of the most important areas of plant diversity in Turkey; 82 species are endemic to the Anti-Taurus Mountains and about 165 species are endemic to the Upper Euphrates region.

The corridor is located in the northern part of the historically significant Fertile Crescent, where large-scale wheat domestication and cultivation first started. Prominent key biodiversity areas hosting wild relatives of various crop species in this corridor include Karacadağ and Ceylanpınar. The Euphrates and Tigris rivers have been ecologically, socially and economically important for people over many centuries. Main threats in the corridor are: natural ecosystem modification through dam constructions and irrigation, agricultural intensification, overgrazing and desertification. As the least protected ecosystem type in Turkey, steppes host wild relatives of crop species. In total 2.1 percent of the surface area of key biodiversity areas in the corridor are legally protected under different categories, as the least protected region in Turkey. The corridor is one of the main energy and agricultural products centers for Turkey. There have been efforts to develop irrigation and hydraulic energy production on the Euphrates and Tigris rivers since 1970s. These efforts, known as the Southeastern Anatolia Project, transformed into a multi-sectoral social and economic development program in late 1980s. The initiative also had various negative environmental impacts leading to extensive habitat and species loss, agricultural intensification, excessive irrigation and land encroachment for agriculture practices. Protecting the sites across this region to promote connectivity and resiliency is essential to maintaining and restoring the ecological functions and integrity of the landscape.

Oranie and Moulouya, Morocco, Algeria *(Corridor surface area: 1,656,081 hectares; 11 key biodiversity areas with a total surface area of 614,888 hectares)*
This transboundary corridor between Morocco and Algeria includes a diversity of natural habitats including typical Mediterranean maquis and forests, freshwater and brackish wetlands, and steppes. Some offshore islets are also important breeding sites for a significant number of seabirds. Key biodiversity areas identified in the corridor are especially important for several highly threatened and restricted range species of lizards (*Chalcides* spp.), the marbled teal (*Marmaronetta angustirostris*, VU), wetland-dependent plant species (for example, *Spergularia embergeri*, VU, and *Limonium battandieri*) and more generally, high numbers of waterbirds in winter. A total of six globally threatened species occur in the key biodiversity areas delineated in the corridor. The area is quite densely populated, especially around the city of Oran in Algeria. Residential and tourist developments pose major threats on natural ecosystems in coastal areas. Pollution due to untreated waste urban water also contributes to the degradation of wetlands. Overgrazing and the intensification of agriculture are also serious threats. Given these threats, potential clearly exists for tackling these issues at a landscape scale, which will allow for greater connectivity in the corridor. Despite the designation of several wetlands as Ramsar sites, there is a difficulty of applying protection laws, notably due to the lack of support given to local protected-area managers. Moreover, none of the key biodiversity areas of the Oranie and Moulouya corridor benefit from formal protection.

South Syria and Northern Jordan, in Syria, Jordan, Israel and the Palestinian Territories *(Corridor surface area: 1,024,397 hectares; 16 key biodiversity areas with a total surface area of 278,587 hectares)*
This corridor is the start of the Great Rift Valley and is a landscape of great extremes. It covers the lowest point on earth at 422 meters below sea level in Jordan and ranges up to 2,844 meters in the Golan Heights Key Biodiversity Area. The corridor itself covers portions of the Palestinian territories, Israel, Syria and Jordan. The global key biodiversity areas cover 15 globally threatened species, most of which are freshwater fish and dragonflies. The corridor also hosts the second most important flyway for migratory soaring birds in the world (1.5 million birds of 37 species, including five globally threatened species) and the most important flyway between Eurasia and Africa. Not surprisingly, agricultural intensification, dams and water extraction are some of the principal threats. Additionally, increasing urbanization is causing further habitat loss impacting the biological integrity of the region. There is an extremely low level of protection in the corridor, with only 7.6 percent of the surface area of key biodiversity areas officially protected.

The Atlas Mountains Corridor, Morocco *(Corridor surface area: 12,812,888 hectares; 30 key biodiversity areas with a total surface area of 2,126,729 hectares)*
The Moroccan Atlas Mountains are divided into separate ranges, including the Middle Atlas, High Atlas and Anti-Atlas. They all, however, comprise one ecological block of mountains and ensuring connectivity across them is a clear need. The most important rivers of the Maghreb region originate in this corridor. The mountain slopes of Middle and High Atlas ranges hold extensive forests, intersected by deep valleys. The dominant canopy tree species of the montane conifer forests is the endemic Atlas cedar (*Cedrus atlantica*), which normally constitutes mixed stands with the evergreen holm oak (*Quercus ilex ballota*) and less frequently with deciduous oak species (*Quercus faginea,* and *Q. canariensis*). This corridor is home of a number of plant and animal species — especially reptiles and freshwater fishes — that are endemic to Morocco. The rate of endemism in flowering plants is also very high with 237 endemic plant species in the Middle Atlas range. The southernmost mountains in the corridor, the Anti-Atlas Mountains, are under the Sahara's climatic influences and the precipitations are much lower. The corridor extends to the Atlantic coast to include wetlands and the Souss Plain, and it holds one of the three last breeding colonies of bald ibis in the world, as well as reintroduced populations of the Critically Endangered addax, or screwhorn antelope (*Addax nasomaculatus*). Key biodiversity areas present in this corridor host 26 globally threatened species. This area is also the stronghold of the endemic argan tree, which has a high economical value for people living there. The main threats to biodiversity include unsustainable water management, agricultural intensification, overexploitation of plant collections and overgrazing that causes soil erosion. Only 10.9 percent of the surface area of key biodiversity areas in the corridor is legally protected, even though some national parks are major tourist attractions. In the Souss-Massa national park, there is a program for reintroducing the fauna of Sahel (such as the oryx). This corridor is large enough to allow dispersal of large-range species like the Barbary macaque, Barbary sheep and Cuvier's gazelle. It maintains an altitudinal corridor from sea-level to the highest peak in the hotspot, towering over 4,000 meters. This design allows for the anticipated shift of habitat due to anthropogenic climate change.

The Cape Verde, Cape Verde *(Corridor surface area: 4,094,124 hectares; 19 key biodiversity areas with a total surface area of 45,988 hectares)*
The 10 islands and five islets that comprise the Cape Verde corridors are one of the most important complexes of islands within the Mediterranean Basin Hotspot. The islands were once covered by dry forests and typical Mediterranean scrub habitat. However, increased

agricultural intensification has destroyed much of the native vegetation. The remaining habitat is limited to the montane peaks and steep slopes. The Ilheu Raso Key Biodiversity Area contains the world's last remaining 150 individuals of Raso lark (*Alauda razae*, CR). This species fluctuates with rainfall and if climate change continues to bring decreased rainfall to this island, then this species will most certainly face a dire future. Additionally, the beaches of Boavista Island boast the third largest population of nesting loggerhead turtles (*Caretta caretta*, EN) in the world. Approximately 7,600 females nest on the beaches annually. Some 92 species of plants (14 percent) are endemic to these islands. At least one species of endemic plant is Endangered on these islands, an understory tree known as marmulan (*Sideroxylon mermulana*). The Endangered Canary Island dragon tree (*Dracaena draco*) also occurs here. The key biodiversity areas in this corridor cover three globally threatened species. Given the complex interactions between the island and marine ecosystems, an integrated landscape-scale approach is necessary to secure the biodiversity found here. Protection levels in the corridor are relatively high with 18.1 percent of the surface area of key biodiversity areas protected. The principal threats in this corridor are residential and commercial development, alien invasive species and overexploitation of marine resources.

The Orontes Valley and Lebanon Mountains, in Lebanon, Syria and Turkey *(Corridor surface area: 2,631,528 hectares; 40 key biodiversity areas with a total surface area of 596,422 hectares)*
This historic valley serves as the main catchment area for the Orontes River, providing essential watershed services. The key biodiversity areas contained here are many of the snow-capped peaks of the Lebanon and Syrian Mountains and the rivers that flow from them. The corridor ranges from sea level up to 3,000 meters in Lebanon's Ainata Key Biodiversity Area. The corridor has been designed to ensure that conservation in the Anti-Lebanon Mountains Key Biodiversity Areas, Al Chouf Cedars Reserve Key Biodiversity Area, and other montane key biodiversity areas can secure the catchment and water resources feeding the Upper Orontes River Key Biodiversity Area. Several highly threatened and endemic fish and reptiles are contained in this corridor. The Upper Akkar/Hermel region is distinct in its 21 percent forest cover of ancient trees and as the entry bottleneck for soaring bird migration from Europe. Additionally, Mount Hermon Key Biodiversity Area in Syria and Tannourine Nature Reserve Key Biodiversity Area are important sites for endemic snakes and lizards. Collectively the key biodiversity areas contained here support populations of 31 globally threatened species. The corridor delivers nearly all of the water for the entire country of Lebanon and has significant inflows into neighboring Syria.

Unfortunately, protection levels in this corridor are relatively low with just 11.6 percent of the surface area of the key biodiversity areas under protection. The main threats acting in this corridor are residential and urban development, with many tourist facilities encroaching on important key biodiversity areas in the corridor and illegal hunting. However, agricultural intensification with poorly irrigated farms is the biggest threat to ecosystems, nature and people in the region. This is particularly troublesome with high population growth as there will be few future options with dwindling water supplies in the region.

The Rif Mountains, Morocco *(Corridor surface area: 1,490,912 hectares; 12 key biodiversity areas with a total surface area of 179,077 hectares)*
The Rif Mountains is one of the wettest regions of North Africa, with some regions receiving upwards of 2,000 millimeters of precipitation a year. As with many areas in the Mediterranean Basin Hotspot, historically most of the massif was covered with forests of Atlas cedar, Holm oak, cork oak, Moroccan fir and Aleppo pine. Today, remnants of

montane forests still hold an enormous diversity of endemic amphibians and birds as well as scattered populations of the Barbary macaque (*Macaca sylvanus*, EN). The Rif Massif also has more than 190 plant endemics. The corridor was extended to the west and east to incorporate coastal wetlands, which are very important for waterbirds as well as threatened species of reptiles, amphibians, dragonflies and freshwater plants (for example, *Juncus maroccanus*, CR). Amongst these wetlands, the Merja Zerga Key Biodiversity Area was the last regular wintering site for the slender-billed curlew (*Numenius tenuirostris*, CR) until the 1990s. The Strait of Gibraltar that connects the Atlantic Ocean to the Mediterranean Sea and separates Spain from Morocco is also crucial for many migratory species of sea fishes, mammals and birds. A total of 15 globally threatened species are present in the key biodiversity areas delineated in the corridor.

Threats to biodiversity are numerous and include pollution of water, agricultural intensification, urbanization and human disturbance. Massive deforestation due to overgrazing and forest clearing for agriculture has taken place over the last century. Plantations have been developed to increase resiliency and connectivity in the corridor and also to combat soil erosion. There are several protected areas here, with national parks and reserves accounting for nearly 38 percent of the total surface area.

The Southwest Balkans Corridor, in Albania, FYR Macedonia, Greece, Montenegro and Serbia *(Corridor surface area: 5,713,629 hectares; 42 key biodiversity areas with a total surface area of 660,923 hectares)*
This corridor includes five countries in the hotspot although the key biodiversity areas are limited to three of the countries here. This corridor was primarily identified for the unique freshwater biodiversity in this corner of the Mediterranean. There are three principal lake systems that comprise the corridor: the Prespa and Ohrid Lake systems shared between Greece, FYR Macedonia and Albania; the Skadar Lake system shared between Albania and Montenegro; and Dojran Lake Key Biodiversity Area between FYR Macedonia and Greece. The corridor also includes montane key biodiversity areas for plants in FYR Macedonia and many coastal key biodiversity areas for breeding water birds and endemic plants. It is essential to manage this region at a landscape scale as pollution in the upstream watershed is one of the key threats to the freshwater key biodiversity areas. Civil society will not be able to avert threats from further farm abandonment unless integrated watershed management is undertaken in the montane and highland plateaus above these freshwater lakes. Taken together, the 42 global key biodiversity areas in this corridor cover a total of 30 globally threatened species. This corridor ranges from sea level up to 2,200 meters at Galicha Mountain Key Biodiversity Area.

Although protection levels of the key biodiversity areas are the highest of any corridor in the hotspot (50.1 percent of the surface area of global key biodiversity areas), enforcement and management of these protected areas is inadequate and can be strengthened. Further, many of these protected areas are multiple-use zones and do not effectively conserve the nature found in the key biodiversity areas. Hunting and overfishing are the key threats driving biodiversity loss in the corridor. Additionally, habitat destruction along the coast is also driven by continued building for tourism.

The Taurus Mountains, Turkey *(Corridor surface area: 11,724,896 hectares; 70 key biodiversity areas with a total surface area of 4,315,013 hectares)*
The Taurus Mountains Corridor covers terrestrial, coastal and marine key biodiversity areas with good examples of the nearly all the diverse and varied habitats found in the Mediterranean Basin Hotspot. These include maquis and shrublands, Mediterranean forests,

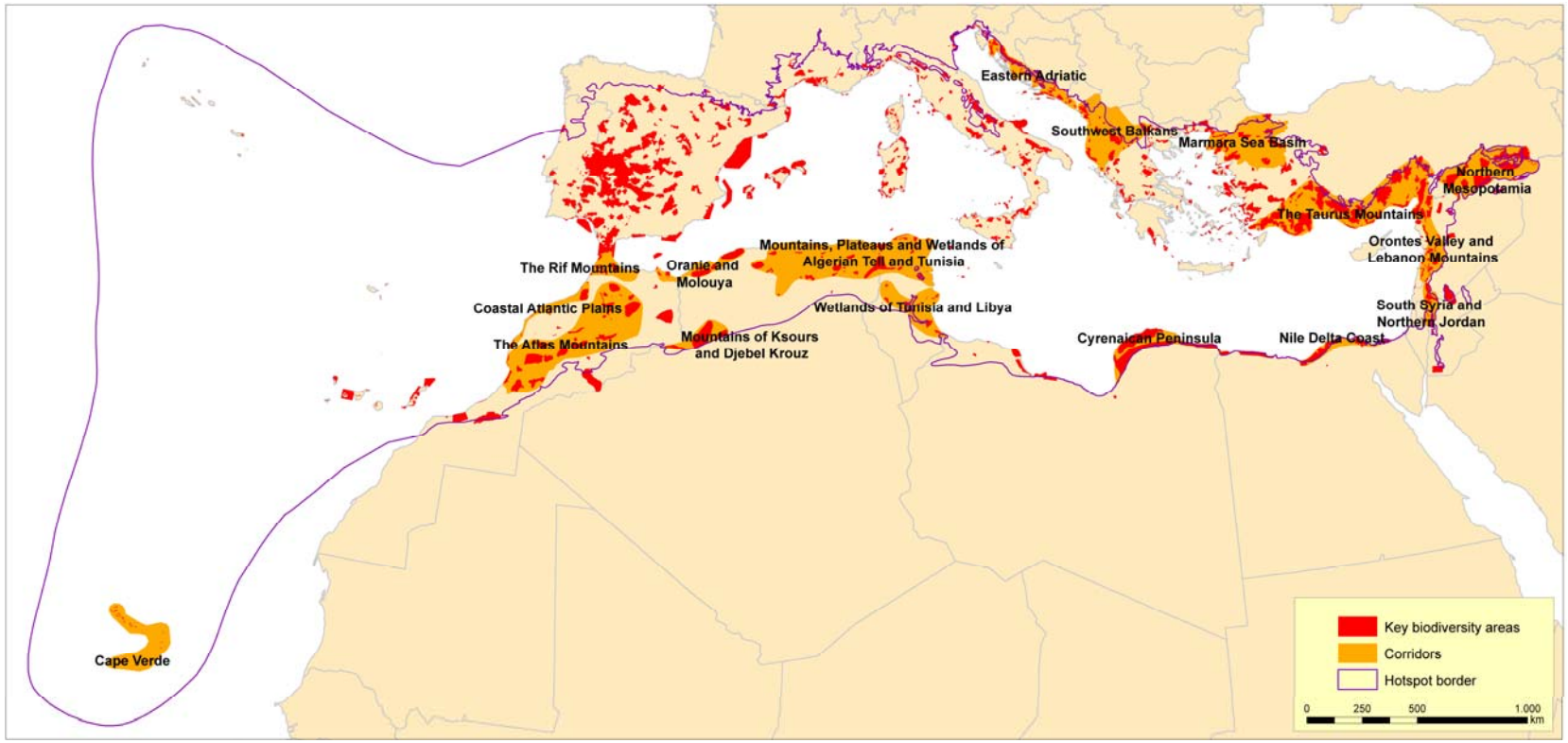
karstic ecosystems, alpine ecosystems, riverine systems, and coastal and inner wetlands. The world's largest and most intact stand of cedar of Lebanon (*Cedrus libani*) is found here, along with forests of endemic fir and oak species. Prominent forest key biodiversity areas in this hotspot include the Datça-Bozburun Peninsulas, Baba Mountain, İbradı-Akseki Forests and Amanos Mountains. Additionally, Turkey's Lakes region lies within this corridor, with many important freshwater lakes.

The corridor covers a vast altitude range from the littoral zone at sea level in portions of the marine and coastal Datça-Bozburun Peninsula Specially Protected Area Key Biodiversity Area up to the to alpine peak of 3,756 meters in Aladağlar Key Biodiversity Area. The key biodiversity areas collectively support populations of 43 globally threatened species. The Amanos Mountains Key Biodiversity Area hosts the highest number of threatened species in Turkey as the main route of bird migration, and also supports unique, diverse and highly threatened relict flora with 20 AZE species. Coastal key biodiversity areas in the corridor host seagrass (*Posedonia ocenica*) communities, which is known as the most effective species in terms of long-term carbon storage. Mediterranean monk seal (*Monachus monachus*) is the flagship marine species of the corridor and several marine turtle nesting sites are on the coast.

In total, 20.1 percent of the total surface area of key biodiversity areas in the corridor is legally protected under different categories. The corridor is the principal source of drinking water for main tourist centers on the coast and regulates the flow of water. Main threats in the corridor are: residential and commercial development for tourism, forests fires, dams, unsustainable water use, agriculture and aquaculture, and road building. Marine and coastal zones have the potential for pollution due to oil pipelines and transport. Additionally, timber harvesting and extensive use of non-timber forest products by local communities are also key threats. As the least protected ecosystem in the world, Mediterranean forests in the corridor provide significant ecosystem services for the downstream agricultural and tourism services, both in terms of forest products and freshwater provision and erosion control (Eken *et al.* 2006).

Wetlands of Tunisia and Libya, Tunisia and Libya *(Corridor surface area: 3,352,601 hectares; 15 key biodiversity areas with a total surface area of 192,245 hectares)*
This corridor encompasses the numerous wetlands found along the Gulf of Gabes, including the Tebessa limestone mountains and some of the last extant savannas in North Africa. The climate is semi-arid with less than 300 millimeters of precipitation a year. Wetlands in the corridor harbor hundreds of thousands of wintering shorebirds on the extensive mudflats of the Gulf of Gabes. Freshwater marshes also hold good numbers of Marbled teal (*Marmaronetta angustirostris,*VU) and white-headed duck (*Oxyura leucocephala*, EN). The corridor is also home to the last populations of Dorcas gazelle (*Gazella dorcas*, VU) and Cuvier's gazelle (*Gazella cuvieri*, EN) in Tunisia. Seven globally threatened species occur in the key biodiversity areas delineated in the corridor. The coast of Tunisia is a popular touristic destination; consequently, housing and tourism development threaten wetlands and their biodiversity. Landscape-scale conservation is appropriate here as this could increase resilience along the hard hit coastal areas and further inland to the wetland key biodiversity areas. Overgrazing is also a serious problem here as with many places in the Maghreb. Nevertheless, some conservation actions have been undertaken, such as the reintroduction of addax and ostrich in the Bouhedma National Park Key Biodiversity Area. Roughly 13.4 percent of the surface area of global key biodiversity areas identified in the corridor is currently protected.

Figure 7. Site and Corridor Outcomes for the Mediterranean Basin Hotspot



SOCIOECONOMIC, POLICY AND CIVIL SOCIETY CONTEXT OF THE REGION

Introduction

There is an evident north-south fracture in the Mediterranean Basin, with an economically rich and ageing northern Mediterranean rim mostly comprised of EU member states, and the younger and poorer southern and eastern rims comprised of Arab states. There are considerable economic disparities between Mediterranean EU countries (average Gross Domestic Product, or GDP, per capita $20,800) and North Africa (average GDP per capita $2,100), and a significant migration flow from the poorer south to the richer north.

The northern Mediterranean is characterized by urban and industrialized societies with high-medium income levels, low population growth, increased and intensive agricultural production and decreased rural population, expanding urban concentration and increased tourism in rural areas. On the other hand, countries in the southern and eastern Mediterranean have low-medium income levels, high population growth rates, relatively high population density in rural areas, and many populations still dependent on natural resources for their livelihoods; including some silvopastoral activities that are vital for rural inhabitants. There is a dominance of state ownership of forest resources, and a pattern of rapid natural resources degradation due to destructive interventions. Urban expansion is, however, increasing, and tourism pressure is very high, especially in coastal zones.

The main socioeconomic figures describing the Mediterranean Basin are:

- 7 percent of the world's population (approximately 450 million inhabitants). Populations in the southern and eastern Mediterranean have doubled over 30 years, to reach 234 million inhabitants, and are expected to increase by additional 70-120 million by 2030. On the North rim, the population has only grown by 14 percent over the same period, and is expected to increase by a mere 5 million by 2030.
- 32 percent of international tourism, with a four-fold increase between 1970 and 2000.
- 13 percent of world's GDP with a decreasing trend.
- Development patterns still largely dependent on environmental resources, especially with regard to tourism but this also results in a significant economic migration flow from the southern to northern Mediterranean because of European-based tourism companies.

The Mediterranean Basin experienced an accelerated globalization during the last few decades, following the collapse of the "two-bloc system" (West vs. Soviet blocs) that also fractured the region. International cooperation policies and economic reforms have been focused essentially on reducing state involvement, trade liberalization (without, however, assessing the impacts on sustainable development), withdrawing subsidies and privatization.

This globalization happened not without several points of conflict or instability, some leading to wars (for example, Algeria, the Balkans and the Near East). Politically, in the northern Mediterranean the EU brought peace, democracy and economic reforms, community funds, free circulation of people, social market economy, and economic and environmental convergence. However, this regional integration model has no equivalent in the southern and eastern Mediterranean. Therefore, in spite of very restrictive EU migratory

policies (imposing strict visa requirements for third-country citizens to enter the EU), migratory flows remain significant and most unlikelyto dry up.

Several initiatives have been developed to bring convergence and cooperation within the region — perhaps the biggest one being the Euro-Mediterranean Partnership (1995), aiming to establish a common area of "stability and shared prosperity." However, Euro-Mediterranean cooperation, which has been integrated into the new European Neighborhood Policy since 2003, is still lacking resources, mutual commitment and incentives. Economically, the Mediterranean Basin is a declining region — particularly in the southern Mediterranean, where, for example, the relative share in international financing is decreasing sharply (10 percent in the 1990s versus 17 percent in the 1970s).

For terrestrial ecosystems, the agricultural lands, evergreen woodlands and maquis that dominate the region today are the result of anthropogenic disturbances that have developed over several millennia. In addition, the marine and coastal resources of the region are vast and the sea has had a huge influence on the socioeconomic development of the region. Therefore, a solid understanding of the social and economic context for the Mediterranean Basin Hotspot is essential to design a well-targeted ecosystem profile.

Social Context to the Mediterranean Basin Hotspot

Introduction and Historical Context

The Mediterranean Basin has experienced a long history of human settlement and landscape modification that first began about 10,000 years ago in the Middle East. The first human civilizations (the ancient civilizations of Mesopotamia and the Nile Valley) occupied parts of the eastern Mediterranean Basin from around the 4th millennium B.C. The mild climates fostered the growth of major urban centers, vast agricultural zones and dense human populations, which gradually expanded west to other countries in the region. Historically, Mediterranean forests were burned to make way for agriculture, the intensification of which has particularly affected European countries. Conflicts between different cultures over access to land and resources were common throughout the history of the region. Such human developments and migratory patterns have distinctly altered the characteristic vegetation of the region, particularly over the last 4,000 years.

The Mediterranean Sea gradually became both the central sea of Western civilization and the trade link to the riches of the east through the 1st millennium AD, and the second half of the 2nd millennium A.D. The sea provided a means for trading, colonization and war, and became the basis of life (via fishing and the gathering of other seafood) for numerous communities throughout the ages.

During the 16th century, the center of gravity for economic power shifted to the Atlantic coast of Europe, and then the Americas. However, the region has continued to be densely populated and the enclosed nature of the sea has increased the sensitivity of the region to human pressures on the environment. Over the last 50 years, human activities have had an increasingly serious impact on the region due to continued population expansion, urban growth, tourism, intensive agriculture and pollution, the disposal of industrial and domestic waste and desertification.

Key Social and Demographic Trends

Languages

The Mediterranean Basin is characterized by a multitude of different languages, the most common official language being Arabic. Economic and social ties throughout the basin have persisted, even through upheavals such as the Muslim ascendancy during the early Middle Ages, and those ties have been mediated by and reflected in the diversity of languages of the Mediterranean. Fifteen main languages are spoken around the region: Albanian, Arabic, Bosnian, Catalan, Croatian, English, French, Greek, Hebrew, Italian, Macedonian, Maltese, Portuguese, Slovenian, Spanish, Serbian and Turkish. Arabic and French are the dominating languages, even though English is increasingly becoming the default international language in the region.

Regional and National Demographics

The population of all countries bordering the Mediterranean Sea in 2009 reached between 450 and 500 million people, depending on the source. This represents about 7 percent of the world population. Table 4 shows a selection of demographic indicators for Mediterranean Basin countries, which include the total land area, total population, population density and the births and deaths/1,000 people.

More than half of the total population for the Mediterranean Basin is accounted for by just four countries: Egypt, France, Italy and Turkey. The region is densely populated with 26 countries exceeding the world average of 49 people/square kilometer. There are also vast differences between countries. Israel (345 people/square kilometer), Lebanon (373 people/ square kilometer) and Malta (1,310 people/square kilometer) are the most densely populated countries of the region, while Algeria (15 people/square kilometer) and Libya (4 people/square kilometer) are extremely sparsely populated – see Table 4 for details.

Table 4. Demographic Indicators (estimates for 2009; Source: The Population Reference Bureau, 2009 (www.prb.org) (except for Gibraltar and Vatican City: Internet World Stats, 2008, www.internetworldstats.com)

Country	Area sq/km	Population (million)	Population density people/km^2	Births/1,000 people	Deaths/1,000 people
Albania	28,748	3.2	111	10	5
Algeria	2,381,741	35.4	15	23	4
Bosnia and Herzegovina	51,197	3.8	75	9	9
Bulgaria	110,912	7.6	68	10	14
Cape Verde	4,033	0.51	126	26	5
Croatia	56,538	4.4	78	10	12
Cyprus	9,251	1.1	116	12	7
Egypt	1,001,449	79	79	25	6
France	551,500	63	114	13	9
FYROM	25,713	2.1	80	11	9
Gibraltar	7	0.029	4,881	13.7	7.8

Country	Area sq/km	Population (million)	Population density people/km^2	Births/1,000 people	Deaths/1,000 people
Greece	131,957	11.3	85	10	10
Iraq	438,317	30	69	32	9
Israel	22,145	7.6	345	21	5
Italy	301,318	60.3	200	10	10
Jordan	89,342	6	66	28	4
Lebanon	10,400	3.87	373	20	5
Libya	1,759,540	6.28	4	24	4
Malta	316	0.4	1,310	9	8
Monaco	1	0.035	35,382	7	6
Montenegro	13,812	0.628	45	13	10
Morocco	446,550	31.49	71	21	6
Portugal	91,982	10.6	116	10	10
San Marino	61	0.03	515	10	7
Slovenia	20,256	2.0	101	11	9
Spain	505,992	46.9	93	11	8
Syria	185,180	21.9	118	28	3
Tunisia	163,610	10.4	64	17	6
Turkey	783,562	74.8	95	18	6
Vatican City	0.44	0.0005	NA	NA	NA

In Macaronesia, most archipelagos were uninhabited before the European colonizers arrived in the 15th century. Today all those archipelagos have high population density (200 inhabitants/square kilometer on average), mostly settled around the coasts, since these islands, which are volcanic in origin, have forbidding mountainous landscapes.

Table 5 provides figures for the average annual projected population rate of change, and provides indicators for the rate of urbanization (projected average rate of change of the size of the urban population) and the percentages of the population living in rural and urban areas.

Mediterranean Basin countries with the largest rural populations include: Egypt (57 percent live in rural areas), Albania (51 percent), Bosnia and Herzegovina (54 percent), Slovenia (52 percent), Morocco (44 percent), Croatia (44 percent), Portugal (45 percent) and Montenegro (36 percent). Those with the highest urban populations include Malta (94 percent), Israel (92 percent) and Lebanon (87 percent). Populations across the region are predominantly urban.

The highest rates of urbanization are in the southern Mediterranean Basin countries of Jordan (3.1 percent), Algeria (2.5 percent), Libya (2.2 percent) and Turkey (2 percent) (if we do not consider the small city states). This is likely to pose considerable risks to biodiversity, particularly in coastal areas. Montenegro and Slovenia have negative rates at –0.8 and –0.6 respectively. Cape Verde has a low population growth rate, but an extremely high rate of urbanization.

Migratory Patterns

Table 6 shows the net migration rate for selected Mediterranean Basin countries. It illustrates that Cape Verde (-5/1,000) and Iraq have the most people leaving the country (-4/1,000), as opposed to entering it. Other countries with a negative net migration rate include Morocco (-3/1,000), Albania (-0/1,000) and Montenegro (-1/1,000). Countries with the highest number of migrant arrivals include Cyprus (9/1,000), Italy (8/1,000), Portugal (2/1,000), Greece (4/1,000) and Malta (5/1,000). These all greatly exceed the EU average of 3/1,000.

Table 5. Projected Population rate of change and rural-urban distribution for Mediterranean Basin countries (estimates for 2009; Source: Population Reference Bureau 2009)

Country	Population rate of change (%)	Rate of Urbanization % annual	Percentage rural: urban
Albania	-11	1.9	51:49
Algeria	43	2.5	37:63
Bosnia and Herzegovina	-20	1.4	54:46
Bulgaria	-22	-0.3	29:71
Cape Verde	53	3.5	41:59
Croatia	-13	0.4	44:56
Cyprus	0	1.3	38:62
Egypt	56	1.8	57:43
France	12	0.8	23:77
FYROM	-9	0.8	35:65
Gibraltar	N/A	N/A	N/A
Greece	2	0.6	40:60
Iraq	106	1.7	33:67
Israel	49	1.7	8:92
Italy	2	0.4	32:68
Jordan	62	3.1	27:83
Lebanon	37	1.2	13:87
Libya	56	2.2	23:77
Malta	-3	0.7	6:94
Monaco	7	0.3	0:100
Montenegro	-4	-0.8	36:64
Morocco	35	1.8	44:56
Portugal	0	1.4	45:55
San Marino	11	0.9	16:84
Slovenia	-8	-0.6	52:48
Spain	-7	1.0	23:77
Syria	68	3.1	46:54

Tunisia	34	1.7	33:66
Turkey	30	2.0	37:63
Vatican City	N/A	N/A	0:100

Table 6. Net migration rates for Mediterranean Basin countries (Source: Population Reference Bureau: 2009 World Population Data Sheet)

Country	Net migration rate (Migrants/1,000 population)
Albania	-0
Algeria	-1
Bosnia and Herzegovina	-0
Bulgaria	-0
Cape Verde	-5
Croatia	2
Cyprus	9
Egypt	-1
France	1
FYROM	0
Gibraltar	N/A
Greece	4
Iraq	-4
Israel	1
Italy	8
Lebanon	*-1*
Libya	*1*
Malta	5
Monaco	0
Montenegro	*-1*
Morocco	-3
Portugal	2
San Marino	12
Slovenia	9
Spain	8
Syria	8
Tunisia	0
Turkey	0
Vatican City	NA

Ethnicity and Religion

The Mediterranean Sea is evenly divided between countries that follow either Christian (generally in the northwest of the region) or Islamic (generally in the south and east of the region) faiths. At many times over the course of human interactions in the region, the two religions have competed for the islands of the Mediterranean Basin, with Crete, Cyprus, Malta and Sicily becoming regular battlegrounds.

Education

According to the Mediterranean Information Office for the Environment, Culture and Sustainable Development, there is a large diversity not only in the degree of application of education and the way that it is practiced, but also in the philosophy and the regulatory and operational framework of the educational systems in general in the various Mediterranean countries. The northern Mediterranean Basin countries have a much higher level of literacy than their southern counterparts. Highest literacy levels are experienced in Albania, Croatia, France and Slovenia. The lowest levels are experienced in Algeria, Egypt, Morocco and Tunisia.

With the exception of France and Malta, literacy levels are lower for women than for men across the region. The greatest variations are experienced in those countries with the lowest overall literacy levels. Indeed, in Morocco, only 39.6 percent of females over age 15 can read or write — the lowest percentage in the region.

In the last 20 years the general public awareness on the need to preserve nature and the environment has increased noticeably. This is a consequence of the many awareness campaigns developed and implemented, but also of the international environmental conventions and policies.

Summary of Social Context: Implications for Biodiversity Conservation

The countries in the northern Mediterranean region are very different from those of the southern and eastern Mediterranean, most of the latter being economically less developed than the former. Population growth poses a potential threat to the environment, particularly in Northern Africa, and parts of the Middle East, such as Syria, where rates are the highest. In addition, increasing urbanization will require more and more water supplies to cities and considerable investments in water supply and treatment.

Constantly increasing population pressure is exacerbated by tourism. The mild climate and the natural and cultural heritage attract huge numbers of tourists. Tourism is seasonally concentrated in the coastal zones, particularly on the shores of the north-western basin. In 1996, 135 million tourists visited the area, but this is expected to rise to 235 million to 300 million per year, by 2012. The population living on the shores of the Mediterranean Basin is approximately 143 million, which significantly impacts the marine ecosystem and surrounding coastal areas. Future conservation efforts need to address population pressures on the land, especially in the coastal zone, issues of infrastructure impact and connectivity, and above all, how to maintain traditional rural livelihoods in a way that benefits biodiversity, particularly where urbanization is high.

The socioeconomic implications of climate change in the region are numerous. The number of heat waves is likely to increase and will directly affect the human populations of the Mediterranean Basin. A rise in temperatures could also facilitate the spread of tropical diseases, especially insect-borne diseases that could multiply rapidly. An increase in dust-

charged winds from the Sahara could increase the incidence of allergies and respiratory problems. A decrease in fish stocks would have an impact on the fishing industry. Aquaculture, a recent activity in the region, could also be affected by a change in climate conditions. Finally, and most importantly, increased warming could seriously affect water resources, sanitation and the tourist industry.

Economic Context to the Mediterranean Basin Hotspot

Introduction to Mediterranean Basin Country Economies

Historically, trade was one of the main driving forces behind the development of Mediterranean Basin societies and cultures. The coastline of approximately 4,000 kilometers proved no hindrance for the flourishing of an incipient trade-based economy. Today, the economics of the region vary considerably between countries of southern Europe, and those of Northern Africa and the Middle East. The latter tend to be more involved in agricultural and industrial activities, whereas the former are more involved in tertiary or service-based activities.

Key Economic Trends

There are some significant economic differences between the countries, again, following a pattern between those countries of the EU at one end of the spectrum, and those of Africa and the Middle East at the other. Below figures for 2008 are presented (The World Bank Databank 2009).

Gross Domestic Product: GDP is highest in France ($2.9 trillion), Italy ($2 trillion) and Spain ($1.6 trillion) and lowest in the smallest countries: Montenegro ($5 billion), Malta N/A, Albania ($12.3 billion) and Cyprus ($25 billion). The EU average is $13.5 trillion and only three countries in the region approach this number. These figures are better interpreted using per capita figures, which consider the size of the country in terms of its population. Cyprus, for example, is in the bottom five for the region for GDP, but in the top five for GDP per capita.

Gross Domestic Product per capita: GDP per capita is highest in France ($44,508), the only country in the Mediterranean region that exceeds the EU average of $41,654. Other countries with high GDP figures per capita include Spain ($35,215), Greece ($32,000), Italy ($38,492), Cyprus ($31,410) and Israel ($27,652). The lowest figures in the region are in Morocco ($2,769), Syria ($2,682) and Egypt ($1,991). There is a clear divide between those countries in the northern part of the region (richer) and those in the south (poorer).

Inflation rate: Inflation in countries of the Mediterranean Basin is high in comparison to the EU average of 3.5 percent. Only five countries have inflation levels below this. Albania, Italy and Montenegro run at 3.4 percent, Portugal at 3 percent, and France at 2.8 percent. Jordan (15.5 percent), Lebanon (8 percent) and Libya (10.4 percent) have the highest inflation levels in the region. Cape Verde has a relatively low inflation (7 percent) but a low GDP per capita.

Energy and Power Production

In the Mediterranean Basin, demand for primary commercial energy more than doubled in riparian countries between 1970 and 2000 (Plan Bleu 2006).

Only four countries in the region, namely in the southern/eastern shore of the Mediterranean Basin (Algeria, Egypt, Libya, Syria), are hydrocarbon exporters, and export 50 percent of their oil and 90 percent of their gas to other Mediterranean Basin countries, contributing significantly to foreign exchange earnings. All the other countries are net energy importers; there is, however, very little, almost residual, oil and gas drilling within the boundaries of the hotspot. The Mediterranean Basin relies heavily on petroleum for its energy (48 percent in total, 2000 data), although some countries have many coal-fired and hydropower plants.

Fossil fuels (oil, gas, coal) dominate supply and account for more than 75 percent of consumption in the north, and 96 percent in the southern and eastern Mediterranean. Growth in natural gas consumption is relatively strong. Fossil energy is expected to account for 87 percent of total energy demand in 2025, nuclear only 9 percent (France, Spain and Slovenia), and renewable energy only 4 percent (biomass excluded), despite a four-fold increase over 25 years. Wind and solar energy are seen as potential alternative sources of energy, and many projects are now cropping up across the hotspot.

Access to Water Resources

On its own, the Mediterranean Basin represents 60 percent of the "water poor" (less than 1,000 cubic meters per capita per year) world population, or 162 million people, mostly living in the south and east, but only 7 percent of the world's total population. On the measure of water footprint per person, five of the top 10 worst nations in the world are the Mediterranean Basin countries of Cyprus, Greece, Italy, Portugal and Spain. The Mediterranean Basin Hotspot is clearly an area facing greater and greater water stress (WWF 2008). Since water is such an important —and scarce — feature in this region, and one that limits and conditions humans and nature. In Appendix 4 there is a brief overview of the role of water across Mediterranean countries, analyzing the availability of water at the national level, and which countries are likely to suffer from the most water shortages in the future. Tourism seasonality (concentrated in the summer time, when water is at its minimum) and type (often based on large resorts and thematic parks or golf courses) do contribute significantly to this situation.

Summary of the Economic Context

As with the social analysis, the economies of Mediterranean Basin countries can be broadly split into two separate clusters: those in the northern Mediterranean belonging to the EU, and those in the southern portion of the hotspot, in Africa and the Middle East. The latter economies generally have lower GDPs per capita; higher inflation; a greater proportion of their population living in rural areas and employed in agriculture; and more fragmented and undeveloped infrastructures.

The demand for and the availability of energy resources, and access to and availability of water across the region, do not follow the same distinct pattern between countries in the north and south of the region. Indeed, all countries to a greater or lesser extent show some degree of water stress, whether this is access to or distribution of water across the country, throughout the year. In the Mediterranean Basin, climate conditions have led people to learn to plan and manage their water since the earliest times. However, the demographic growth and social and economic changes of the 20th and early 21st centuries have created a new situation. In the degraded environment, water —a rare resource — is under threat and has become a factor limiting development in many ways. In addition, as populations continue to increase in the region, there is more and more demand on energy resources. Some countries are exploring the power of the Mediterranean sun and wind in producing energy through the

development of alternative energy technologies, but most attempts to do this are in their infancy.

One significant economic sector in the Mediterranean Basin is tourism. Development for tourism has placed significant pressure on the region's coastal ecosystems. The shores of the Mediterranean Basin are the biggest large-scale tourist attraction in the world, with 220 million visitors arriving per year, a figure that is expected to double by 2020. France alone receives 75 million tourists per annum, and the sector provides 15 percent of total GDP in Greece. In Egypt, international tourist arrivals reached 7.5 million in 2004 and according to the WTO vision, in 2020 Egypt would be the largest tourist-receiving country in the African Continent. The construction of tourism related infrastructure, and the direct impacts of people remains a key threat to coastal areas in Cyprus, Greece, Lebanon, Morocco, Tunisia and Turkey, as well as Mediterranean islands such as the Balearics, Corsica, Crete, Sardinia, Sicily and the Atlantic island archipelagos of the Canaries and Madeira Islands.

Because of all these patterns and pressures, the ecological footprint of each Mediterranean Basin country is exceeding its potential for renewal. The ecological footprint compares human demand with planet Earth's ecological capacity to regenerate. Table 7 shows figures for the region.

Table 7. Ecological Footprint (and Deficit) of Mediterranean Countries (Ewing *et al.* 2009)

Country	Ecological footprint (Global hectares/person)	Ecological deficit (Global hectares/person)
Albania	2.6	-1.6
Algeria	1.9	-1.1
Bosnia and Herzegovina	3.4	-1.7
Bulgaria	3.3	-0.6
Cape Verde	NA	NA
Croatia	3.3	-1.5
Cyprus	4	-3.5
Egypt	1.4	-1.1
France	4.6	-1.8
FYROM	NA	NA
Gibraltar	NA	NA
Greece	5.8	-4.4
Iraq	1.3	-1.1
Israel	5.4	-5.1
Italy	4.9	-3.9
Jordan	2.0	-1.8
Lebanon	2.1	-1.8
Libya	4.3	-3.3
Malta	3.9	-3.3

Country	Ecological footprint (Global hectares/person)	Ecological deficit (Global hectares/person)
Monaco	NA	NA
Montenegro	2.6	-1
Morocco	1.3	-0.4
Portugal	4.4	-3.2
San Marino	NA	NA
Slovenia	3.9	-1.5
Spain	5.6	-4.3
Syria	1.6	-0.7
Tunisia	1.9	-0.7
Turkey	2.7	-1.1
Vatican City	NA	NA

All the Mediterranean Basin countries had an ecological deficit in 2003. This means that the environmental capacity of the region is used up more quickly than it is renewed. The ecological footprint per capita has gone down since 1996 in all of the Mediterranean Basin countries except Croatia.

In 2004, the overall ecological footprint in the Mediterranean Basin countries reached 1.3 billion hectares, almost 10 percent of the worldwide footprint, while the Mediterranean population is around 7 percent of the world population. The Mediterranean Basin ecological footprint (3 hectares per inhabitant) is thus higher than the world's average ecological footprint (2.2 hectares per inhabitant). It is becoming increasingly clear that current economic development trends in the Mediterranean are not sustainable.

The Mediterranean Basin's ecological deficit (1.7 hectares/inhabitant) is more than four times greater than the world's ecological deficit (0.4 hectares/inhabitant). The ecological footprint of the northern Mediterranean countries (4.7 hectares/inhabitant) is almost three times higher than that of the southern and eastern Mediterranean countries. Their ecological deficit (2.9 hectares/inhabitant) is very high (60 percent of their footprint, more than 3.6 times the deficit of the south and eastern Mediterranean countries). The gaps between countries in terms of ecological footprint per unit of GDP are, however, reversed. Italy, for example, consumes 162 hectares per million dollars and France consumes 213 hectares per million dollars, while Lebanon consumes 587 hectares per million dollars. Tunisia is particularly thrifty with 226 hectares per million dollars.

Institutional Frameworks for Environmental Management

Government Frameworks

All the countries have a national ministry with competencies on biodiversity issues, although few have more complex governance with different entities at different levels that are also competent. The most complex countries are Bosnia and Herzegovina and Spain. Portugal has also a decentralized government for the overseas territories of Madeira and Azores. Croatia has Public Institution for the Management of the Protected Areas at the

county level, responsible for the management of regional and local protected sites. The rest of the countries have a centralized structure, simple in some countries (such as Cyprus, Jordan, Lebanon, Monaco, Palestinian territories and Syria) or with regional delegations in others (for example, France and Libya).

Some countries have specific agencies or institutes responsible for protected sites, species and/or data management, acting as the executive branch of the competent ministry. Some examples are Albania (Agency of Environment and Forestry), Croatia (State Institute for Nature Protection and Croatian Environmental Agency), Slovenia (Institute of the Republic of Slovenia for Nature Conservation, and The Environmental Agency), Montenegro (Agency of Environmental Protection), Algeria (Agence Nationale de la Conservation de la Nature) and Egypt (Egyptian Environmental Affairs Agency). France, apart from the regional delegations, has several relevant agencies dealing with coastal ecosystems (Conservatoire du Littoral), management of regional parks (Fédération des Parcs Naturels Régionaux de France), public forests (Office National des Forêts) and wildlife and hunting (Office National de la Chasse et de la Faune Sauvage). Similar structure is also working in Italy, with the Ministero dell'Ambiente e Della Tutela Del Territorio e del Mare as the competent national authority, with a branch for wildlife conservation (Istituto Superiore per la Protezione e la Ricerca Ambientale). In Turkey, under the Ministry of Environment and Forestry there are two institutions for protected areas: General Directorate of Nature Conservation and National Parks (for National Parks, Strict Nature Reserves, Nature Monuments, and Wildlife Reserves), and Environmental Protection Agency for Special Areas (for Special Environmental Protection Areas).

Governments in the hotspot have devoted much effort to the designation and management of protected areas for conservation, tourism and recreation. While these efforts have helped to advance conservation locally, they do not address strategically targeted on-the-ground priorities. As a consequence, there are significant gaps in terms of protected area coverage. Weakness in protected area management and insufficient enforcement of laws is another concern. Furthermore, governmental initiatives in different parts of the Mediterranean Basin Hotspot have often inadequately mobilized civil society participation, expertise and support.

Civil Society Organizations

Mediterranean Basin Hotspot Networks, Programs and International NGOs

Aware of their common heritage, Mediterranean and international organizations have developed many initiatives for cross-border cooperation in nature conservation and sustainable development. The countries of the Mediterranean Basin Hotspot are at different stages in terms of economic and institutional development, and therefore, have different capacities to address biodiversity issues.

Some entities work exclusively in the Mediterranean, such as Medmaravis, Medasset and Tour du Valat. Others have a wider scope and have either developed targeted Mediterranean programs, such as the Mediterranean Programme Office of WWF or the IUCN Med, South Eastern Europe or North Africa Biodiversity programs or programs have a broad geographical scope that cover larger parts of the Mediterranean Basin Hotspot (Vulture Conservation Foundation, Oceana-Europe, etc; see supplemental appendices on www.cepf.net).

In the Northern Mediterranean it is common to find pan-European cooperation initiatives (many of them promoted by EU regional policies), while in the other sub-regions networking among countries is rare. In the Balkan States there are few cross-border networks active in biodiversity, with the Balkan Vulture Action Plan (promoted by the Vulture Conservation Foundation, Frankfurt Zoological Society and BirdLife International, together with local NGOs and governments) being the most outstanding. This plan is consolidating a regional network of local NGOs capable to work efficiently in nature conservation and sustainable development using vultures as flagship species.

In the Middle East, there are some examples of networking among countries such as the Friends of the Earth Middle East (FoEME), which is the only NGO with national branches in Jordan, Palestinian territories and Israel, being active in climate change and environmental issues along the Dead Sea Rift Valley. The project "Migrating Birds with no boundaries" is led by three organizations: the International Center for the Study of Bird Migration in Israel, Wildlife Palestine Society and the Royal Society for the Conservation of Nature (RSCN) in Jordan. And there is a UNDP project funded by the GEF, "Mainstreaming Conservation of Migratory Soaring Birds into Key Productive Sectors Along the Rift Valley/Red Sea Flyway." It has been developed in Egypt, Jordan, Lebanon and Palestinian territories, among other countries.

In the Macaronesia sub-region, there is an intense cooperation between the Canaries and the Madeira and Azores islands supported by EU programs, thus not including Cape Verde. Some examples of initiatives funded by European Commission Interreg Funds are the Emecetus Project (in Madeira and Canary archipelagos on cetacean populations) and the Macetus Project (in Madeira, Azores and Canary archipelagos, also on cetacean populations).

Initiatives for biodiversity conservation in the Mediterranean context led and promoted by Western European countries are more stable at the long term, such as:

- The MedPan, funded by the European Commission Interreg Funds, involving 11 countries around the shores of the Mediterranean in the creation and management of more than 20 marines protected areas.
- The Observatory of Mediterranean Wetlands (MedWet) initiative, managed by Tour du Valat.
- The MedWetCoast Project for conservation of Wetlands and Coastal Ecosystems in the Mediterranean Region, promoted by UNDP with GEF funds, and developed in Albania, Lebanon, Palestinian territories, Egypt, Tunisia and Morocco, with the advice of Tour du Valat and Conservatoire du Littoral.

National NGOs

National NGO activity differs greatly among the different sub-regions, and (with few exceptions) is generally less developed in the Balkan States, North Africa and Middle East sub-regions. (Table 8). In these sub-regions there are few NGOs, with local scope, not always skilled, very poor and operating under unstable financial conditions, with small membership and budget. Most of them are in need of qualified staff, consistent funding, competitive salaries and quality office equipment to improve cooperation with other NGOs. They also need training with respect to fundraising, writing project proposals, accounting, reporting, building networks, strategic planning, organizational development and working with the media, as well as to improve their ability to influence policy and cooperation with governments.

Only a small number of the environmental NGOs in the Balkan States, North Africa and Middle East are active in biodiversity issues (inventory, monitoring, protected areas management, and direct conservation measures) and few are able to develop high-profile, long-term programs, while governmental institutions and academic stakeholders do most of the nature conservation activity.

In Albania, Bosnia and Herzegovina, Syria, Libya and Cape Verde, this situation is critical, as there are few to none undertaking biodiversity work. In contrast, Croatia and Turkey have several organizations performing specific jobs and long-term research and biodiversity inventories in the marine environment, rivers and on land, especially on herpetology and ornithology. Jordan, Lebanon, Morocco and Tunisia have a large number of environmental NGOs, although the vast majority are very local in scope. Montenegro has only few NGOs due to its recent independence. In the Palestinian territories, because of the small size of the country and its socio-political complexity, the number of NGOs working on biodiversity is low. On the other hand, relative abundance of resources in Israel (with donations from private donors mostly from the United States) allows some very professional NGOs to develop long-term conservation programs, especially with regard to migratory birds and raptors. In the Northern Mediterranean sub-region, the biodiversity NGO movement is well consolidated in biodiversity issues, with very active, skilled, professional and strong associations. Some have more than 50 years of experience.

Table 8. Number of Environmental NGOs Active in the Mediterranean Basin, by Sub-region

Sub-region	Countries	# of Environmental NGOs	# of Biodiversity NGOs	IUCN Members
Balkan States	6	350	101	4
Macaronesia	3	70	17	2
Middle East	6	161	46	27
North Africa	5	887	59	13
Northern Mediterranean	9	980	146	95

See Appendix 5

The most active NGOs in biodiversity monitoring and conservation are:

Albania: Albanian Society for the Protection of Birds, Institute for Nature Protection in Albania, Iliria and the Mammals and Protection and Preservation of Natural Environment in Albania.

Algeria: Association Algérienne des Amis des Oiseaux, Mouvement Ecologique Algérien, Association Nationale pour la Protection de l'Environnement et la lutte contre la Pollution, Association Ecologique de Boumerdes, Association de Protection de l'Environnement, de la Faune et de la Flore de la wilaya de Béchar and the Fédération Nationale de Chasse.

Bosnia and Herzegovina: The Ornithological Society "Naše Ptice," Novi Val and Southern Blue Sky, Society for Inventarization and Animal Protection.

Cape Verde: SOS Tartarugas, Associação para a Defesa do Ambiente e Desenvolvimento, Cabo Verde Natura 2000, Associação Garça Vermelha.

Croatia: Croatian Society of Natural Sciences, Croatian Herpetological Society, Blue World Institute for Marine Research and Conservation, Eleonora Society for Protection of Nature

and Environment, Mediterranean Monk Seal Group, Nature Society "Drava," Eco-center Caput Insulae-Beli, Croatian Ecological Society and Croatian Botanical Society.

Cyprus: Episkopi Turtlewatch, BirdLife Cyprus, Society for the Protection of Birds and Nature, Cyprus Wildlife Society, Cyprus Association for the Protection of Avifauna.

Egypt: Nature Conservation Egypt (NCE, BirdLife Affiliate), Egyptian Entomological Society, Egyptian Botanical Society, the Society for Conservation of Nature and Friends of Environment Association.

France: Société d'Etudes Ornithologiques de France, Ligue pour la Protection des Oiseaux (LPO, BirdLife partner in France), Société Française pour l'Etude et la Protection des Mammifères, Seagrass 2000, Association Internationale Forets Mediterranéennes, The Cousteau Society.

FYR of Macedonia: Macedonian Ecological Society (MES, BirdLife Affiliate) and the Bird Study and Protection Society of Macedonia (DPZPM).

Greece: Hellenic Society for the Study and Protection of the Monk Seal, Hellenic Ornithological Society (HOS, BirdLife partner in Greece), Hellenic Zoological Society, Archelon (Sea Turtle Protection Society), ARCTUROS, WWF-Greece.

Israel: Society for the Protection of Nature in Israel (SPNI, BirdLife partner in Israel), International Birding and Research Center in Eilat, Israel Herpetological Information Center, Hai-Bar Society for the Establishment of Biblical National Wildlife Reserves in Israel, Middle East Nature Conservation Promotion Association, Israel Ecological Society and Zoological Society of Israel.

Italy: Lega Italiana Protezione Uccelli (LIPU, BirdLife partner in Italy), WWF-Italy, Arche (Chelonian Conservation), Federazione Nazionale Pro Natura, Naucrates, Fondazione Cetacea, Legambiente.

Jordan: Royal Society for the Conservation of Nature (RSCN, BirdLife partner in Jordan), the Royal Marine Conservation Society of Jordan, Arab Group for the Protection of Nature, and National Environment and Wildlife Society.

Lebanon: Society for the Protection of Nature in Lebanon (SPNL, BirdLife partner in Lebanon), Association for Forests, Development and Conservation, Al-Shouf Cedar Society, Environment Protection Committee, A Rocha, and Green Line.

Malta: BirdLife Malta, Malta National Biodiversity Platform, Malta Marine Foundation.

Monaco: Association Monégasque pour la Protection de la Nature.

Montenegro: Center for the Protection and Research of Birds of Montenegro, Fauna Conservation Society Lynx, Eco Centre Dolphine and Green Home.

Morocco: Groupe d'Ornithologie du Maroc, Association d'Education Environnementale et de Protection des Oiseaux au Maroc, Centre d'Etude des Migrations d'Oiseaux, Société Protectrice des Animaux et de la Nature, Groupe de Recherche pour la Protection des Oiseaux au Maroc, Association Marocaine pour la Protection de l'Environnement,

Association de Protection des Tortues Marines au Maroc and Féderation Royale Marocaine de Chasse.

Palestinian territories: Palestine Wildlife Society (PWLS, BirdLife partner in Palestinian territories), Palestinian Society for the Protection of Environment, and Nature and Applied Research Institute-Jerusalem.

Portugal: Sociedade Portuguesa para o Estudo das Aves (SPEA, BirdLife partner in Portugal), Grupo de Estudos de Ordenamento do Território e Ambiente, Liga para a Protecçao da natureza, Quercus (with delegations in Azores and Madeira), FAPAS, Azorica.

Slovenia: DOPPS – BirdLife Slovenia and Zveza Ekoloskih Gibanj Slovenije.

Spain: Asociación Española de Entomología, Sociedad Española de Biología de Conservación de Plantas, Sociedad Española de Ornitología (SEO, BirdLife partner in Spain), WWF-Spain, Ecologistas en Acción, Adenex, GOB, Silvema, Gurelur, Andalus, Fapas, CRAM, Depana, Sociedad para el Estudio de los Cetáceos de Canarias.

Syria: Syrian Society for the Conservation of Wildlife, the Arab Center for the Studies of Arid Zones and Dry Lands, and Syrian Environment Protection Society.

Tunisia: Association "Les Amis des Oiseaux" (AAO, BirdLife partner in Tunisia); Association Tunisienne pour la Protection de la Nature et de l'Environnement; Association de la Sauvegarde de Île de Djerba; Association Nationale du Développement Durable et de la Conservation de la Vie Sauvage; Association Tunesiènne des Sciences de la Mer; Association Tunisienne de la Protection de l'Environnement, de la Nature, de la Faune et de la Flore Sauvages de Sfax; Association de Protection de la Nature et de l'Environnement de Kairouan; and Association Nationale Tunisienne de la Protection de la Faune Sauvage.

Turkey: Doğa Derneği (BirdLife partner in Turkey), WWF Turkey, Turkish Bird Research Society, TEMA Foundation, Buğday Society, and TURCEK Environmental and Woodlands Protection Society of Turkey.

Academia

Academic interest and involvement in biodiversity conservation is well developed in most countries in the hotspot. Academic institutions are of particular significance in some countries where the NGO sector is comparatively underdeveloped (see Appendix 5).

The Faculty of Sciences of the University of Tirana and the Museum of Natural Sciences in Albania congregate relevant scientists in biodiversity work. In Libya, the Marine Biology Research Centre works on sea turtle conservation, and the Al Fateh University (Tripoli) works in sea, coast and fisheries, sustainable use of natural resources, pollution and wildlife conservation. Bosnia and Herzegovina has its National Museum as well as the Center for Ecology and Natural Resources (associated with the University of Sarajevo), which deals with IUCN biodiversity projects and the Emerald Network. Croatia has important research programs on biodiversity at the University of Zagreb, University of Split and the University of Dubrovnik, and there are research institutions focused on the marine environment (Institute for Marine and Coastal Research, Ruder Boskovic Institute and the Institute of Oceanography and Fisheries). In Montenegro, the Institute of Marine Biology, based at Kotor, is aggregated to the University of Montenegro, with a Laboratory on General Biology and Protection of the Sea.

In Algeria, the Université Saad Dahlab Blida undertakes work on protected areas management in wetlands and arid zones, and the Université de Béjaïa is active in ornithology and natural habitats. The Egyptian Academy of Scientific Research and Technology is partner of IUCN's North Africa Biodiversity Program. Tunisia has scientific institutions working in biodiversity or protected sites, such as the Institut National des Sciences et Technologies de la Mer, which is undertaking studies on the marine ecosystems and sustainable use of marine natural resources; the Institut des Régions Arides, focused on flora and fauna and reintroduction of species; and the Institut National Agronomique de Tunisie, which deals with management and sustainable use of marine natural resources, water bird and wetland studies and water management.

In Israel, Tel Aviv University is the most actively involved in biodiversity research and conservation, in close cooperation with the environmental authorities and NGOs. Israel is a global reference on raptor ecology. The University of Jordan, Yarmouk University, Hashemite University and the Jordan Badia Research and Development Centre (involved in Ramsar wetland management) are the most relevant academic stakeholders in Jordan, while in Lebanon they are the American University of Beirut, the Beirut Arab University and the Arts, Sciences and Technology University. In the Palestinian territories it is the Biodiversity and Agricultural Research Unit of the Applied Research Institute that has updated the Palestinian Flora, Fauna, Agricultural, Plant Protection and Livestock DataBase. In Syria, little research is done in the two main universities with faculties of sciences, the Damascus and Aleppo universities. The Mediterranean Turkish area has several universities with interests in the field of biodiversity, namely the Akdeniz University, the Aegean University, Dokuz Eylül University and the Middle East Technical University. It also has the Scientific and Technological Research Council of Turkey (TUBITAK).

In some countries, the academic centers have played an important role in the creation of biodiversity NGOs, as is the case of the Macedonian Ecological Society, the Ornithological Society Nase Ptice in Bosnia and Herzegovina, the Albanian Society for the Protection of Birds and Mammals, the Spanish Ornithological Society or the Society for the Protection of Nature in Israel.

In 2007 the Euro-Mediterranean University in Slovenia (EMUNI) was created with the support of the European Union, which complements a second academic initiative, the Centre of Research and Studies for the Eastern Mediterranean (CREMO) led by the University of the Aegean. Combined these institutions have the potential to increase research on conservation and sustainable development in the Mediterranean Basin, among other issues.

Private Sector

CEPF has previously successfully engaged the private sector in biodiversity conservation in many hotspots. In the Cape Floristic Region biodiversity hotspot in South Africa, the Wine and Biodiversity Initiative represented a partnership between the South African wine industry and the conservation sector. Similarly, in the Atlantic Forest Hotspot the majority of the remaining natural habitat was privately held, including large tracts of commercially owned and operated land. Through a local partner nongovernmental organization, Instituto BioAtlântica, private owners of large land holdings were provided with the necessary scientific information and legal options to play a pivotal role in the creation of biodiversity conservation corridors through the strategic use of their own land as required by Brazilian law. These and other innovative approaches could well be replicated in the Mediterranean Basin Hotspot.

Within the northern Mediterranean sub-region of the hotspot there are several examples of positive partnerships between the nongovernmental and private sectors including private landowners working with nongovernmental organizations to implement effective land stewardship practice. Many of these approaches were piloted in Spain but have recently been replicated in Bosnia and Herzegovina. WWF has promoted the adoption of the Forestry Stewardship Certification across the sub-region with the timber industry which has significantly reduced negative impacts. Finally, the fisheries industry has strived to minimize the impact of by-catch of sea turtles and marine birds. Lessons learned from these approaches can be replicated in the other sub-regions to reduce negative impacts and develop direct conservation and restoration measures.

However, to date there has been limited engagement of the tourism industry. Many large tourism companies with extensive operations in the northern Mediterranean are expanding into new markets including Cape Verde, Greece, Egypt and Morocco. Some of these companies have sustainable development policies, but these are the exceptions rather than the rule. The expansion of the tourist markets and associated impact of the construction companies contracted to build the necessary infrastructure also generates negative impacts in the short and long term. These include mining sand from beaches and placing a high demand on the available water supply for building. In addition, the development of intensive agricultural practices to provide needed food increases and the demand for irrigation are further reducing the available water supply. Generating the power that results from this increased demand threatens many areas as hydroelectric power is seen as an attractive option by governments and donors.

There are successful examples of collaboration between NGOs and the private sector, especially with industries that generate significant atmospheric pollution, through reducing their carbon footprint by reducing emissions and tree plantations. Some examples of this cooperation are those developed by WWF and Global Nature's Business and Nature Program. The European Centre for Nature Conservation (ECNC) is developing a Business and Biodiversity program to mainstream nature and biodiversity concerns into business sector's policies and operations.

In addition, the IUCN Regional Office for Europe is working through its Countdown 2010 initiative to increase the level and the quality of private sector commitments toward biodiversity and helps to create platforms for business to engage on biodiversity; this includes the European Business and Biodiversity Initiative launched under the Portuguese presidency of the EU and the Dutch and Swiss initiatives, Leaders for Nature. Companies that have made Countdown 2010 commitments range from business associations to small and medium-size enterprises to multinational corporations like the European Aggregates Industry, Holcim and Delta Café.

Few countries take advantage of tourist donations as a source of revenue for biodiversity conservation, as has been done in Belize. With the predicted increase in tourism to the Mediterranean Basin, such payments have the potential to become a significant source of funding for nature conservation. In the Mediterranean Basin Hotspot, the relationship between NGOs and the tourist sector can be described as "foes" rather than as "friends." This is despite the fact that nature and natural areas are a significant draw for tourists. An example of a tour company engaged in conservation is TUI, a German tour operator, with destinations in Cape Verde, the Balearic and the Greek islands. It has established agreements with local conservation NGOs to support biodiversity activities.

Another creative approach to engaging the private sector in biodiversity conservation is to invite the business leaders to become members of the boards of the NGOs. Examples of this include SEO/BirdLife's Alzando el Vuelo program to conserve the Spanish imperial eagle, which is also a good example of private corporation involvement in biodiversity conservation.

Policy, Legislation and Planning

Environmental legislation and policy status is diverse among the Mediterranean Basin countries. EU countries have a comprehensive and consistent legislation on most environmental subjects (for example, pollution, water management and sewage, Environmental Impact Assessment (EIA), species and site protection, fisheries, and energy), which is among the most developed in the world, showing a proactive attitude on many issues. Additionally, its implementation is well advanced, and means and financial resources are available, particularly to those less developed and more recent member states.

The non-EU countries in the Mediterranean Basin Hotspot have made or are making significant progress in updating their environment policies and legislation, motivated by their will to become EU members and/or in response to their international commitments in accordance with international conventions and agreements (mainly toward the U.N.'s Rio Conventions). In general, these countries show a weaker implementation, are more reactive, and have rather limited mainstreaming of environmental issues into other sectors and financial resources.

International and Regional Environmental Agreements

Most countries in the Mediterranean Basin have signed the main international and regional environmental conventions and agreements - the main exception being Palestinian territories, due to its particular historical and political circumstances (for details see supplemental appendices on www.cepf.net).

All countries are signatories to the three Rio Conventions: the Convention on Biological Diversity, the Convention to Combat Desertification and the Framework Convention on Climate Change. There are some sub-regional Action Programs enhancing the implementation of these conventions, for example, on Desertification, the one of the Union of Arab Maghreb (UMA; for Libya, Tunisia, Algeria, Morocco and Mauritania), on Sustainable Development, the African Union Initiative on Promotion and Development of Agenda 21 in Africa (including Cape Verde) or the GEF Strategic Partnership on the Black Sea and Danube Basin (including Bosnia and Herzegovina, Croatia, Turkey). In addition, the Millenium Declaration, promoted by the United Nations and endorsed by all UN member states, established the Millenium Development Goals (MDGs) in 2000. For the first time, a specific environmental sustainability target (Objective 7) is included. Following the Johannesburg Summit in 2002 there has been a stronger focus in biodiversity issues.

In addition, most of the countries are parties of other globally relevant agreements on biodiversity: the Ramsar Convention on Wetlands (all countries), with a specific Initiative for Mediterranean Wetlands (MedWet, providing technical tools and ensuring wetland sustainability, creating stakeholders' networks and partnerships, disseminating information on "wise use" of wetland resources and putting into practice best practices); the Bonn Convention on Migratory Species (all countries signatories, except Bosnia and Herzegovina, Lebanon and Turkey) that has special Agreements on the Conservation of Small Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic area, the Conservation of

Populations of European Bats and the Conservation of African-Eurasian Migratory Waterbirds; the Convention on Trade in Endangered Species (CITES) (all countries except Lebanon) and World Heritage Convention (all countries) (for details see supplemental appendices on www.cepf.net).

At the Mediterranean regional and sub-regional levels, the main biodiversity agreements are the Barcelona Convention to which all countries in the hotspot are signatories except FYR Macedonia and Portugal for which it is not applicable, and Jordan; the Bern Convention, on the Conservation of European Wildlife and Natural Habitats, aiming to ensure conservation and protection of wild plants and animals and their natural habitats, to increase cooperation between contracting parties, and to regulate the exploitation of species, that it is being implemented in all the European countries, plus Turkey, Morocco and Tunisia that are signatories too; the ICCAT (International Commission for the Conservation of Atlantic Tuna) for the conservation of 30 tuna-like species in the Atlantic Ocean and its adjacent seas, including the Mediterranean Sea and to which all Mediterranean Basin countries are parties except Palestinian territories, Lebanon, Jordan, Israel, Slovenia, Montenegro and Bosnia and Herzegovina (not applicable to FYR Macedonia) (see supplemental appendices on www.cepf.net).

The level of the implementation of these international commitments differs significantly among the Mediterranean Basin countries, and despite some remarkable achievements have been attained recently, there is still a long way to go in most of the non-EU countries. In general, long-term commitments are sometimes difficult to achieve, as governmental budgets are low and re-allocated yearly in many countries, and there are also insufficient personnel, inadequate environmental sensibility of public bodies and disorganization.

As stated already, the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean is the most relevant Mediterranean Convention for biodiversity conservation. In 1976, 16 Mediterranean Basin countries and the European Community adopted the Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution (original convention, amended in 1995) to enhance the implementation of the Mediterranean Action Plan (MAP) formulated a year before, under the auspices of UNEP. In 1995 the convention was amended and renamed. The objective of the revision was to modernize the Convention to bring it into line with the principles of the Rio Declaration, the philosophy of the new Convention on the Law of the Sea and the progress achieved in international environmental law in order to make it an instrument for a sustainable development. The current number of contracting partners is 22.

The key goal of the Barcelona Convention is to control pollution in the Mediterranean Sea and protect and improve the marine environment, thus contributing to its sustainable development. The objectives include preventing, reducing, combating and, as far as possible, eliminating pollution in the Mediterranean Sea, to ensure sustainable development of natural marine and coastal resources, to mainstream environment into social and economic development, to protect the natural and cultural heritage to strengthen solidarity among Mediterranean coastal States and to contribute to improvement of livelihoods.

Seven Protocols addressing specific aspects of Mediterranean environmental conservation complete the MAP legal framework: the Dumping Protocol, Prevention and Emergency Protocol, Land-Based Sources Protocol, Special Protected Areas and Biodiversity Protocol, Offshore Protocol and Hazardous Wastes Protocol. All were amended in 1995, but the only amended protocol in force is the Special Protected Areas (SPA) and Biodiversity Protocol.

The Specially Protected Areas and Biological Diversity Protocol provides the establishment of a List of specially protected areas of Mediterranean interest (the SPAMI List). The SPAMI List may include sites that "are of importance for conserving the components of biological diversity in the Mediterranean; contain ecosystems specific to the Mediterranean area or the habitats of endangered species; are of special interest at the scientific, aesthetic, cultural or educational levels." The Regional Activity Centre for the Specially Protected Areas (RAC/SPA), based at Tunis, is the technical secretariat for this protocol and since 1985 supports the Mediterranean Basin countries to implement it. The RAC/SPA is also in charge for the implementation of six Action Plans concerning species conservation for the most threatened and most emblematic species in the Mediterranean (monk seal, marine turtles, cetaceans, marine vegetation, birds and cartilaginous fishes) and also on invasive species.

National Policy and Legislation

As it has been already stressed, belonging to the EU and/or to international agreements and conventions is strongly contributing to the development of national legislation in all Mediterranean Basin Hotspot countries.

As a result of the Rio Summit, the Contracting Parties were called to develop National Sustainable Development Strategies. Furthermore, the three Rio Conventions state that each Contracting Party shall develop national strategies, plans or programs for each one (Biodiversity, Combating Desertification and Climate Change). The state of these Action Plans in the different Mediterranean Basin countries is diverse: most have adopted Biodiversity and the Climate Change strategies, but few have formulated the Plan to Combat Desertification and the Sustainable Development Strategy (for details see supplemental appendices on www.cepf.net).

EU countries have well-developed environmental legislation derived from the adaptation into national law of the European Directives, being the most relevant for nature conservation: the Birds and Habitat Directives, the Water Framework Directive, the Marine Strategy Framework Directive (deadline for transposition at national legislation by July 2010) and the EIA Directive. It is worth noting that belonging to the EU has meant for many countries the obligation to develop more advanced environmental policies than those that the national authorities were keen to, sometimes forced by infringement cases or fines of the European Commission, or even sentences of the European Court of Luxembourg.

Outside of the EU, Mediterranean Basin countries have a simpler legislative environmental framework, often with a single umbrella Environmental Protection Law more or less updated or in process of development.

In the Balkan States region and Turkey, their position regarding the EU accession is a relevant indicator when analysing their national environmental policy. Slovenia (already joined), Croatia and the FYR Macedonia have updated and comprehensive biodiversity laws, compared to Turkey or Bosnia and Herzegovina. Thanks to their will to join the EU -and according to the 2009 EC Progress Reports, all have made progress at different levels in amending their national legislation and in setting up proper nature conservation strategies taking into consideration sites and species protected under international conventions. However there are still some serious gaps in their institutional and legislative basis. Apart from this group of countries, Albania's existing legislative framework offers adequate tools (with three new laws since 2002, on environmental protection, protected areas and

biodiversity), but mechanisms have not been established yet and it has less support from the EU in terms of funds and technical advice for effective implementation.

In the Middle East region, biodiversity conservation is not always a high priority on the national agenda and biodiversity is not perceived as an immediate human well-being issue. But all countries have a more or less strong legislation and environmental authorities committed to its implementation, often in difficult conditions in terms of funding, skilled staff and unfavourable atmosphere. Israel, for example, has a comprehensive, wide and quite updated legislation (Environmental protection Law in 2008; Protection of the Coastal Environment Law in 2004, Environmental Impact Assessment in 2003, protected areas in 1998 and wildlife protection law since 1955).

Algeria, Egypty, Morocco and Tunisia have progressed since 2000 in amending and updating their environmental laws, although enforcement has not been consistent until recently (for example, Egypt has amended twice its Environmental Protection Law since 1994; Morocco has enacted two laws in 2003, the EIA and the Environmental Protection ones). The nature conservation laws in Libya were set in the 1990s and may require some advancement.

Protected Areas Network

All Mediterranean Basin countries (except Palestinian territories) have a protected areas policy by law, although not always consistently implemented across all countries. Much progress has been made in the last decade, however, thanks in part to international cooperation (EU, bilateral and multilateral agencies and NGOs).

As defined by IUCN, there are currently at least 2,275 national or internationally recognized protected areas within the hotspot. This figure includes 226 Ramsar sites, 14 World Heritage Sites for Nature and 52 biosphere reserves. In total these cover at least 8.7 million hectares (Table 9) representing less than 5 percent of the area of the hotspot. In addition to these protected areas within the EU there are a further 4,055 Natura 2000 sites.

This limited protected area coverage contrasts sharply with the protected area coverage of EU countries, where the Natura 2000 network has an average coverage of 28.3 percent per country. One of the reasons for such a difference is that the Natura 2000 network has been designated following scientifically based inventories as a reference (like the Important Bird Area inventories). As a consequence, the EU countries now have a large network of protected areas, around seven times larger than the rest of the Mediterranean Basin countries, but many of them without sufficient resources to undertake an appropriate management of these Natura 2000 sites.

In those countries that have recently developed their protected area systems at national level, stricter management categories (IUCN's categories I to III) form 25 percent of all protected areas – such as in Albania, Algeria, Croatia, Cyprus, FYR Macedonia, Greece, Lebanon, Malta, Montenegro, Portugal and Turkey. However, these categories are nonexistent in Bosnia and Herzegovina, Cape Verde, Egypt, Jordan and Libya.

There is a poor representation of the stricter protected area management categories in some countries with otherwise well-developed protected areas networks (Azores, Canary Islands, France, Israel, Italy, Madeira Islands and Spain), although these countries have a greater number of intermediate categories of protected area and a wide network of sites designated at regional and local levels.

The Northern Mediterranean Region has a well-developed protected areas system at national level, with a better legal framework, more resources and qualified staff. While in the Balkan States, it is in general inadequately developed, except for Croatia and Slovenia. Croatia, in its Nature Protection Act, has established a National Ecological Network composed of protected sites at both national and international levels that cover 47 percent of its land and 39 percent of the sea, including two corridors, one for sea turtles and the other for bird migration.

Bosnia and Herzegovina is the country with the weaker protected site network in the Balkans. Albania, FYR Macedonia and Montenegro, together with Greece, are involved in several regional projects on integrated management of transboundary-protected areas (namely the Ohrid, Prespa, Shkodra and Dojran lakes). A good example to this is the establishment of the Transboundary Prespa Park (jointly declared in 2000 by Greece, Albania and FYR Macedonia) and the tri-lateral Prespa Agreement signed in February 2010 establishing a permanent cooperation to develop a common strategy and implement measures, giving priority to water management in line with the EU Water Framework Directive. All the North Africa Region countries (except Libya) have a more or less strong protected areas system improving in the last decade with designations of new sites, new laws (for example, Tunisian Law on Marine Protected Areas of 2009) and strategic plans (such as the Egyptian National Protected Areas System Plan, of 1998). Despite the funding problems, all manage to develop at least the basic tasks required in the protected sites. Countries in the Middle East Region and Turkey have small protected areas networks with insufficient governance and management.

According to the Palestine Authority, there are 13 natural reserves in the West Bank –designated during the British Mandate or by Israel - while in the Gaza Strip there are no protected areas despite some areas having high biological value (such as the Wadi Gaza wetland). Protected areas in Palestine are effectively managed by the Palestinian Environmental Authority established in 1996 and recently merged into the Ministry of Environmental Affairs.

In Jordan, from 18 areas that should become protected according to IUCN-WWF and the Royal Society for the Conservation of Nature, seven have been statutorily recognized. Lebanon is the Middle East country that made the biggest progress in the last years, including a law on protected areas (in preparation), a considerable increase in the protected areas and the development of nature reserves management involving local communities (such as the restoration of the “Hima” traditional type of protected areas, declared and managed by local communities, promoted since 2004 by Society for the Protection of Nature in Lebanon). Syria has a quite limited protected area network, but it is developing projects at local level to involve communities in the sustainable management of natural resources in the protected areas, as many of them need to provide alternative livelihood resources to people depending on the traditional uses. Turkey has also improved its protected areas network in the last decade and targets to increase it more and to enhance strategic designation, management capacities and funds. Nevertheless, the enforcement of laws is very weak at Turkish protected areas. Many protected areas are severely threatened from development projects, particularly, hydropower.

Apart from the national statutory protection titles the Emerald Network (created in 1999 by the Bern Convention), Ramsar sites of internationally important wetlands, Biosphere Reserves or the World Heritage Sites for Nature, are terrestrial site protection figures at international level

commonly used in the Mediterranean Basin Hotspot. The Emerald Network was set up under the Bern Convention to define Natura 2000 sites in non-Community EU countries with the aim to identify and conserve core areas of the Pan-European Ecological Network. In EU countries, Natura 2000 sites contribute to the Bern Convention's Emerald Network of Areas of Special Conservation Interest (ASCIs), which is currently under development. Outside the EU countries the Emerald Network is being defined in six non-EU countries in the hotspot, namely Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro and Turkey, where 85 ASCIs have been identified in all the country territory. Tunisia is also contracting party to the Bern Convention, but has not started to develop the network. As of 2009, 226 Ramsar sites have been designated inside the Mediterranean Basin Hotspot (Table 9) in all countries except in Jordan and Palestinian territories. An analysis of the designation of the Ramsar sites in Europe and North Africa (BirdLife International, 2001, 2002) evidences that there has been huge progress in recent years in some North African countries (such as Algeria, Morocco, Tunisia) and that Ramsar sites designations compared to the number of existing wetlands of international importance is better now in North Africa than in Northern Mediterranean, Macaronesia or the Balkan States regions; although the effectiveness of wetlands management is not evaluated here.

To date, there are 19 World Heritage Sites for Nature in the hotspot, distributed in nine countries. As of 2009, there are 52 Biosphere Reserves in the hotspot in 12 countries. Spain is the one with the highest number (with 19 Biosphere Reserves) plus those in the Canary Islands (other four). There are three sub-regional Biosphere Reserve networks involving Mediterranean Basin countries: EuroMab (in cooperation with the Council of Europe, the Pan-European Ecological Network and the Emerald Network), ArabMab (involving Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, Palestinian territories, Syria, and Tunisia) and IberoMab (including Spain and Portugal along with Latin American countries).

At the Mediterranean Basin level, there are a number of initiatives aiming at enhancing a proper protected areas policy and site management for conservation. IUCN's Centre for Mediterranean Cooperation, the Regional Activity Centre for the Specially Protected Areas (RAC/SPA) of the Barcelona Convention, Eurosite or Europarc are some of the active regional stakeholders promoting site protection in the Mediterranean Basin. One of the main needs to improve the Mediterranean site protection policies is the promotion of synergies between already existing networks, as many sites are protected under different statutory figures. With this objective, the Pan-European Ecological Network (PEEN) was established by the Council of Europe within the framework of the Pan-European Biological and Landscape Diversity Strategy and that is specifically built on existing ecological network initiatives (Natura 2000, Emerald Network and Ramsar sites), and considers making use of unique opportunities such as land use changes as a result of privatisation and EU Agro-Environmental Measures in Europe and the IUCN's Parks for Life initiative.

Regarding the management model of protected sites, all countries (except Jordan) have a system depending on the competent authorities at national or county level, which can be the Environmental, Forestry or Fisheries. The protected areas in Jordan are managed by a national NGO (The Royal Society for the Conservation of Nature) according to an agreement with the Ministry of Environment, a unique example in the Mediterranean Basin where the management of protected areas has been delegated. In most of the countries, the involvement of NGOs and other stakeholders (municipalities, local communities, etc.) is a quite common practice, as members of the management councils or as partners in conservation projects. In Lebanon, the Hima approach, a traditional type of protected area declared and managed by local communities, has been revived since 2004 given the significant efforts of the Society for the Protection of Nature in Lebanon. In EU countries,

involving local and national stakeholders in the Natura 2000 sites management is considered as a good practice and it is promoted by EU funds (as it has been done in Tilos Natural Park in Greece or in Dwejra Heritage Park in Malta). A particular management model of areas of high biodiversity value that is starting to be widespread in some European countries is the Land Stewardship. It consists of a set of strategies and tools that aim to involve the owners and land users in the conservation and wise use of natural, culture and landscape resources and values. To achieve this, arrangements and cooperation mechanisms are promoted between the land stewardship entity, the owners and other public and private entities. This practice started in the United States at the end of 19th century, being currently active in more than 50 countries around the world. In some European countries it began to be implemented along the 20th century, such as by Oasi WWF-Italy, Conservatoire du Littoral in France or Xarxa de Custòdia del Territori in Catalonia-Spain. This methodology has been widespread in Spain in the last decade, making possible the hope for the recovery of the Iberian lynx (though a LIFE project 2006-2011 of the regional government of Andalucía, Spain) or for the Spanish imperial eagle in Ciudad Real (Project Alzando el Vuelo of SEO/BirdLife 2007-2009).

Marine Protected Areas in the Mediterranean Basin Hotspot

Even though the protected site approach is one of the most traditional conservation practices, with the first sites being protected in the hotspot at the beginning of the 20th century, the first marine areas in the Mediterranean Basin were protected only half a century later with the National Park of Mljet in Croatia in 1960 and the National Park of Port-Cros in France in 1964 (Figure 8). Marine protection is still far from being satisfactory in any country, and in many cases the aim is not for biodiversity conservation but to protect fisheries. Fortunately, this situation is starting to change with the increasing attention that several institutions are paying to the marine environment in the last years (EU, Barcelona Convention, IUCN, BirdLife International, etc.).

Current area encompassed by marine protected areas (MPAs) in the Mediterranean (113,077 square kilometers out of 106 MPAs) represents about 4.6 percent of the total marine surface. This list (Abdulla *et al.* 2008) excludes strictly intertidal areas, lagoons and deltas that do not have marine parts; while it considers as MPA marine sites with a statutory protection (at national or international level) and those fisheries management areas that have an official objective of biodiversity conservation besides the pure fisheries management. Moreover, the distribution of MPAs is highly uneven (Figure 9). Most of that area corresponds to the Pelagos Sanctuary (87,500 square kilometers), the remaining representing only about 1 percent of the region and is divided into a large number of small, basically coastal areas, and, with the exception of a few sites in Algeria, Morocco, Tunisia, Israel, Lebanon and Syria, mainly concentrated in the north and northwest sector of the Mediterranean Basin. A similar picture applies to the Macaronesia, where most MPAs are small and coastal sites.

Table 9. Number of Protected Areas under National and International Protection Per Country and Territory in the Mediterranean Basin Hotspot (Marine sites not included and Natura 2000 network considered separately)

no	Sub-region Name	Country / territory	# National Protected Areas inside the Hotspot*	# Ramsar Sites inside the Hotspot	# World Heritage Sites for Nature inside the Hotspot	# Biosphere Reserves inside the Hotspot	Coverage by national and international protected areas inside the Hotspot (ha)**	% of the country/territory covered by national and international protected areas inside the Hotspot	# Natura 2000 Sites inside the Hotspot§	Coverage by N2000 sites inside the Hotspot (ha)	% of the country/territory covered by N2000 sites inside the Hotspot
1	**Balkan states**	Albania	76	3	0	0	244,447	9.2	*na*	*na*	*na*
2		Bosnia and Herzegovina	2	1	0	0	*nd*	*nd*	*na*	*na*	*na*
3		Croatia	128	1	0	1	126,830	8.7	*na*	*na*	*na*
4		Montenegro	5	1	0	0	*nd*	*nd*	*na*	*na*	*na*
5		Serbia	0	0	0	0	0	0.0	*na*	*na*	*na*
6		Slovenia	6	2	1	1	1,136	0.7	31	61,901	39.5
7		FYR Macedonia	20	2	1	0	78,403	14.2	*na*	*na*	*na*
8	**Macaronesian Islands**	Azores and Madeira Islands (included in Portugal)	-	-	-	-	-	-	-	-	-
9		Canary Islands (included in Spain)	-	-	-	-	-	-	-	-	-
10		Cape Verde	3	3	0	0	14,377	2.6	*na*	*na*	*na*
11	**Middle East**	Iraq	0	0	0	0	0	0,0	*na*	*na*	*na*
12		Israel	186	2	0	1	32,880	4.1	*na*	*na*	*na*
13		Jordan	18	0	0	0	41,902	4.4	*na*	*na*	*na*
14		Lebanon	8	4	0	1	22,525	2.2	*na*	*na*	*na*
15		Palestinian territories (Gaza Strip, West Bank)	13	0	0	0	*nd*	*nd*	*na*	*na*	*na*
16		Syria	19	1	0	0	31,482	0.6	*na*	*na*	*na*
17		Turkey	95	7	2	0	1,288,286	4.6	*na*	*na*	*na*

no	Sub-region Name	Country / territory	# National Protected Areas inside the Hotspot*	# Ramsar Sites inside the Hotspot	# World Heritage Sites for Nature inside the Hotspot	# Biosphere Reserves inside the Hotspot	Coverage by national and international protected areas inside the Hotspot (ha)**	% of the country/territory covered by national and international protected areas inside the Hotspot	# Natura 2000 Sites inside the Hotspot§	Coverage by N2000 sites inside the Hotspot (ha)	% of the country/territory covered by N2000 sites inside the Hotspot
18	**North Africa**	Algeria	40	31	0	5	119,017	0.4	*na*	*na*	*na*
19		Egypt	4	1	0	0	42,674	9.5	*na*	*na*	*na*
20		Libya	14	2	0	0	*Nd*	*Nd*	*na*	*na*	*na*
21		Morocco	50	21	0	3	330,924	0.9	*na*	*na*	*na*
22		Tunisia	48	15	1	4	59,638	0.7	*na*	*na*	*na*
23	**Northern Mediterranean**	Bulgaria	1	0	0	0	822	4.3	3	13,510	71.4
24		Cyprus	41	2	0	0	41,362	4.3	38	106,608	11.0
25		France	350	5	1	4	1,818,351	26.7	390	1,520,033	22.8
26		Gibraltar (United Kingdom)	1	0	0	0	*nd*	*Nd*	2	275	45.9
27		Greece	102	10	2	2	409,670	3.3	358	2,476,708	20.1
28		Italy	223	33	1	6	1,315,342	6.8	1,621	3,222,209	16.8
29		Malta	90	2	0	0	*nd*	*Nd*	35	2,818	8.5
30		Monaco	2	0	0	0	*nd*	*Nd*	*na*	*na*	*na*
31		Portugal (including Azores and Madeira Islands)	55	26	1	1	503,187	6.4	137	1,690,505	21.4
32		San Marino	0	0	0	0	0	0.0	*na*	*na*	*na*
33		Spain (including Canary Islands)	383	51	4	23	2,180,555	4.9	1,440	11,415,009	26.0
34		Vatican City	0	0	0	0	0	0.0	*na*	*na*	*na*
	TOTAL		**1,983**	**226**	**14**	**52**	**8,703,810**	**4.1 and 4.8*** **	**4,055**	**20,509,576**	**21.4 and 28.3*** **

**Source: World Database on Protected Areas, and national updated information for Jordan, Syria, Lebanon, Turkey, Cape Verde, Palestine territories and Croatia.*

*** The estimates are based on available information on the protected areas boundaries and does not include the Natura 2000 sites as most of them overlap with already protected national or international sites –data on the Natura 2000 network is provided in separate columns.*

**** The former is the median and the latter is the mean percent*

§Source: European Commission, DG Environment / nd: no data; na: not applicable

Figure 8. Marine and Terrestrial Protected Areas in the Mediterranean Basin Hotspot
Blue areas indicate Natura 2000 sites and red areas are IUCN category protected areas. Nevertheless, some protected areas for which full boundaries were not available are not shown on the map. (*Source: World Database on Protected Areas, European Commission, DG Environment and national updated information for Jordan, Syria, Lebanon, Turkey, Cape Verde, Palestinian territories and Croatia)*

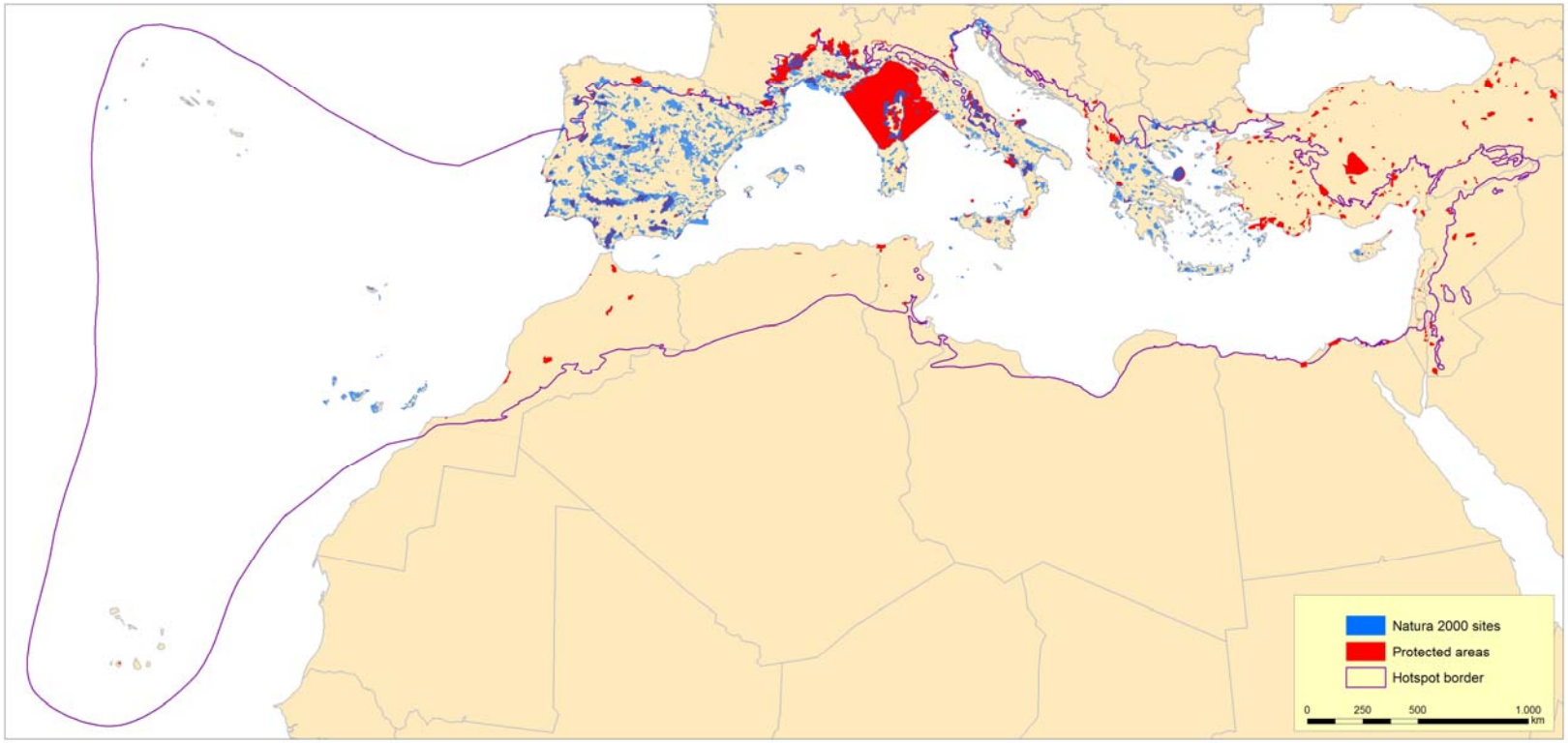
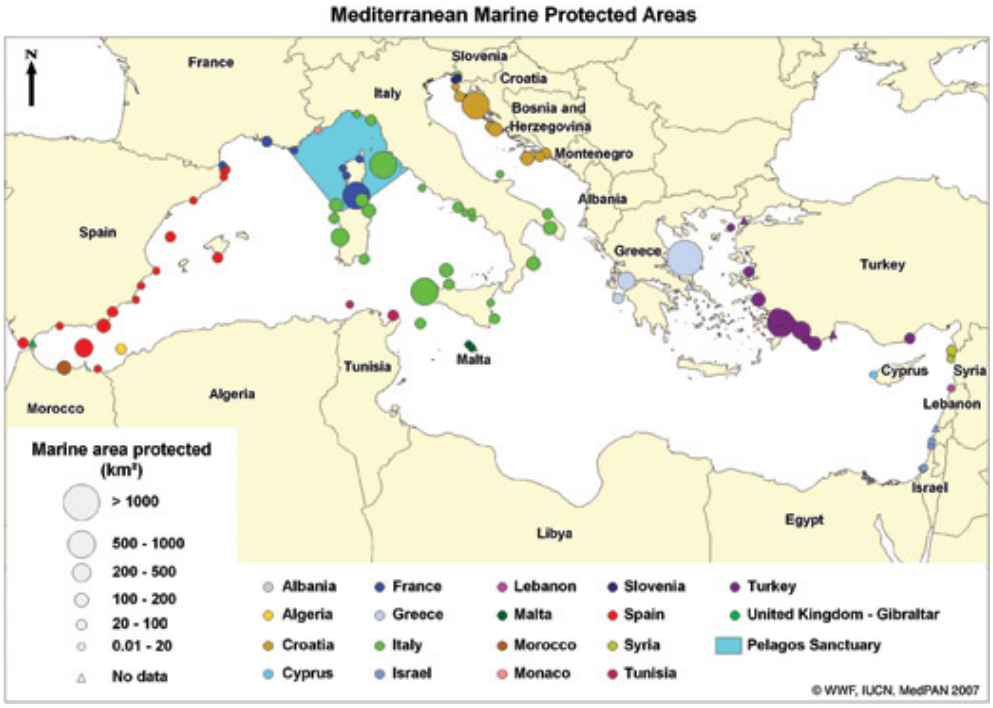


Figure 9. Distribution of Marine Protected Areas in the Mediterranean Sea
Color indicates the country, and the size of the circle is proportional to the area covered. (Source: Abdulla *et al.* 2008)



Protection figures for the marine environment in the Mediterranean Basin include the Specially Protected Areas of Mediterranean Importance (SPAMI) under the Barcelona Convention and Natura 2000 sites under the EU legislation, plus other regional and national initiatives (Abdulla *et al.* 2008). RAC/SPA has also the aim of inventorying any MPAs within the Mediterranean Basin. All MPAs to date are restricted to jurisdictional waters, with the exception of the Pelagos Sanctuary, which is shared between France, Italy and Monaco, with an innovative legal framework. There are 25 SPAMIs in Algeria, France, Italy, Monaco, Morocco, Spain and Tunisia (Table 10).

Table 10. Number of Specially Protected Areas of Mediterranean Interest in the Mediterranean Basin Hotspot (RAC/SPA)
Also lists total number of marine areas protected or managed (including SPAMIs) and the corresponding surface in the Mediterranean Basin (Source: Abdulla *et al.* 2008), updated with new SPAMIs designated in 2009.

no	Sub-region Name	Country / territory	SPAMIs*	Marine protected areas**	Area in marine protected areas (km^2)
1	Balkan States	Albania	0	1	*nd*
2		Bosnia and Herzegovina	0	0	0,00
3		Croatia	0	8	981.54
4		Montenegro	0	0	0,00
5		Serbia	*na*	*na*	*na*
6		Slovenia	0	3	1.25

no	Sub-region Name	Country / territory	SPAMIs*	Marine protected areas**	Area in marine protected areas (km^2)
7		FYR Macedonia	*na*	*na*	*na*
8	**Macaronesian Islands**	Cape Verde	*na*	(1)***	*nd*
9	**Middle East**	Iraq	*na*	*na*	*na*
10		Israel	0	5	17.97
11		Jordan	0	*nd*	*nd*
12		Lebanon	0	1	3.98
13		Palestinian territories (Gaza Strip, West Bank)	0	0	0.00
14		Syria	0	3	50.00
15		Turkey	0	12	1,972.55
16	**North Africa**	Algeria	2	1	27.00
17		Egypt	0	0	0.00
18		Libya	0	0	0.00
19		Morocco	1	1	23.30
20		Tunisia	3	2	51.50
21	**Northern Mediterranean**	Bulgaria	*na*	*na*	*na*
22		Cyprus	0	1	5.50
23		France	2	7	916.91
24		Gibraltar (United Kingdom)	0	1	*nd*
25		Greece	0	4	2,336.55
26		Italy	7	25	2,738.18
27		Malta	0	2	11.06
28		Monaco	0	2	0.52
29		Portugal (including Azores and Madeira Islands)	0	(8)***	*nd*
30		San Marino	*na*	*na*	*na*
31		Spain (including Canary Islands)	9	14	772.33
32		Vatican City	*na*	*na*	*na*
33	**International**	Three General Fisheries Commission for the Mediterranean deep-sea sites of particular ecological interest	*na*	3	15,666.50
34		International (Pelagos)	1	1	87,500.00
		TOTAL	**25**	**106**	**113,076.64**

** For countries not considered by Abdulla et al., 2008, the figures –in parenthesis- come from the WDPA.*
nd: no data; na: not applicable

At EU level, marine habitats and species are not as well represented in the Annexes of the Habitats Directive as are those of a terrestrial nature (O´Brian and Rizo 2001), being recognised that there are some difficulties in establishing Natura 2000 sites in the marine environment, especially for wide ranging species, and also due to issues of delimitation of sites. Generally only very few marine (not coastal) sites have been selected so far, many of which are quite small. To address this weakness, the European Commission has called on relevant Member States to complete marine Natura 2000 network.

Some ongoing initiatives within the Mediterranean Basin Hotspot go beyond the classical identification of small coastal sites as MPAs. The major attempt to address the protection of deep seas at regional level (for the Mediterranean Sea) corresponds to a joint initiative between the WWF Mediterranean Program and the IUCN Centre for Mediterranean

Cooperation (WWF/IUCN 2004). The FAO has also paid attention to the problem of deep-sea habitats and their management, particularly regarding fisheries (Gjerde, 2007). Furthermore, in 2004, SEO/BirdLife (Spain) and SPEA (Portugal) took on the challenge of inventorying marine important bird area through two sister, pioneering EC-funded LIFE Projects. The availability of new technologies that allow getting reliable information on seabird distribution patterns at sea and the current political willingness, at the EU level, of extending the Natura 2000 network to the marine environment helped the projects to succeed.

The two projects produced the first complete Marine Important Bird Area (MIBA) inventories at global level, with 59 MIBAs, 42 in Spain (42,584 square kilometers) and 17 in Portugal (14,551 square kilometers), all of them within the Mediterranean Basin Hotspot except those off the Iberian Portuguese coast. These areas are often large and very important foraging grounds and migratory hotspots for seabirds, some of them well offshore (Ramírez *et al.* 2008, Arcos *et al.* 2009). Further BirdLife initiatives are currently going on in other EU countries, such as France, Greece, Italy, Malta, and Slovenia. In addition, some of the MIBAs identified by the Spanish and Portuguese LIFE Projects are located off Morocco.

Other recent and ongoing initiatives at national level addressing the protection of marine key habitats/taxa are, for instance, the recently created French Marine Protected Areas Agency and Spain has started a LIFE+ project, INDEMARES, to declare its marine Natura 2000 network.

The Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and contiguous Atlantic area (ACCOBAMS) has also been very active in the identification of potential MPAs for cetaceans including huge areas in many cases, for example, the whole Alboran Sea or the already protected Pelagos Sanctuary (Reeves and Notarbartolo di Sciara 2006; Abdulla *et al.* 2008).

Regarding MPA designation and management, the marine environment poses a problem of competences, which is not so pronounced in the land. Indeed, competences at sea are often complex and not clear, and this is particularly so in the small Mediterranean Sea. The management of these areas faces problems and conflicts with their social environments, particularly with the resource users, either traditional or not (for example, fishing, sand extraction, hunting, agriculture or tourism industries). Most MPAs lack of a management plan, as well as funds and staff to implement basic conservation measures.

Mainstreaming of Environment into Other Sectors

Among the most advanced in integrating environment into other sectors (according to their own reports to the CBD) are Croatia, Spain, Lebanon or Algeria, which count with sectoral regulations addressing issues of conservation and management of biodiversity. Sometimes, the plans have been prepared but the tools to address them are still lacking.

In the EU, integration is a requirement since 1997 under the Treaty establishing the European Community. The current EU Biodiversity Action Plan addresses the challenge of integrating biodiversity concerns into other policy sectors in a unified way. It identifies a comprehensive plan of priority action and outlines the responsibility of community institutions and Member States in relation to each. The Action Plan focuses on implementation and calls for the full integration of biodiversity concerns into all other EU policy areas: Agriculture, Cohesion Policy, Development, Employment, Energy, Enterprise, Fisheries, Internal Market, Research, Trade and External Relations, Transport and Economic

and Financial Affairs. The Action Plan represents an important new approach for EU biodiversity policy, as it is the first time that all relevant economic sectors and policy areas are addressed in a single strategy document and apportioned a share of the responsibility to implement it. Despite not all these initiatives arrive efficiently at the national level; it is evident that the EU countries are the most advanced in the Mediterranean Basin Hotspot in terms of mainstreaming biodiversity and environmental issues into other policies. Some relevant examples are:

EU Agriculture, Rural Development and Forest policy: The Biodiversity Action Plan identifies a target for Member States to optimise the use of opportunities under agricultural, rural development and forest policy to benefit biodiversity between 2007 and 2013. With the major reform of the common agriculture policy in 2003, national statutory requirements derived from EU directives concerning inter alia birds, habitats, nitrates and pesticides were included in the reference level to be respected by farmers. It also enhances cooperation between nature protection and agricultural authorities. In addition, the rural development policy provides EU Member States with several possibilities to support environmental integration. One possibility for the Member States is to use a series of agri-environmental measures, designed to encourage farmers to protect and enhance the landscape and biodiversity. For the forest policy the Action Plan calls to ensure that the forthcoming EU Forest Action Plan addresses forest biodiversity among the priorities, in line with the EU Forest Strategy and the 6th Environment Action Program'.

EU maritime and fisheries policy: The EU action plan for environmental integration, adopted in 2002, contained guiding principles, management measures and a work program to move towards an ecosystem-based approach to fisheries and to limit the environmental impact of the common fisheries policy (CFP). The objectives include reducing fishing pressure to sustainable levels, reduce by-catch and the impact on habitats, protecting non-target species and habitats and decrease the impacts of aquaculture. The EU water framework directive changed the way fresh and coastal waters are managed, to improve water quality and the way aquatic ecosystems in Europe work. In addition, the Marine Strategy Framework Directive (adopted in 2008) constitutes the vital environmental component of the Union's future maritime policy, designed to achieve the full economic potential of oceans and seas in harmony with the marine environment.

Despite progress, integration is still a major challenge of biodiversity policy in Europe. Monitoring and evaluation mechanisms have to be developed and implemented to assess the real benefits of existing measures and to introduce specific measures in each sector. It is also necessary to adequately communicate the value of biodiversity to the relevant stakeholders and involving them from the beginning in the development of tools that they will have to implement.

Balkan states region (except the EU member Slovenia): Croatia is the only country with an advanced mainstreaming of biodiversity and environmental issues in other sectors. While very few have been achieved with regards to this integration in Albania, Bosnia and Herzegovina, Montenegro and FYR Macedonia that remains a high challenge for them. Their existing legislative frameworks offer tools in the field of sustainable use of natural resources, but mechanisms have not been established yet and lack of funds, insufficiently developed management and monitoring systems, conflict of interests with some development policies (such as forestry), lack of adequate progress in implementation of the policies and institutional problems to afford properly environmental integration, make it difficult. The only sector with some provisions for integration is the forestry one, with

forestry laws, plans and strategies that consider sustainable use and biodiversity conservation. Albania has an inter-ministerial committee for integration, chaired by the Prime Minister, created in 2000.

The EIA procedure development in these countries is diverse. In Albania and Bosnia and Herzegovina, it is regulated through articles in the Environmental Protection laws but some further guidelines are still lacking and the procedure is not yet completely developed; the SEA has not yet been incorporated to the national legislation. Both FYR Macedonia and Croatia have a well-developed procedure of EIA, also through the Environmental Protection Laws; Croatia has amended its pieces of legislation to transpose the EU Directives and to include the SEA in 2008, while FYR Macedonia's Law on Environment (EIA) is already in accordance to EIA Directive and incorporates the SEA with specific further regulation at the Law on Protection of Nature. A specific multilateral agreement among the countries of South-Eastern Europe for the implementation of the Spoo Convention on EIA in a transboundary Context (Bucharest Agreement) was signed in 2008 by all relevant countries except Albania and Bosnia and Herzegovina.

North Africa: In these countries, sustainable use of natural resources is a priority that is being developed under the framework of National Environmental and Sustainable Development Strategies and Action Plans. Tunisia has an inter-ministerial commission (National Commission for Sustainable Development is chaired by the Prime Minister) and the sectoral integration of environment is reinforced by specific Governmental Agencies under the Ministry of Environment and Sustainable Development. The Tunisian Agency for the Protection and Management of the Littoral Zone has formulated and implemented 35 Occupation Plans for Beaches, regulating their capacity for tourism and ensuring the protection of the ecosystems. The current Tunisian Socioeconomic Development Plan (2007-2011) promoted by the Ministry of Economy with the participation of the rest of ministries, includes, for example, an increased promotion of ecotourism, based on the protected areas, the already active management program for littoral and beaches and the establishment of a Tourism Development Strategy to promote coastal and environmental tourism.

In Egypt, several initiatives are being developed to promote ecotourism in various parts of the country, mainly in protected areas and in Morocco specific environmental training for tourism operators have been carried out by local authorities. Measures for incorporating environmental consideration into forestry exploitation are active in all the countries in different level of implementation, through national strategies, plans and programs. In Morocco there is a program for the conservation and development of forests, with the aim to stop the degradation of forest cover and to develop an integrated exploitation of the forested areas. Furthermore, Morocco is developing incentives programs that benefit local communities while they realize a better management and use of biodiversity, by involving them directly in the management of natural resources, such as compensations for local communities affected by the protection of forests, in the form of collective socioeconomic projects; or establishing contract-projects, in the long-term, among local cooperatives and the State to allow a sustainable exploitation of rosemary or wood in public forests. In the field of fisheries, Morocco has developed the program Biologic Rest, a preventive program established by the Department of Marine Fisheries to protect the fisheries resources of the perverse effects of human activities, especially overfishing. Other integrating initiatives are the support to organic agriculture, a more efficient water management in agriculture and hunting regulation. Algeria, Tunisia and Morocco have EIA legislation, but none of them is

actively developing SEA. Egypt has a weak EIA procedure, with an environmental law that includes some articles on EIA and no direct public participation in current processes.

Middle East: In this region, lack of sufficient funding, trained staff and public awareness are main problems delaying the implementation of sectoral plans. While Israel, Turkey, Jordan, Lebanon and Syria are in rather preliminary stages, with quite recent sectoral and national plans and laws, they face numerous problems at implementation. For example, environmental issues are considered in the Government Policy Statement of Lebanon (2008); its Environmental Protection law (2002) adopted the principle of biodiversity protection that stipulates that all activities should avoid causing damages to the different components of the biodiversity; and some sectors have addressed biodiversity considerations in their last plans and strategies, such as the National Reforestation Plan (2001), the Hunting Law (2004), the Strategy for Agricultural Development in Lebanon (2004), the National Master Plan for Land Management in Lebanon (2009) or the National Strategy for Forest Fires (2009); however, the major challenge remains the proper enforcement of the provisions of these strategies and plans.

Palestinian territories has no sufficient initiatives for the integration of environmental issues into other sectors, but the Ministry of Environmental Affairs tries to play a role as the planning, coordinating and executive body to improve environmental standards and attitude in the country, but the scarcity of qualified workers, technicians and experts in the different environmental fields coupled with the lack of research facilities available hinders this process.

Some countries have already created inter-ministerial committees for environmental issues (such as the Israel's National Committee for Sustainable Development, lead by the Ministry of Environmental Protection, with participation of all ministries, and also with representatives of the private sector, local authorities and civil society; or the Turkish National Committees for Wetlands as well as for Combat Desertification with members from government institutions and agencies, NGOs and universities; or the Supreme Council of Environmental Affairs of Syria).

Several countries have already formulated a national tourism strategy (such as Israel, Lebanon and Jordan) including sustainable development and biodiversity conservation criteria. Ecotourism is promoted in most of the countries of this region, but its implementation is at a pilot project or local levels; for example, in Jordan some of the protected areas, such as Dana and Ajloun, have integrated ecotourism and sustainable livelihoods into the management program and Syria has started working on ecotourism in some important bird areas as an alternative to hunting (Al-Jabboul Lake ecotourism project, funded by the Swiss Agency for Cooperation and Development, to develop a community-centerd ecotourism facility as a mean of generating revenue to enhance bird conservation at the lake and to provide alternative livelihoods for local people).

Some advances have been made in the forestry sector of these countries, supporting conservation and sustainable use of biodiversity (i.e. integrated forest management, forestation programs, updated forestry laws); however, insufficient awareness and commitment of key groups and limited funding make the process difficult. Mainstreaming environmental issues into agriculture has been delayed in the Middle East region.

Israel, Jordan, Syria and Turkey develop the EIA procedure for relevant projects that may have adverse impacts on the environment, while Israel and Lebanon have regulations on

Strategic Environmental Assessment (SEA). In Lebanon, official EIA studies are being submitted to the Ministry of Environment since 2002 for major development and infrastructure projects and SEA studies since 2005 for major plans, and all these studies are addressing biodiversity considerations. In Syria, according to the Environmental Law (2002), factories and development projects (tourism projects included) have to apply environmental criteria for their activities. Due to the economic limitations, development priorities and increasing demand for the resources and the EIA procedures occasionally consider biodiversity impacts in a strong way (for example, in Israel a rare butterfly triggered changes in residential plans to ensure the conservation of its habitat and the connectivity among populations). In Palestinian territories, thanks to a Canadian Project on EIA being signed recently between the Palestinian Environmental Authority and Environment Canada has helped to the creation of an EIA Unit and trained its staff.

Clearly, the governmental capacity toward biodiversity conservation in the Middle East and North Africa is insufficiently developed. This presents a major opportunity to not only strengthen civil society to complement governmental efforts toward biodiversity conservation but also to ensure that civil society plays an important role in working with government to mainstream biodiversity conservation and environmental considerations into policies and programs.

CLIMATE CHANGE ASSESSMENT

Following the publication of the IPCC's Fourth Assessment Report (AR4) in 2007 (IPCC 2007), scientists have largely agreed that human activities, particularly the combustion of fossil fuels and land-use change, are causing unprecedented levels of climate change. In addition, there is consensus that anthropogenic (human driven) climate change is directly affecting the world's ecosystems and the human economies that are highly dependent on such systems for survival (Stern 2006). Due to the close relationship between climate change, ecosystems services and dependent human economies and livelihoods, considerable attention and investment have in recent years been placed on appropriate responses to climate change.

An entity, be it a nation, organization or individual, can respond to climate change in two broad ways, namely through mitigating future climate change or adapting to future changes in climate. *Mitigation* activities mainly focus on reducing human generated Greenhouse Gas (GHG) emissions released through the combustion of fossil fuels or through deforestation, rangeland degradation and the turnover of organic matter in soil. In the latter regard, land-use changes such as deforestation lead to the release of significant quantities of carbon dioxide into atmosphere since dry wood or organic matter comprises approximately 50 percent carbon. *Adaptation* activities on the other hand mainly focus on decreasing an entity's exposure to the potential detrimental effects of climate change. For example, in areas that are predicted to become drier and warmer, farmers could adapt to climate change through changing to drought-resistant crops.

Overview of Climate Change

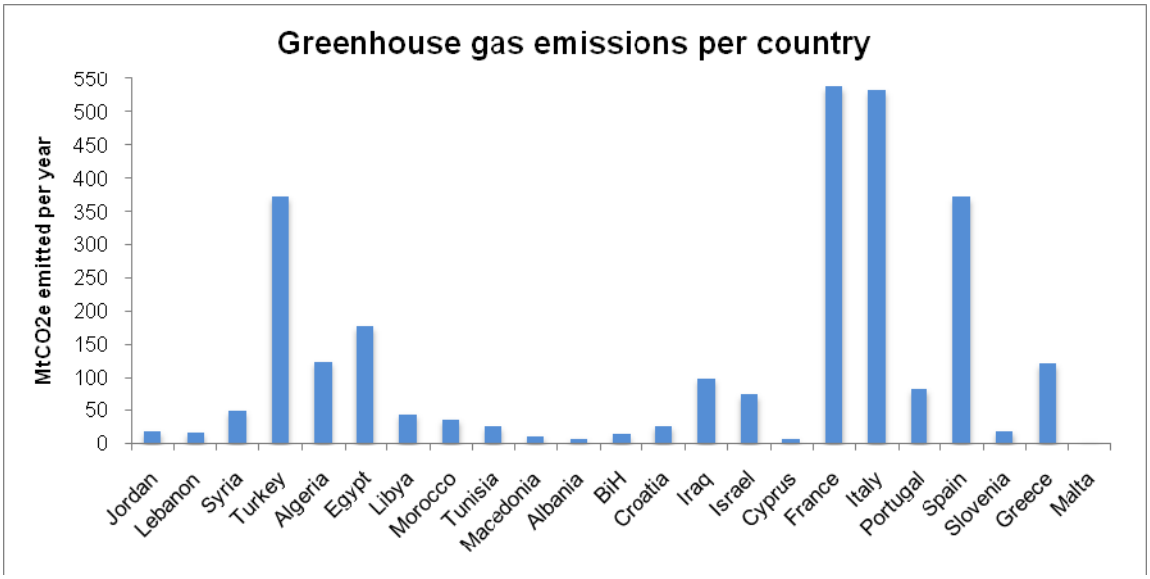
Role of the Mediterranean Basin Hotspot in Climate Change

Numerous GHGs, for example carbon dioxide or nitrous oxide, naturally occur in large quantities in the Earth's atmosphere. At "natural" concentrations, GHGs form a valuable part of maintaining the energy balance of the earth's atmosphere as they absorb solar radiation and heat the atmosphere of the Earth, working much like a "greenhouse." The

Earth's terrestrial and ocean ecosystems form part of this balance through their ability to absorb and sequester GHGs. The crux of anthropogenic climate change is that humans are emitting GHGs at a faster rate and beyond the capacity of natural GHG "sinks." This alters the energy balance of the Earth's atmosphere, causing the global climate to deviate from expected natural patterns.

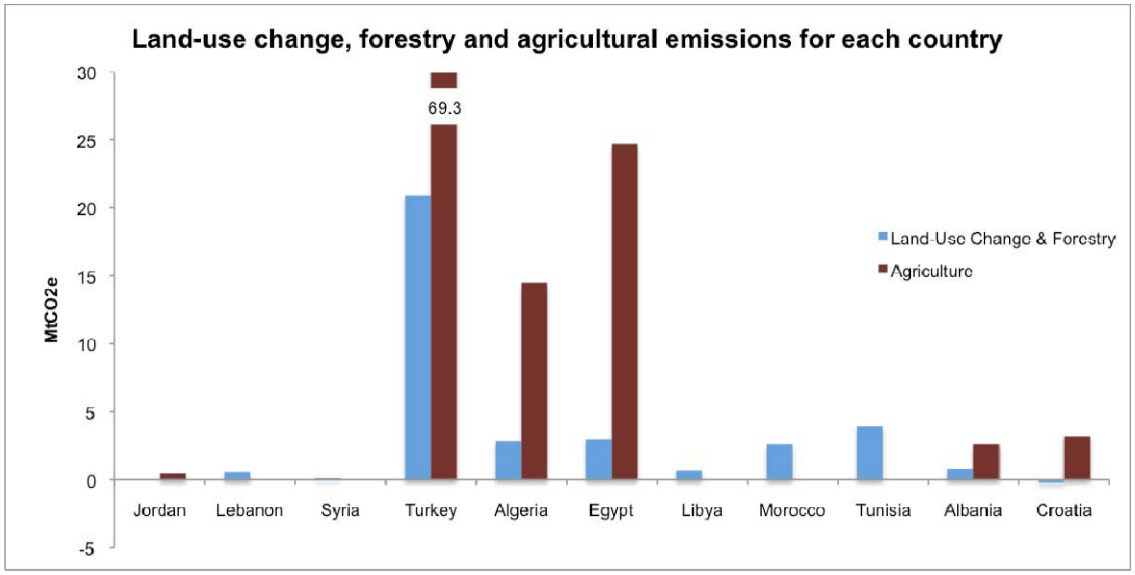
At a national scale, the majority of GHG emissions are generated in the region's larger economies, namely, France, Italy, Spain and Turkey, which together generate 65 percent of the hotspot's emissions (Figure 10). The remaining 28 countries and territories emit significantly less, contributing 35 percent of the region's emissions together. The observed national emission levels are closely related to the size of a nation's economy as well as population size. For example, Egypt, France, Italy, Spain and Turkey are home to 72 percent of the hotspot's human population and are responsible for 63 percent of emissions. A similar pattern is seen for emissions per sector and for the land-use and agricultural sectors in particular (Figure 11). Broadly, land-use and forestry GHG emissions are linked to the population size of the country and its economic activity (indicated by GDP). Also see supplemental appendices on www.cepf.net.

Figure 10. Greenhouse Gas Emissions Per Country within the Mediterranean Basin Hotspot Per Year
(MtCO2e per year; GHG emissions are limited to those countries for which data exists; Source: CAIT, 2009)



The GHG emissions per person and per unit of economic production are less clear (see supplemental appendices). The more developed nations within the EU typically have higher emissions per person compared to less developed nations in the southern and eastern Mediterranean area. There are notable anomalies, particularly for oil-producing nations such as Libya that have among the highest emissions per person. Here the prevalence of a single polluting industry in a relatively small nation can significantly affect the emission profile of an entire nation.

Figure 11. Greenhouse Gas Emissions from Land-use Change, Forestry and Agriculture for Each Country of Interest
(MtCO2e per year) EU countries are not reported due to a lack of readily available comparative data (Source: CAIT, 2009).



While the emissions per person may be higher in northern Mediterranean EU nations, they tend to be more economically efficient per ton of emitted GHG, compared to eastern and southern Mediterranean countries and territories (see supplemental appendices on www.cepf.net). This may be due to a shift toward more efficient public transport, power production and industry as nations develop as well as the dominance of certain industries. For example, the financial services and tourism sector in nations such as Malta lead to higher efficiencies compared to nations where energy-intensive industry, agriculture or oil production forms the basis of economic production.

Climatic History and Projections

The Mediterranean Basin has a particular climate characterized by cold, wet winters and prolonged hot, dry summers (Giannakopoulos *et al.* 2005). Through an analysis of a broad scope of historical documents, Luterbacher *et al.* (2006) observed that colder and warm spells, as well as wet and dry spells were common on a decadal timescale over the past 1500 – 2000 years. Significant increases in temperature variability as well as winter warming started around ~1890. Increases in precipitation variability occurred from an earlier date (~1780) together with an observed reduction in annual precipitation from about 1960 onwards (Luterbacher *et al.* 2006).

Giannakopoulas *et al.* (2005), Luterbacher *et al.* (2006) and Lionello *et al.* (2008) provide comprehensive reviews of predicted changes in climate for the Mediterranean Basin and the current status of regional climate change research.

Predicted Changes in Temperature

There is general agreement across studies that climate change will lead to an increase in mean annual temperatures across the Mediterranean Basin, with a particular increase in the frequency of hot summer days and high temperature events. While summer temperatures are

predicted to increase in the southern and eastern Mediterranean, winter temperatures are expected to remain constant, especially for the northern Mediterranean. Predicted increases in temperature are expected to be higher inland than at the coast. The frequency of extremely hot summer days is expected to increase by 10 percent in coastal areas increasing to 20 percent further inland. Moreover, the frequency of frost nights, defined as nights with a minimum temperature below 0°C, are predicted to decrease by 1-2 weeks along the coast and up to a month inland (Giannakopoulos *et al.* 2005). While there may be slight relative variation in predicted changes according to the Global Change Model (GCM) or scenario used, there is general consensus in observed trends across studies.

Predicted Changes in Precipitation

Annual precipitation is expected to decrease across the Mediterranean Basin, particularly over the southern and eastern components (Giannakopoulos *et al.* 2005). While the number of wet, winter days should remain the same, the number of dry summer days and drought spells is expected to increase. In a similar manner to the predicted changes in temperature above, there is consensus across studies on the direction and magnitude of the change (Giannakopoulos *et al.* 2005, Giorgi and Lionello 2008, Hertig and Jacobeit 2008).

While predicted rainfall changes may differ for the northern Mediterranean depending on the model and scenario used, there is agreement across scenarios regarding the southern and eastern components of the Mediterranean Region where a 0-20 percent decrease in annual rainfall is expected over the next 50 years (Giannakopoulos *et al.* 2005). Long-term predictions (2070-2099) indicate a general drying for the entire Mediterranean Basin of up to 30 percent in summer (Somot *et al.* 2008).

In summary, a general trend of warming and drying is predicted for the Mediterranean Basin. Of particular importance for the conservation of the region's biota is the change in the frequency of dry, hot days conducive to fire. Using the Canadian Fire Weather Index as an indicator of fire risk, Giannakopoulos *et al.* (2005) predict a strong increase in fire risk for the southern and eastern component of the Mediterranean Basin.

Biotic Change in Response to Climate Change

The predicted warming and drying of the Mediterranean Basin as the well as the predicted increase in extreme climatic and fire events are likely to have a significant effect on the biota of the region.

Here we focus on the effect of climate change on four biotic zones of the Mediterranean Basin, namely wetlands, forests, shrublands and mountain flora. In conclusion, we focus on past studies that have assessed the effect of climate change on biodiversity *per se*, across the broader region. This assessment is largely based on published studies that focus on the European component of the Mediterranean Basin. Little research has been published on the effect of climate change on the biota of the southern and eastern Mediterranean. As Thuiller *et al.* (2005) note, the availability of underlying climatic and especially biological datasets for the entire Mediterranean Basin is limited, constraining analysis and published work to the northern component.

The intention of briefly reviewing past studies for the northern Mediterranean Basin is to glean key trends that provide valuable insights that are applicable to the development of climate change mitigation and adaptation ventures in the southern and eastern components of the Mediterranean Basin.

The Effect of Climate Change on Mediterranean Mountain Biota

Mountain ecosystems are among the most threatened of the Mediterranean Basin due to climate change (Alcamo *et al.* 2007). Mountain flora is predicted to change significantly with local plant species losses of up to 62 percent and turnover rates of 70 percent by 2080 (Thuiller *et al.* 2005). In addition, significant range shifts are expected at species- as well as at a vegetation zone level. Current species ranges and entire vegetation zones (tree line, alpine and nival zones) are predicted to shift to higher elevations resulting in certain flora and fauna communities being restricted to higher elevations (Alcamo *et al.* 2007).

Climate Change Implications for Forest Ecosystems

The extent of forest systems is expected to decrease due to a gradual warming and drying of the region. Decreases in annual rainfall are expected to reduce the distribution of a number of tree species, as well as recruitment and net ecosystem production (NEP / carbon sequestration) rates (Sabate *et al.* 2002). Even though a certain degree of "CO_2 fertilization" is expected for Mediterranean forests, prolonged dry periods and droughts are expected to lead to a decrease in forest biomass (Sabate *et al.* 2002). Predicted increases in the frequency and intensity of fires are anticipated to decrease the current distribution of forests and even convert forest areas to more fire-resilient shrubland (Mouillot *et al.* 2002).

The Potential Response of Shrubland Systems to Climate Change

The spatial distribution of shrublands in southern Europe has increased over the past few decades and is expected to continue increasing in future (Mouillot *et al.* 2002). In a similar manner to forest ecosystems however, recruitment, nutrient cycling, NEP and associated carbon storage in biomass are expected to decrease due to progressive drying and warming (Lloret *et al.* 2004, Alcamo *et al.* 2007). In one of the few empirical experiments on the effect of climate change on Mediterranean shrubland, predicted warming and drying reduced the abundance of emerging seedlings and respective species richness (Lloret *et al.* 2004, 2005). Future warming and drought responses are dependent on current conditions, with current cold, damp sites more strongly influenced by changes in temperature; and warm, dry sites being more responsive to changes in rainfall.

For all terrestrial systems, be it a grassland, shrubland or forest, predicted increases in fire frequency coupled with an increase in extreme rainfall events is likely to lead to an increase in soil erosion for the region (Mouillot *et al.* 2003, Giannakopoulos *et al.* 2005, Alcamo *et al.* 2007).

Expected Impacts on Human Populations

Predicted changes in climate and secondary effects such as changes in sea levels and fire regimes are expected to have crucial implications for human livelihoods and economies in the Mediterranean Basin (Stern 2006; Boko *et al.* 2007; Magnan *et al.* 2009; Parry *et al.* 2007). Although climate change is forecast to have numerous impacts on human health, livelihoods and economies, we have chosen to focus on water supply, energy, agriculture and coastal zones. The expected impacts and potential adaptation responses and activities are presented in Table 11.

Table 11. Potential Adaptation Responses and Activities

Climate change impact	Adaptation response
Water The region is at present experiencing medium to high water stresses. Climate change will intensify the problem. All countries in the Mediterranean Basin are predicted to experience increased water stress through a decrease in annual runoff and increased future water consumption. This would result in a decrease in summer low flows, with up to 80 percent lower flows occurring in some rivers of the region. (Giannakopoulos *et al.* 2005, Alcamo *et al.* 2007)	Improved watershed and infrastructure management as well as improved water-use efficiency. *Potential adaptation activity:* The restoration and conservation of natural indigenous watershed systems.
Energy Dependent on the balance between reduced heating in winter versus increased cooling in summer. Generally, additional demand for cooling will outweigh heating savings. Water shortages are forecast to hamper both hydro- and conventional power plants. Hydropower potential for the region is expected to decrease by 20-50 percent by 2070. (Cartalis *et al.* 2001, Giannakopoulos *et al.* 2005).	Improved energy efficiency and the gradual adoption of renewable energy- (solar water heaters) and building technologies. *Potential adaptation activity:* The maintenance of natural, indigenous watershed systems and water supply. Adoption of renewable technologies where possible within operations.
Agriculture Extreme climatic events, coupled with increased rainfall intensity and drought, is forecast to significantly reduce crop yield in the Mediterranean Basin. The southern Mediterranean will be affected most severely with estimated reduction yields of up to 30 percent. (Bindi and Moriondo 2005, Boko *et al.* 2007)	*Potential adaptation activity:* The promotion of sustainable agricultural management including conservation tillage, use of cover crops and tree boundaries, crop residue and manure management, and the restoration of boundary and riparian vegetation. Such activities increase production resilience, form valuable biodiversity corridors and lead to soil carbon sequestration.
Coastal zones The regional sea level rise is expected to be 1.1-1.3 millimeters per year (1 to 2 centimeters for every 1 centimeters globally). May lead to increased land and infrastructure loss, and the salinization of groundwater. Vulnerable to flooding and storm surges, especially in the deltoid areas. (Alcamo *et al*. 2007, Tsimplis *et al.* 2008)	*Potential adaptation activity:* The restoration and maintenance of natural coastal barriers such as delta and wetland systems, as well as coastal dune vegetation and dynamics.

Policy Responses in the Mediterranean Basin

While all nations within the Mediterranean Basin Hotspot may be affected by anthropogenic climate change to a certain degree (Alcamo *et al.* 2007, Boko *et al.* 2007), a nation's ability to respond to climate change and the nature of the response is determined by a number of factors including the nature of the climate change impact, historical and current emission levels, and the availability of financial and institutional capacity to implement mitigation and adaptation measures. Due to significant differences in historical and current emissions as well as potential financial and institutional capacity, the nations of the Mediterranean Basin Hotspot have in the past been split into two categories under the UNFCCC and the Kyoto Protocol.

One of the main principles of the UNFCCC and the Kyoto Protocol is one of a "common but differentiated responsibility" among nations. Where industrialized nations (as listed in Annex-1 to the Kyoto Protocol) are required to reduce national emissions to 5 percent below 1990 levels in the period 2008-2012, developing countries (often referred to as "non-Annex 1 nations") do not have an emission reduction target. It is recognized that for economic and industrial development to occur in developing nations, there will need to be an increase in national emissions.

With regard to the countries and territories of the Mediterranean Basin Hotspot, Northern Mediterranean countries located within the EU as well as Turkey are viewed as industrialized under the Kyoto Protocol and have clear emission reduction targets, while countries outside of the EU located in the eastern and southern Mediterranean Basin are seen as developing and therefore do not have emission reduction targets under the Kyoto Protocol. Although a post-2012 climate change agreement is currently under negotiation, separation of industrialized and developing countries and the manner in which they respond to climate change is likely to be maintained in future policy.

Going forward into a post-2012 period, the EU has a strong, progressive climate change policy objective of limiting the increase in average global temperature to less than 2 percent. To reach this objective, the EU has proposed aggressive emission reduction targets of a 20-40 percent reduction in national GHG emissions by 2020 and reduction of at least 80 percent by 2050 (http://www.eu-un.europa.eu). Although emission targets and post-2012 commitments were not agreed to during the course of the 15th Conference of Parties (COP) in Copenhagen in December 2009, the EU has committed to pursuing such emission targets unilaterally.

To attain such progressive objectives the European Parliament has made climate change a highest funding priority and recommended an extensive suite of measures for implementation from changes in energy generation and energy efficiency, to increased climate change education and awareness training, to sustainable forest management and soil protection. Of particular importance to the Mediterranean Basin Hotspot and the conservation of biodiversity and ecosystems services in the region, is that many of the recommended measures focus on land-use (agriculture, avoided deforestation and reforestation) and the creation of a EU-wide "super-grid" that includes solar energy partnerships with non-EU nations in the Mediterranean Basin. A comprehensive introduction and review of EU climate change policy can be found at the Web portal http://ec.europa.eu/environment/climat/home_en.htm.

Aside from the EU, there are already well-established climate change initiatives in the majority of the 16 eastern and southern Mediterranean Basin countries and territories reviewed in this report. Due to the number or range of climate change related activities, for ease of comprehension and comparison, climate change policy, mitigation and adaptation initiatives are listed in supplemental appendices on www.cepf.net.

With regard to land-use sector activities in particular, there are already initiatives in place in Albania, Bosnia and Herzegovina, Cape Verde, Croatia, Egypt, Jordan, Libya, Syria and Tunisia. These initiatives span both mitigation and adaptation activities ranging from a new National Park development in Libya that includes the afforestation of 250,000 ha, to an initiative to convert at least 10 percent of Egyptian agriculture to organic farming by 2010. Although no REDD ("reduced emissions from deforestation and degradation") ventures are yet to be realized, there are two afforestation projects already in place. The Libyan project mentioned above as well as community-based carbon sequestration (afforestation) project in Albania.

In future there is a clear need for an assessment of potential areas suitable for reforestation as well as avoided deforestation activities, especially if REDD is adopted as an eligible climate change mitigation activity in post-2012 policy. It would be appropriate for such an assessment to be included within a greater climate change response plan for key biodiversity areas and protected areas in order to prioritize areas that are strategic in terms of conservation of the Hotspot as well as climate change mitigation and adaptation. The development of such a response plan is explored further below. Good progress was made on REDD at the Copenhagen UNFCC Summit (2009) and it has been included in the Copenhagen Accord as a priority.

Developing a Response to Climate Change

The restoration and maintenance of ecosystems at a landscape-scale provides a good opportunity to mitigate climate change through carbon sequestration in biomass and soil, and adapt to climate change through ensuring the maintenance or recovery of intact watershed systems. In a region where the climate is forecast to get drier and warmer which in turn may lead to an increase water usage in the agricultural and domestic sectors, the restoration of the "sponge-effect" of natural watershed systems, provides a cost efficient means of regulating water flow and sediment loads. The maintenance of natural ecosystems also provides an opportunity to conserve important key biodiversity areas and crucial corridors in human-dominated landscapes. Here we focus on the current understanding of the effect of climate change on existing protected areas and describe potential climate change responses going forward.

Existing Protected Areas in the Context of Climate Change

There is a growing awareness of the importance of conserving natural systems as an integral part of addressing climate change (Turner *et al.* 2009). For this reason, the IUCN together with partner organizations has established the PACT 2020 partnership (Protected Areas and Climate Turnaround) with the goal of:

"Ensur[ing] that protected areas and protected area systems are recognised as an important contribution to climate change adaptation/mitigation strategies for biodiversity and human livelihoods" (www.iucn.org).

Establishing and managing protected areas essentially requires the long-term restoration and management of resilient, indigenous, multi-species ecosystems across landscapes. Compared to single species plantations or agricultural systems, multi-species indigenous systems are more resilient to climate change and don't lead to the degradation of soil or water quality. Such an activity inherently leads to climate change mitigation through the long-term sequestration of atmospheric carbon dioxide in plant biomass and soil organic matter. At the same time protected areas provide ecosystem services, such as the management of water flow and sedimentation to downstream human economies. Intact, indigenous Mediterranean shrubland can form a 'sponge effect' regulating stream flow and dampening the effect of heavy-downpours and drought events. In their meta-analysis of the effect of single species plantations on water flow, Farley *et al.* (2005) note how the afforestation of indigenous Mediterranean shrubland in South Africa has lead to a decrease in stream flow relative to rainfall. In an area that is forecast to get dryer and warmer, protected areas can provide a cost-efficient climate change adaptation option to increasing water scarcity.

The maintenance of existing protected areas and the further establishment of protected areas therefore not only address the sustainable conservation of the hotspot, but provide an opportunity to establish climate change adaptation and mitigation ventures at a landscape scale.

With regard to planning key biodiversity areas and protected areas, as described above, anthropogenic climate change is expected to result in a shift in the range of a large proportion of Mediterranean Basin species (Thuiller *et al.* 2005). While the degree of predicted change in range is species—and location-specific, initial studies highlight the acute need for conservation planning to include the effect of climate change on species range when identifying and managing protected areas and key biodiversity areas. Although initial analyses have been undertaken for the northern Mediterranean Basin and Europe more specifically (Thuiller *et al.* 2005, Hannah *et al.* 2007), little analysis have been completed for eastern and southern Mediterranean Basin countries.

THREAT ASSESSMENT

Introduction

The combination of economic development and an increasing human population is creating unprecedented pressures on the natural resources in the Mediterranean Basin. This is compounded by the lack of effective planning and management systems to control these pressures. Rapidly increasing levels of consumption have led to massive increases in natural resource exploitation and conversion of natural habitats to other land uses.

The one over-riding immediate concern facing the region's biodiversity is habitat loss — the principal issue for nearly all species in the region and elsewhere in the world. However, as detailed below, threats differ significantly from taxa to taxa, and even among species within the same taxa, a reflection of different biology, life cycles and distribution patterns. The situation in the Macaronesia sub-region is also particular, and there invasive species seem to be a very important threat.

The information collected under this profiling process reflects that habitat loss in the region results mainly from (i) infrastructure and residential development, (ii) increasing pressure on water resources and (iii) agricultural intensification and land abandonment. In Macaronesia,

and apart from habitat loss, the threat posed by introduced invasive species is a major and priority issue causing the decline of biodiversity there, particularly avian biodiversity.

Threats in the region do not only result in loss or fragmentation of habitats, but they are also triggering the local or global extinction of a number of species, such as the Mediterranean monk seal (*Monachus monachus*). Furthermore, pressures on biodiversity and on the environment are also having a heavy human and economic toll. On the Southern and Eastern rims, annual costs of environmental degradation have been estimated at nearly 3 percent of GDP in Tunisia and at 5 percent in Syria, Algeria and Egypt, which is higher than the global average (Larsen *et al.* 2002)

This section provides an overview of the main threats to terrestrial and coastal biodiversity and ecosystems in the Mediterranean Basin Hotspot and their impact, as well as an analysis of their root causes. These threats and root causes need to be addressed in a way to reverse the current trend, if we are to achieve effective conservation and sustainable use of the hotspot's biodiversity and ecosystems.

Specific threats to the region's islands and oceans, which have some of its most important biodiversity, are analysed elsewhere in this profiling document.

Vulnerability of the Mediterranean Basin Biodiversity

As reflected elsewhere in this report, the terrestrial and marine biodiversity of the Mediterranean Basin Hotspot is rich, unique and vulnerable. It is also one of the most densely inhabited regions of the world.

Even though population density alone is not a particularly good predictor of threat in the Mediterranean Basin, it is the human population that is driving some of the main threats. Overall, the Mediterranean Basin Hotspot countries hold around 400 million inhabitants (7 percent of the world population), 135 million of which live on the Mediterranean coast. Further, the same coast is visited by 220 million tourists a year (32 percent of the planet's international tourism) (Plan Bleu 2006). The miles of coastline, turquoise seas, spectacular mountains and gorges, and warm summer climate are a tour operator's dream

This results in one of the heaviest pressures from visitors and residents on the remaining natural habitats encountered anywhere on earth. The prospects of short-term financial gain from tourism are often winning over the long-term security of biodiversity and maintenance of ecosystem services.

Further, some of the endemic taxa in the hotspot are confined to islands (for example, many endemic plants and reptiles living on Macaronesian and Mediterranean islands) and have narrow genetic base, reduced competitive abilities and limited dispersal opportunities increasing their vulnerability.

Fortunately, most of the region's continental biota have evolved for thousands of years with mankind, and also with the many naturally occurring hazards, notably fires and droughts, and thus have developed a certain level of natural resilience to various pressures. This explains why, despite intensive human pressure for centuries, one still observes high biodiversity and few documented extinctions in the region.

A different situation applies to the oceanic island archipelagos of Macaronesia, where species have evolved without the presence of competitors, and thus have suffered immensely

after human colonization. As a consequence, most of the recent extinctions in the Mediterranean Basin Hotspot have been in Macronesia, and a disproportionate number of threatened species occur there.

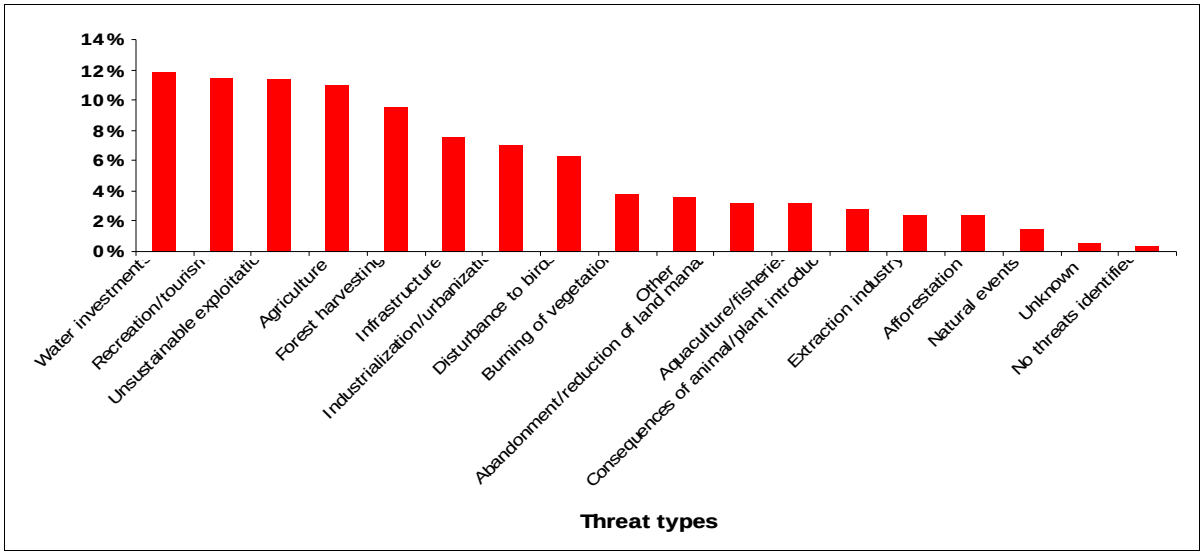
Overview of Threats

Biodiversity in the hotspot has been impacted by humans for millennia, nonetheless, negative impacts increased substantially in the last century with the explosion in human population, and particularly with the booming and relatively recent Mediterranean tourism industry that accounts for more than 32 percent of global tourism, causing fast infrastructural and recreational development. IUCN (Cuttelod *et al.* 2008) lists the most important causes of threat for Mediterranean Basin species by order of importance, as follows:

- Habitat loss and degradation, due to agricultural, urban, tourism, transportation and industrial/commercial (including mining/energy) development driven by increasing population and affluence.
- Pollution, particularly to freshwater biodiversity and to the marine environment.
- Overexploitation (harvesting, hunting and fishing).
- Natural disasters (including climate change).
- Invasive Alien species (predation and competition).
- Human disturbance.
- Bycatch

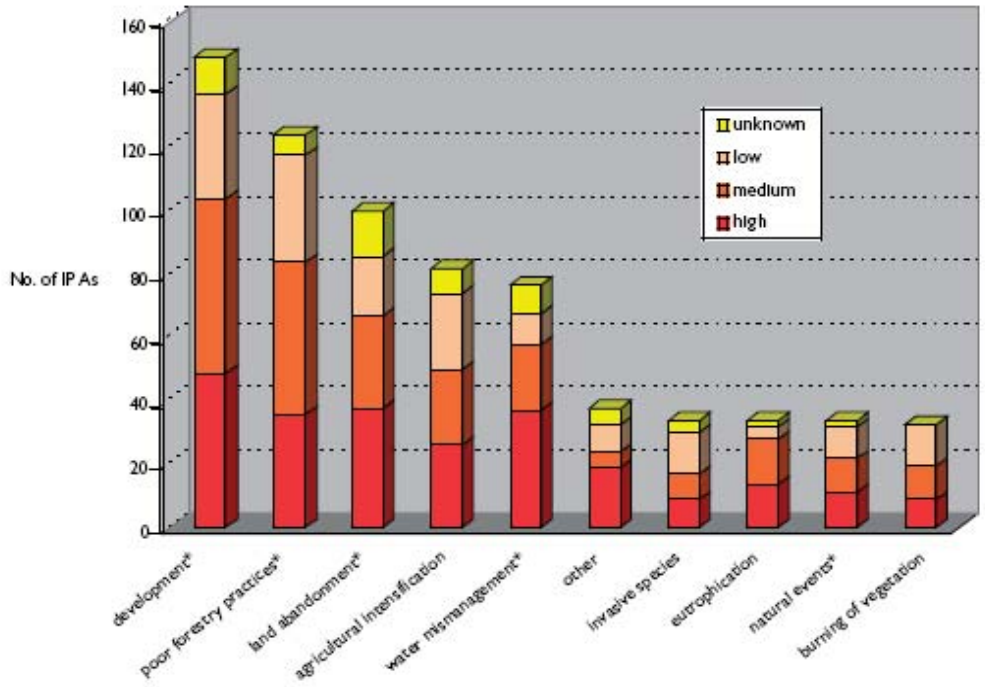
On the other hand, analyses undertaken on Important Bird Areas (IBAs) of global significance in the Mediterranean Basin (Source: BirdLife International 2009) indicates that increasing pressure on water resources resulting from economic development is a key issue for the hotspot, and it will clearly become more important over the next decades as a result of climate change. The frequency of threats originating from water investments and recreational development is 12 percent, followed by unsustainable exploitation with a frequency of 11 percent (Figure 12).

Figure 12. Frequency of Threats on Important Bird Areas in the Mediterranean Basin
(Source: BirdLife International 2009)



A different perspective is provided by Plantlife International (Radford and Odé 2009) which assessed threats to Important Plant Areas in southeastern Europe, based on the extent, potential damage and timescale to produce a "high," "medium" or "low" threat rating. It reports that development and poor forestry practices affect the largest number of important plant areas in the southeast European countries. Development (industry, infrastructure, tourism and urban) affects 51 percent of all sites, with tourism development alone affecting 31 percent. Poor forestry practices threaten more than 40 percent of Important Plant Areas, deforestation and intensified forest management are the main activities responsible. Land abandonment or reduction of land management is the third most important threat, affecting 100 important plant areas (over one third of all sites) resulting in loss of biodiversity rich grassland habitats as they revert to coarse grassland or scrub when grazing is reduced (Figure 13). In the same survey, Plantlife International suggests that threats are increasing in intensity, and are frequently associated with irreversible activities: building hotels, roads, dykes, dams and drainage channels, and removal of forest.

Figure 13. Top 10 Threats Affecting Important Plant Areas in the Balkan States
Development includes tourism, urban, industrial and infrastructure development, poor forestry practices includes damaging afforestation and deforestation and inappropriate management of forests, water mismanagement includes dredging and canalisation, drainage, management systems and constructions of dams/dykes and natural events include flood, drought, and fire. (Source: Plantlife International 2009).



BirdLife International have also undertaken an analysis of threats per habitat across Europe (Tucker and Evans 1997), including many habitats that occur mostly in the European region. In general, BirdLife International has concluded that habitat deterioration (change of particular features of habitats that are essential) and loss (destruction) are the main threats. Table 12 presents a summary of the top three threats identified for some of the habitats most relevant for the Mediterranean Basin Hotspot.

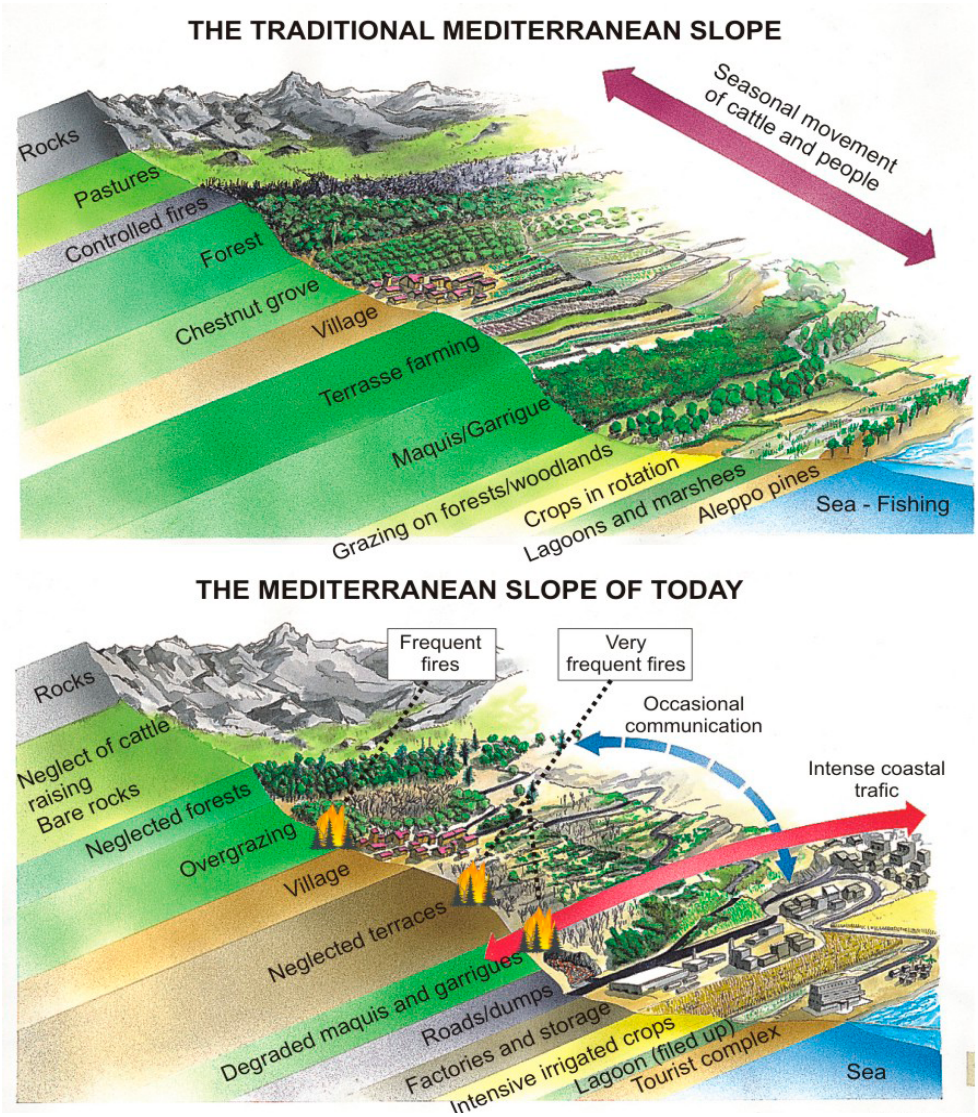
Table 12. The Most Important Threats to European Mediterranean Habitats

Habitat type	1st threat and effects on biodiversity	2nd threat	3rd threat
Coastal habitats	Tourism and recreation (disturbance and changes to vegetation due to trampling; associated problems from building developments, infrastructure, pollution and increased water demand)	Land claim and coastal development (loss and degradation of intertidal, shallow subtidal and terrestrial habitats)	Nutrient pollution (decreased water clarity, algal blooms and anoxic conditions, changes in vegetation structure, reduced food supply)
Mediterranean forest, shrubland and rocky habitats	Abandonment of grazing, or undergrazing (increases vegetation cover, reduces vegetation diversity, increases vegetation height, loss of open areas, of feeding opportunities, and of carrion)	Frequent and large fires (opens up habitat and simplifies structure, increases susceptibility to erosion and in extreme cases, habitat loss through desertification	Afforestation with native and non-native trees (for example, Eucalyptus) (habitat loss)
Agricultural and grassland habitats	Crop improvements, including high fertilizer input, improved varieties, grass reseeding, irrigation (rapid growth leading to tall dense vegetation, unsuitable for foraging)	Pesticide use (direct toxic effects, widespread reduction in invertebrate, vertebrate and plant food resources)	Land abandonment (plant succession lading to habitat loss through overgrowth by scrub and trees)

Habitat Loss

The population and economies of all Mediterranean Basin countries have grown considerably in the last 50 years, which has been accompanied by expansion of urban areas and creation of new ones, industrial and commercial developments, and associated infrastructure, particularly transportation systems, and the development of one of the world's largest tourism industries focused on the coastal areas. Much of this development has occurred without proper planning and has led to the destruction and degradation of huge areas of natural habitats, and resulted in a complete change to the coastal landscape and character of many Mediterranean coasts.

Figure 14. Summary of the Evolution of the Mediterranean Coastal Landscape over the Last 50 Years
(Source: PlanBleu 2006)



Main impacts in the hotspot include:

- Pollution from untreated sewage from residential and tourism developments and contamination from industrial sites.
- Clearance of natural vegetation for construction of housing, hotels and resorts, commercial complexes, and roads, agricultural expansion and intensification.
- Clearance, dredging, channelization or in-filling of coastal wetlands (lagoons, estuaries, coastal marshes) for marinas and ports and agricultural areas.
- Sand mining and beach and dune erosion.
- Increased consumption of water from surface and ground water sources leading to salt intrusion (which is likely to get worse with predicted sea level rises), receding

deltas (50 meters/year in the Ebro; Plan Bleu 2006) and changes in ecosystem function, and decreased availability of water supplies.
- Dam construction for energy.
- Loss of natural habitats due to mining.

Although all these have been a major force for economic growth and some improvements in human well-being in the region, their negative impacts on the environment and ultimately their sustainability have not been properly considered.

Infrastructure and Residential Development

Tourism and recreation areas: One of the greatest drivers for land-use changes has been the enormous and at times and places uncontrolled, growth of tourism in the region over the past five decades. This has reflected itself with the widespread construction of hotels, marinas and associated developments, especially along coasts.

International tourist arrivals in the Mediterranean Basin countries increased four-fold between 1970 and 2000, reaching 218 million visitors in 2000, 85 percent of whom were Europeans. The assumption for 2025 is a continuing strong growth of tourist flows with 178 million additional arrivals (Plan Bleu 2006).

Development associated with tourism has often meant the complete removal of natural vegetation, planting of ornamental trees, shrubs and grass for lawns and golf courses, filling-in of small coastal wetlands and construction of new roads to give access to coastal areas that previously could only be reached on foot or by sea. Even legally protected areas have not been immune to tourism development pressure. Infrastructure projects (such as road construction) are often inextricably linked to major tourist developments and can have profound effects on biodiversity.

Overall figures for the area of natural habitats lost to tourism development in the hotspot are not available, but the total lost is considered enormous, with very few coastal areas now unaffected.

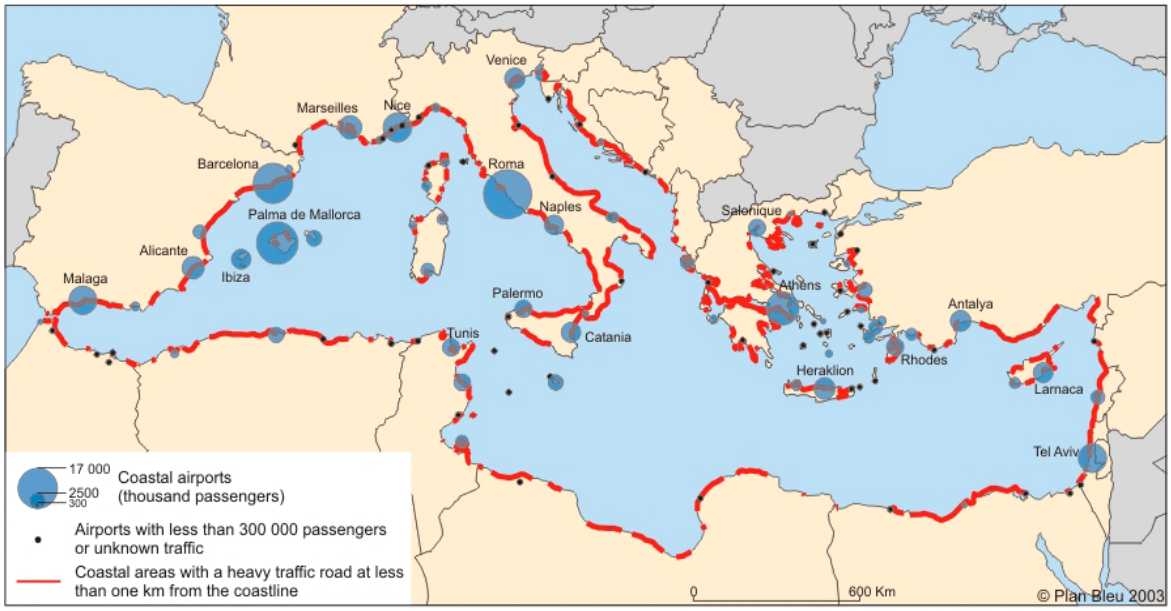
Many tourist sites are operating beyond their carrying capacities, both from biophysical and management perspectives. Influxes of high numbers of tourists during high season, for instance, frequently overtax public services, reduce water supplies, and generate vast amounts of solid and liquid wastes that must be accommodated by local municipalities which have limited waste management facilities. Encouragingly, some tourism operators are taking a more responsible approach to the environment, and the ecotourism market is growing.

While tourism is one of the drivers of infrastructure and residential development across the region, it is not evenly distributed. In some countries (for example, Algeria, Libya, Albania) tourism development is very limited. Furthermore the tourism pressure is usually restricted to coastal areas and does not affect mountainous areas.

Transport infrastructures and service corridors: In 2000, the Mediterranean Basin coastal strip had 70 million urban inhabitants, 584 coastal towns, received 175 million tourists, 750 yacht harbors, 286 trade ports, 248 energy plants, 238 desalinization plants, 112 airports and numerous high-traffic roads (Plan Bleu 2006).

Traffic growth outweighed population and economic growth in the Mediterranean by far between 1970 and 2000: 4.9 percent per year for passengers and 3.8 percent for freight (excluding maritime traffic). Traffic growth is mainly due to road transport, which accounted for 88 percent of passenger traffic and 82 percent of freight in 1999. High growth in air transport (7.3 percent) is linked to tourism development. Maritime freight transport also registered significant growth (4 percent per year). Transit-flows account for 40 percent of Mediterranean traffic (Plan Bleu 2006). Transport infrastructure is a major cause of surface sealing/waterproofing, thus increasing vulnerability to floods and to loss of biodiversity (Figure 15).

Figure 15. Map of Road and Airport Infrastructure across the Mediterranean Basin
(Plan Bleu 2006)



Source : Different national statistical sources

Even before the expected problem of sea-level rise, coasts were threatened by extensive costal engineering measures to protect land and property from inundation and or erosion. The construction of seawalls is common, and this is likely to increase in the future. One of the most important and wide ranging impacts of such sea defences is the disruption of natural geomorphological processes, and the protection of coasts may actually exacerbate the problem of erosion and flood risk.

Increasing Pressure on Water Resources

Most experts agree that the physical, socioeconomic and environmental limits of supply-based water policies in the Mediterranean Basin have been reached. As a direct and indirect result of this, large areas of freshwater habitats in the region have been lost, degraded or fragmented, in all parts of the Mediterranean Basin, with a significant impact on biodiversity. For example, 32 percent of freshwater fishes in the Mediterranean Basin are threatened by dam construction (McAllister *et al.* 2001). A number of range-restricted molluscs in North Africa are already feared to have gone extinct, as the rivers where they occurred are now completely dry for parts of the year (previously they flowed year round),

due to a combination of climate change, increased water abstraction and construction of dams.

Inappropriate water management, although most significantly a threat to wetlands, also affects other habitats: The reservoirs often flood important terrestrial habitats, while artificially managed discharges cause major alterations to seasonal flow regimes and natural sedimentation processes. The dams themselves impact directly on fish migration routes and access to spawning grounds: most lack fish passes or strategies to maintain aquatic communities downstream. Another impact of dam construction is that displaced human communities are often relocated in areas where they clear or place additional pressure on natural habitats.

Increasing demand for flood control, irrigation, and electricity generation is fuelling a wave of dam construction on large rivers. National water policies are largely dominated by efforts to increase water supply, and multiply the number of large water infrastructures. More than 500 large dams were built during the last century, big transfer infrastructures are underway in Egypt and Libya, and many other waterworks are planned in Algeria, Morocco, Turkey, Cyprus, Spain, Greece, etc. However, many dams in the South and East will lose a large share of their capacity due to silting; in Algeria; reservoirs have already lost one-quarter of their original capacity.

Furthermore, water abstraction or diversion for agriculture is one of the primary threats in the arid Mediterranean Basin. This has resulted in disappearance of several lakes in the region (for example, in Turkey). Water-intensive golf courses and lawns built as parts of tourism developments are unfortunately common in the region and the root cause of much erosion, pollution and sedimentation which threaten both the marine as well as terrestrial habitats.

The challenge of water management is not only limited to physical savings. It is also a matter of economic and social planning of exploited water taking also the needs of ecosystems into account via policies such as integrated river basin management.

Several recent experiences have demonstrated the feasibility and the *win-win* impact, both economic and environmental, of such policies. Tunisia has implemented a national irrigation water-saving strategy which includes the creation of user associations, pricing aimed at progressive cost recovery, targeted financial instruments for water-efficient farming equipment, and support to farmer revenues. Since 1996, this policy has stabilized irrigation water demand despite agricultural development, and the needs of both the tourism sector (a source of foreign currency) and cities (a source of social stability) have been assured. In Morocco, improved water management in Rabat-Casablanca has delayed or perhaps completely avoided costly investments (dams, transfer canals) initially scheduled by the Master Plan of 1980.

Agricultural Intensification and Land Abandonment

Land abandonment threatens many important habitats in the hotspot that are managed for agriculture in a non-intensive or traditional way, such as steppes, montane grasslands, Iberian dehesas and Mediterranean shrublands. Abandonment occurs where rural people have too few financial or social incentives to manage their land.

During the last 100 years, traditional land uses have been abandoned over millions of hectares of non-intensive cultivation and pasture in the Mediterranean Basin (Beaufoy *et al.*

1994). Without the checks to succession provided by ploughing or grazing, the result in the medium term is often the replacement of these open wildlife rich habitat mosaics by secondary uniform shrubby habitats of reduced conservation value, as is presently occurring in many parts of the region (for example, France; Lepart and Debussche 1992).

Land abandonment also suggests that the only way to stay competitive in agriculture is to intensify, which is also harmful to biodiversity. One of the major challenges facing the region is how to support sustainable rural development in the poorer regions.

Large-scale clearance of land for agriculture is not a new phenomenon in the Mediterranean Basin, as it happened hundreds, in some cases thousands of years ago, leading to widespread deforestation throughout the region. Irrigated surfaces have doubled in 40 years, reaching 23 million hectares in 2000. In Turkey, 1.5 million hectares are no longer appropriate for agricultural use due to salinization. In Tunisia, annual land losses from land degradation processes (water and wind erosion, salinization, overgrazing) are estimated at 37,000 hectares, 13,000 of which have suffered irreversible damage. Extensive areas of some deltas in the Mediterranean Basin have been lost for agricultural purposes (for example, Evros Delta in Greece, Caorle Lagoon in Italy).

Overgrazing has also significantly altered the vegetation of many areas, leading to degraded scrub vegetation, and continues to be a threat to native vegetation, especially on islands with significant numbers of free-roaming sheep and goats. More recently, declines in some agricultural markets has led to the abandonment of degraded areas with an expansion of the Mediterranean maquis.

Other Causes of Habitat Loss

Mining: Extensive loss of natural habitats has also occurred due to mining activities in some countries. Unfortunately, the mining industries have a patchy record of meeting their requirements to "restore" lands devastated by mining (and some governments have a similarly poor record of enforcing the penalties for failure to do so), and Environmental Impact Assessments are little more than paper exercises in many countries. Moreover, restoration attempts have not been very successful in repopulating areas with native species (common, widespread, usually weedy species tend to dominate), and, given the long history of mining in the region and continued importance of the mining sector to the national economies, ecological restoration of mine workings remains a priority research area.

Quarrying of limestone for cement manufacture is a particular threat to limestone karsts, which generally are areas of outstanding endemism. Even underground mining operations create damage through clearance of vegetation for surface facilities and dumping of tailings, with a risk of pollution from poorly constructed or managed effluents and tailings ponds.

There is also illegal extraction of gravel from riverbeds and sand from beaches for the construction of hotels, resorts and residential houses, practices which are common and widespread in the Mediterranean Basin. Apart from destroying fauna and flora communities, beach sand mining causes sedimentation, and disturbs the hydrology. Reduction of the sediment supply in Mediterranean rivers caused by sand dredging is thought to cause erosion of coastlines observed around some Mediterranean deltas. While mostly small-scale, their cumulative impact is thought to be significant.

Aquaculture: Worldwide demand for fishing products tripled between 1961 and 2001 as a result of the human population increase and the rise of consumption per person from 11

kilograms/person/year in 1970 to 16.2 kilograms/person/year in 2002 (The State of World Fisheries and Aquaculture 2004). Aquaculture and extractive fishing are complementary activities that must face the challenge of this increasing demand for marine products. The production of extractive fishing reached its highest levels at the end of the 1980s, and since that time has fluctuated around the same level (90-95 million tons), indicating that the oceans are being exploited near to their maximum production.

In the Mediterranean Basin, aquaculture has expanded rapidly over the last two decades, with an annual growth rate rising from 4 percent in 1980 to 13 percent in 2000, and with a trend towards the diversification of cultured species which facilitates the growth of the sector. Main species cultivated in the Mediterranean Basin (data from The State of World Fisheries and Aquaculture 2006) are Mediterranean mussel (*Mytilus galloprovincialis*) 147,920 tons, Gilthead seabream (*Sparus aurata*) 74,078 tons, European seabass (*Dicentrarchus labrax*) 43,804 tons, flathead grey mullet (*Mugil cephalus*) 42,546 tons, Japanese carpet shell (*Ruditapes philippinarum*) 25,000 tons, Other seabass 20,982 tons, Pacific cupped oyster (*Crassostrea gigas*) 8,608 tons, Other marine fish 4,894 tons, Trout (*Salmonids*) 1,194 tons and red drum (*Sciaenops ocellatus*) 438 tons.

Uncontrolled development of aquaculture has resulted in loss and degradation of wetland habitats in some coastal areas, including coastal lagoons and saltpans in some countries. Transformation of the traditional Mediterranean Salinas into aquaculture tanks is one of the major threats to this rare and valuable type of habitat.

The poor location, construction and operation of ponds in areas exposed to storms and floods can introduce exotic species and diseases into lagoons and other habitats in coastal ecosystems. Exotic species for instance, have been accidentally or intentionally introduced into local streams, lagoons and wetland areas through aquaculture projects and compete with and/or reduce indigenous fish populations.

Aquaculture in the Mediterranean Basin currently faces a significant challenge: how to fulfil the expectation of alleviating the pressure that fishing fleets exercise on fish populations and the increasing demand for sea products in local and international markets without leading to environmental problems. Particularly, aquaculture is expected to develop widely in the near future in the Mediterranean's Southern and Eastern countries. In order to avoid potential environmental disruption issues, it is important that the aquaculture sector is provided with clear, user friendly and scientifically based guidelines to ensure its sustainable development.

Other Major Threats

Over-exploitation (Harvesting, Hunting and Fishing)

Overexploitation and illegal and indiscriminate hunting is a serious problem for Mediterranean Basin species, affecting many threatened plants, reptiles, fishes and other species. The main activities that constitute threats in this category include unsustainable hunting and egg collecting, logging and wood harvesting, trapping of animals for the pet and aquarium trades, collection of plants for horticulture, and fishing. A full list of which species are exploited is not available and there have been no regional overviews. Furthermore, quantitative data on many of these activities are scarce in part because exploitation is often illegal (so hidden) and not adequately monitored due to lack of resources within the relevant environmental agencies. Consequently, it is difficult to gauge

the true impact of these activities relative to other threats, but they are considered significant for some species.

Overall, there is a need for more comprehensive surveys to quantify current levels of exploitation of both animals and plants in the hotspot and regional and national reviews of their use; the establishment of scientifically-based limits on the exploitation of target species; improved monitoring and awareness programs for target species; more clearly defined laws and regulations governing the use of animal and plant species; and better law enforcement and national and regional reporting (for example, to CITES).

Conservation action is required in a number of thematic areas, at site, landscape, national and international levels, if populations of species threatened by overexploitation are to be secured. Site-based action is required to reduce pressure on wild populations.

Hunting: Many species of animal are hunted for food or sport in the region, with hunting seasons and bag limits regulated under national or regional (for example, EU) legislation, with penalties for violations – however, illegal hunting is widespread, even in some EU countries – notably in Malta, who has the densest population of hunters in the EU, and whose government officially challenged the EU's Birds Directive. As a result, of this intense persecution, Malta has the dubious distinction of being the only country in Europe and the Mediterranean Basin with no regularly breeding birds of prey!

Illegal hunting in the Middle East is also widespread. There species hunted for food (or for sale as food) include many threatened species of birds and mammals, including the sociable lapwing in Syria. In many countries catching of small passerines is still widespread

Hunting of birds for sport is popular in many countries, especially thrushes, partridges, pigeons and doves, but in many places hunters do kill protected species as well, while poaching outside the hunting season is still widespread in many places.

Addressing sustainable hunting is identified as a conservation goal in several countries NBSAPs, but surveillance and enforcement remain key challenges due to lack of capacity and resources among relevant government agencies (which need to be increased in key biodiversity areas), and there is a general lack of transparency and accurate information on the numbers and locations of animals taken, the level of illegal hunting and the impact of hunting on populations. All these are needed to make informed decisions about species-specific hunting limits, design effective management plans for target species, and to protect the most vulnerable species. This presents an important gap in knowledge and research.

Hunting also has indirect effects, namely disturbance to nesting, roosting and feeding birds. Sensitivity to disturbance varies among species. Another indirect effect is lead poisoning, which affects mostly waterfowl in wetlands. In the Camargue, France, lead shot densities of up to 2 million per ha have been recorded in the sediment (Pain 2001).

In some of the European countries, land managed (usually private or leased) for hunting by hunting clubs and associations is helping meet conservation objectives (for example, Spanish Imperial Eagle in the Spanish Cotos de Caza). Involving more hunting groups in policy development and species management could help promote biodiversity conservation goals and offer opportunities for cost sharing.

The economic value of animal hunting has not been adequately researched. Such information would help persuade politicians and other decision-makers of the need to increase resources to manage populations of hunted species sustainably. Some limited data are available for some countries but the picture is very incomplete.

Timber extraction, firewood collection and charcoal production, non-timber forest products: Mediterranean forests provide a wide range of important benefits and services to society that go far beyond traditional forest products. Furthermore, they represent one of the planet's important centers of plant diversity, with an estimated 25,000 species of plant of which around half are endemic.

Forests have always played, and still play, an important role in the daily life of the Mediterranean peoples. Although Mediterranean forests provide low direct economic returns on wood products in comparison to the Northern European forests, they play a crucial role in maintaining key ecosystem components for securing human welfare and life in the region.

Previously, exploitation of the natural landscape was long, slow and relatively sustainable — originally, hardwood was used to construct ships, homes, and furniture, and the rest of the forest was treated as a source of fuel wood. Today, few areas in the Mediterranean Basin have any significant primary forest cover. Some of the Mediterranean islands, including many in the Aegean Sea, lost virtually all of their native forest, and have thus been completely altered by agricultural developments. In the past decades, this pattern has accelerated, and the forests are now fragile and under threat. Many countries have suffered forest loss and degradation. Action is needed to conserve, sustainably manage and restore forests in the region for the maintenance of watersheds and local climate and to protect against desertification, erosion and flood damage.

In some areas, one stills sees widespread intensification of forest management, and in the most extreme cases, existing natural and seminatural forests are being turned into uniform monoculture plantations through clear-felling and replanting, often using non-native species (for example, Eucalyptus). Afforestation in Iberia has led to the loss of thousands of square kilometres of shrubland, for example (Hermeline and Rey 1994). In other areas, logging of the very few remaining natural or semi-natural old-growth forest is a major threat.

Most current forestry in the region still has a traditional focus on timber production from plantations (often of exotics), but the sector is gradually moving towards a more diverse-use approach including protection of natural forests for other ecosystem services such as nature-based tourism and recreation.

However, there has been very limited development of forest certification schemes in the Mediterranean Basin, with, to date, no significant areas under sustainable management and only few projects addresses the issue, such as the WWF project with the Forest Stewardship Council (FSC).

In some rural areas of the poorer countries in the hotspot communities rely heavily on fuel wood and charcoal from neighbouring forested areas. Non-wood forest products, such as fruits, fibers, resins, tannins, essential oils, tree seeds, honey, fodder, ornamental plants, medicinal plants, gums and mushrooms, etc, are often said to be an important part of the rural economy, but their value — socially and economically — has not been quantified and only partially documented for some countries, for example, cork in Portugal.

Collection for live-animal and plant trade: Collecting for the pet, aquarium and horticultural trades, both local and international, is also believed to present a direct threat to some species in the hotspot, notably seahorses, plants and reptiles, such as the Critically Endangered Egyptian tortoise (*Testudo kleinmanni*).

Seventy percent of the Mediterranean Basin wild plants are known to be of potential economic value and the threat posed to plant species from overexploitation is potentially as massive as that to animal species. However, very little accurate information has been published on the impacts of overexploitation on plant species in the region. Thousands of plant species in the region have documented uses in human societies, from decoration to food to traditional medicine.

Unfortunately, trade statistics for local markets are not generally kept (and protected species tend to be sold clandestinely) and most of countries in the hotspot have not submitted recent annual and biannual reports on trade in endangered species to CITES. As a result, national and international trade statistics for animals and plants are not comprehensive for the Mediterranean Basin.

Egg collecting (*seabirds and turtles*): Seabird colonies on offshore islets throughout the Mediterranean Basin Hotspot have also been traditionally harvested for their eggs by fishermen during the breeding season, and, although most colonies are now protected under national legislation, illegal egg collecting still occurs occasionally. The collection of sea turtle eggs is not common in Mediterranean Basin Hotspot (although may be significant in Cape Verde).

Overfishing: As human populations and levels of consumption increase, overfishing presents a growing threat to the region's fish diversity, with potentially significant indirect impacts on other species through, for example, depletion of food supply. For example, the bottom trawling fisheries are the main cause for Maltese skate decline of 80 percent. This Mediterranean Basin endemic is Critically Endangered.

Energy Production

Energy plays a role in everything we do and the Mediterranean society's growing requirements for energy are resulting in significant impacts on biodiversity. Energy supply systems both depend on and influence ecosystems. Ecosystems, such as watersheds and forests, are critical for the provisioning of energy services such as water flows for hydro-electricity and biomass for bioenergy. However, current energy production can also cause species and habitat loss along the entire energy cycle from exploration to production and distribution to final use. The very biodiversity that provides energy services is under threat by the growing demand for energy. Demand for primary commercial energy more than doubled in riparian countries between 1970 and 2000 (Plan Bleu 2006). Detailed information on the energy sources in the Mediterranean Basin is given in section on energy and power production.

Dams and other types of hydropower plants form the single most important threat to biodiversity in some parts of the hotspot. In Turkey, damming is the key threat to threatened and endemic taxa as it permanently destroys habitats of high biodiversity value along the river valleys (Eken *et al.* 2006).

Wind and solar energy are seen as potential alternative sources of energy, and many projects are now cropping up everywhere. Installation of such energy farms does involve a certain

amount of habitat destruction. Wind farms may represent a threat to bats and both migratory and resident birds, which may be vulnerable to injury and death from wind turbine blades. Consequently, the sitting of future wind facilities is critical and needs to ensure that thorough environmental impact assessments are undertaken in all cases.

Power lines can also cause high levels of mortality to birds, through electrocution and collision, particularly to storks and raptors. For example, electrocution is the commonest cause of non-natural death in the globally threatened Spanish imperial eagle, *Aquila adalberti* (Gonzalez 1996). The design of the electrical poles significantly affects the probability of electrocution.

Pollution

The main sources of pollution in the Mediterranean Basin are sewage and wastewater from urban sources (often untreated or insufficiently treated), excessive pesticide and nutrient additives from agricultural activity (principally nitrogen and phosphorus, and pesticides, fungicides and herbicides from non-point sources), discharges and accidents involving heavy metals and oils from industrial facilities (also oil from marine sources that washes ashore), toxic chemicals from mining operations, and dumping of solid waste from a variety of sources in wetlands, drainage channels, rivers and other wetlands.

The rapid and widespread intensification of agriculture in the hotspot in the last 30 years has been associated with a massive increase in the use of inorganic fertilizers, resulting in a widespread run-off. Nutrient pollution from sewage disposal is also a major problem, though not as great as riverine discharge of nutrients from agriculture. However, with the growth in the population, pollutants directly discharged into the sea are likely to reach higher concentrations. In many countries, particularly in the south, only primary treatment is given to swage.

The Mediterranean Sea is extremely susceptible to ship-related pollution — 30 percent of international maritime freight traffic and some 20 to 25 percent of oil maritime transport transit through the Mediterranean Basin. Between 1977 and 2000 there were 156 accidents followed by oil spills. Significant progress has been achieved though in combating marine pollution from ships: operational pollution from hydrocarbons has decreased by a factor of 20 between 1985 and 2000, through stronger regulation, mainly the obligation to use separate ballast tanks. Emptying ballast waters into the sea is illegal, and yet this pollution is estimated at 100,000 to 150,000 tons per year (Plan Bleu 2006).

Over 80 percent of landfills are uncontrolled in the South and East, and waste production, at a current average of 282 kg per capita and per year versus 566 kilograms in the North, could reach 600 kilograms per capita by 2025. Total volumes of produced waste could almost triple in the south and double in the north by 2025 (Plan Blue 2006). Pollution is also recognized as having significant socioeconomic impacts in the region, including on human health.

The Mediterranean Action Plan (MAP) has a protocol on pollution from land-based sources, and a strategic action plan to combat pollution adopted in 1997, with further national plans. The EU has also strengthened its legal framework and set ambitious objectives for the protection of water resources. The water framework directive aims at improving the state of coastal waters by 2015. Yet, 60 percent of urban wastewater is still discharged into the sea without any treatment and considerable differences exist between EU member countries, which benefit from structural aids, and the developing Southern and Eastern countries.

Natural Disasters

Natural disasters and extreme climatic events (forest fires, drought and storms) have always happened in the Mediterranean Basin, but the frequency of these is expected to increase as a result of climate change. In the last decade droughts have been severe in several countries such as Morocco, Syria and Cape Verde. Earthquakes in Al Hoceima (Morocco 2004), Algiers and Boumerdes (Algeria 2003), İzmit (Turkey 1999, 17,200 fatalities), and big floods (Bab el-Oued, Algiers, 2001) and forest fires (Spain, France, Italy), marked the decade.

The Mediterranean Basin is one of the most fire prone regions of the world and has a history of terrible forest fires devastating large areas. Climate change models indicate that the Mediterranean Basin will experience decreasing rainfall and increasing temperatures (Bates *et al.* 2008), which suggests that forest fires will be more frequent and impacting. Forest fire destroys or degrades forest cover, and this in turn accelerates landslips on steep hillsides, flooding and soil erosion.

To a certain extent, Mediterranean ecosystems are adapted to naturally occurring fires resulting from lightening strikes or volcanic activity. Natural fires have been a driving force for evolutionary change. In fact many species of Mediterranean plants depend on the forest fires, as they have evolved with fire, and are fire-dependent. Consequently, fire is not only a threat in the region, but a critically important natural process in some systems and an important land management tool.

However, the loss, fragmentation and degradation of natural habitats in the Mediterranean Basin, especially in the last 50 years, has reduced the resilience of the region's remaining biodiversity to survive forest fires, with species sometimes reduced to small and often isolated populations (many threatened species), which may lose virtually all of their ranging area. The nature fire-return interval has decreased dramatically in the last century and may now be as little as five years in some areas (Trabaud and Prodon 1992), thus blocking successional processes, with often one or few shrub species dominating the landscape (Blondel and Aronson 1995).

Furthermore, 98 percent of fires in the Mediterranean Basin are started by man (Velez 1990), either intentionally or accidentally. Frequent large fires are partly due to the widespread abandonment of traditional agriculture, grazing and forestry, which can lead to the growth of extensive areas of dense shrubland that is very susceptible to fire. Illegal and often uncontrolled burning is still used to produce fresh growth of vegetation for livestock grazing in some Mediterranean Basin countries. It is estimated that 1 percent to 2.5 percent of forested Mediterranean areas in the EU burn annually (Hermeline and Rey 1994).

Other possible natural threat comes from volcanoes - there are two active or potentially active volcanoes in Italy. In the past, violent eruptions have been responsible for the extinction species. Following a major eruption, the vegetation takes several decades to return to an appearance of normality. Interestingly, the vegetation close to permanent active fumaroles and sulphur springs is specialized and can be limited to a few sites.

Invasive Alien Species (IAS)

IAS are exotic, introduced (deliberately or accidentally) species which become established in natural or semi-natural habitats, and change the respective ecosystems and threaten the native species. IAS particularly threaten islands ecosystems, which are very rich in endemic

species, often with small, isolated populations, that due to the island environment free of predators and competitors have lost defensive behaviours — so this threat is probably the biggest on the Macaronesian sub-region within the hotspot, and on some Mediterranean islands.

The number of IAS introduced in the Mediterranean Basin has been growing — as an example, you can see below the rate of evolution of the rate of detection of exotic marine species in the Mediterranean Sea. Nearly 500 non-indigenous marine species have now been introduced (Plan Bleu 2006).

The problem is not new. Romans extensively transported and introduced animals across Europe more than 2,000 years ago, including the rabbit *Oryctolagus cunicula,* introduced from its native Iberia into most other countries and regions, and the civet *Genetta genetta*, introduced from North Africa into Iberia. But in the last few decades the spread of IAS has been facilitated by the rampant globalisation (especially the booming cross border trade on fresh food and living plants and animals, the increase in tourism and also the ever more complex and widespread transport links). In one specific sector, the recent expansion and development of the aquaculture industry around the Mediterranean has also offered opportunities for the introduction and spread of IAS.

Some of the most damaging IAS include feral cats, rodents, feral goats (usually introduced on islands island to maintain populations for future culling), marine species that have traveled north through the canal de Suez, and many invasive plants. Introduced fungus are also causing havoc among some native tress, namely some root fungus that are casing significant declines on Mediterranean oaks (*Quercus ilex* and *Quercus suber*) in the western part of the region, namely Spain and Italy (Brasier 1992).

While the catastrophic impact of invasive terrestrial vertebrates on islands is well established, for most other IAS there have been no experimental studies to verify their exact impacts — notably on the under-sampled marine environment.

Major pathways for the introduction of IAS include trade in agricultural products, the pet and aquarium trades, ill-conceived biological control schemes, agricultural, forestry and aquaculture development projects, and horticulture (partly fuelled by the tourism industry that needs plants for their gold courses, hotels and landscaped gardens). The latter is of particular concern in Macaronesia, where some of the worst invasive plants were introduced for gardens or botanical parks.

Biosecurity at the borders is relatively lax, and legislation often inadequate, so in many regions there is a need for proactive engagement with several stakeholders to agree measures to reduce the risk of introduction.

It is therefore important to establish and/or participate in regional IAS networks, develop national and regional policies and strategies, promote training and capacity building within local management agencies, improve regulatory and legislative frameworks, and link local land managers and conservationists with the international community that has the expertise and resources to implement on the ground IAS eradications and/or control.

Human Disturbance

The increase in the human population in the region, spread of agriculture and urban and tourism developments means that there are now few relatively undisturbed natural areas outside of protected areas and inaccessible mountain regions that are not subject to some form of human disturbance. Even within protected areas the growth in the numbers of visitors in recent years has led to degradation of vegetation and disturbance of fauna, due to carrying capacities being exceeded. Some groups of animals and plants are known to be particularly vulnerable, notably at breeding sites, such as nesting seabirds, and the iconic Mediterranean Monk Seal (M*onachus monachus*).

Disturbance can cause temporary disruption of the normal activities of birds (for example, feeding and roosting), alter their daily rhythms, increase escape-flight distances, etc. Thus animals may starve as a consequence of reduced food intake and/or increased energy expenditure. Disturbance may also disrupt pair bonds and other social structures, and during the breeding periods may expose eggs and young to increased risk of predation or temperature stress.

Bycatch

Many Mediterranean marine species are affected by accidental capture in fishing gear, also called bycatch. This is considered a major problem for sharks, rays, dolphins, marine turtles and seabirds. All shark species are considered to be threatened by bycatch (Cavanagh and Gibson 2007).

Root Causes of Threats

The underlying causes of the threats outlined above are often deep rooted and complex. Many have their origins in regional and global economic trends, on-going demographic changes and the socio-political history of the region. They may be becoming further compounded by the unpredictable impacts of climate change.

Principal among these underlying root causes are increasing population, economic growth, increasing material consumption and inequitable access to resources, policies and incentives that damage the environment, and undervaluation of ecosystem services. All these drivers can be either exacerbated or mitigated by public policies and institutional arrangements, at national, regional and international levels.

When presenting trends in the Mediterranean Basin, a distinction will always need to be made between Northern Mediterranean Basin countries, which include EU countries spreading from Spain to Greece as well as the two insular states (Cyprus and Malta), as well as the European Balkan countries, and the poorer, less developed, generally drier Southern and Eastern Mediterranean countries, which include countries and territories from Morocco to Turkey.

Population Growth and Movements

At a fundamental level, many trends affecting biodiversity and ecosystems in the Mediterranean Basin are a reflection of an ever-increasing number of people. All countries are also witnessing rapid rates of urbanization and migration from rural to urban areas, resulting in increased demands for natural resources, particularly for water and energy, and land for building.

The urban population in all riparian countries together grew from 94 million in 1950 (44 percent of total population) to 274 million in 2000 (64 percent). Spectacular urban development takes place in the south and east, where 74 percent of population would become urban by 2025.

Urban dynamics are quite different on north and south rims. In the north, population and employment are scattered, and population is dropping in town centers. Urban sprawl has major consequences in terms of land-sealing and increased motorized travel distances. Losses of agricultural land are considerable, and reach 276 hectares per year in Padua-Venice-Mestre, for example. On the south and east, the very high urban growth rates cannot be equated with similar economic development levels, and technical and financial capacities of cities are limited. With the expansion of urban areas, the proliferation of informal housing (between 30 and 60 percent of total) and the risks of instability have been accentuated.

In the north, agricultural population has collapsed, with a 74 percent reduction in 40 years. After an important phase of rural migration, which accentuated coastal over-development, a rural revival has been recorded in many developed countries. The development of quality products, agrifood industry, tourism and the residential economy, has lead to a diversifying rural economy.

In the south and east, despite rural exodus and emigration, agricultural populations have increased 10 million in 40 years to reach 71 million in 2000. Nevertheless, differences with agricultural productivity in the North have been deepened. Non-agricultural employment is still scarce. Agriculture still plays a decisive social and economic role but is characterized by duality, where modern farming coexists with a mass of subsistence small farms, which are undergoing fragmentation. Rural poverty and disparities with cities are high, as shown by some indicators (population living under the poverty line, access to basic services, schooling and illiteracy rates). Considerable pressures are exerted on natural resources causing deforestation, desertification, rapid silting-up of reservoirs, altered stream flows and irreversible biodiversity losses. Desertification affects 80 percent of arid and dry areas; pasturelands and rain-fed croplands are the most affected but irrigated land is also under threat. In spite of very restrictive EU migratory policies, migratory flows remain significant and most unlikely to dry up. It is estimated that 10 million foreigners, 5 million of whom are from other Mediterranean Basin countries, are living in the Mediterranean Basin countries.

Rapid Economic Growth, Increasing Consumption and Inequitable Access to Resources

Economic growth and ever-increasing consumption are one the main underlying causes of habitat loss and degradation, and overexploitation of plant and animal species. All countries in the region are, to varying degrees, pursuing market-oriented economic policies and export-led development strategies, on the promise of strong economic growth. This is especially notably in three critical sectors for biodiversity conservation: forestry, fisheries and agriculture.

On both rims, economic growth has been lower than in other comparable regions worldwide. One reason often described is the ever prevalent ‘slack’ and ‘mining’ features of the Mediterranean economy: revenue from land as a result of the residential economy and some farming practices, revenues from oil and gas, revenue from water abstraction from non-renewable resources, and the appeal of short-term speculative or commercial gains without any real strategy for developing goods and services. The economy lacks of innovation and

remains little dynamic. Public and private R&D expenditure and ties between business and training and research institutions remain limited. Brain drain is high and civil societies are not sufficiently active in many countries.

Economic growth has obviously helped push poverty back, and promote human well being. Mediterranean Basin countries in general have a "Wellbeing Index" (built by aggregating 87 environmental, economic and social indicators) greater than the world's average. However, if we look at the sustainability of this growth, the situation is not so rosy.

Mediterranean Basin countries do not do so well in the Environmental Sustainability Index (ESI). ESI is a measure of overall progress towards environmental sustainability and permits cross-national comparisons of environmental progress in a systematic and quantitative fashion. It represents a first step towards a more analytically driven approach to environmental decision-making. Among the 20 indicators that comprise the ESI are factors such as urban air quality, water, and the strength of environmental regulation. Box 1 represents the ESI index for the different Mediterranean Basin countries, with the top end (Finland) and bottom end (North Korea) as a reference.

Box 1. 2005 ESI Ranking and Optimal Rank for Each Country

The best rank represents the "best score" that the different countries have achieved in previous years, and does not necessarily mean that the efforts at the national level in individual countries have decreased, but also hints at the improvements undertaken within other countries evaluated. The methodology and detailed findings indicate that Mediterranean countries with lower scores are more vulnerable to environmental risks as well as lack all the necessary institutional tools to respond to environmental threats.

Finland	1	1
Croatia	19	16
Albania	24	21
Slovenia	29	19
France	36	22
Portugal	37	23
Tunisia	55	34
Bosnia and Herzegovina	61	48
Israel	62	30
Greece	67	44
Italy	69	40
Spain	76	44
Jordan	84	55
Serbia and Montenegro	89	75
Turkey	91	66
Algeria	96	57
Morocco	105	65
Egypt	115	87
Syria	117	75
Libya	126	100
Lebanon	129	85
North Korea	146	144

Policies and Incentives that Damage the Environment

Generally, governments in the Mediterranean Basin have followed the dominant (non sustainable) global economic models, through policies based on export-orientated development, and, in recent years, provision of services, especially in the tourism and financial sectors. These development policies have failed to integrate conservation and resource management considerations in a systematic and participatory way.

Associated with these policies have been economic incentives/subsidies, grants and financial arrangements to favoured sectors, such as reduced tariffs on water and electricity, tax exemptions on investments and exports, subsidized prices on imported fertilizers and pesticides, and construction of transport and communication infrastructure to facilitate development, that have encouraged unsustainable natural resource extraction and environmental degradation. For instance, government policy in many Mediterranean Basin countries has been to expand tourism as a means of generating jobs and foreign exchange, and external investment has been actively pursued with developers frequently given favourable terms. Subsidies within the forestry and agriculture sectors have promoted increased production of a number of products linked to forest loss, including forest products and cash crops, and promoted agricultural intensification and the large-scale use of agrochemicals.

Subsidies for tree planting have led to the afforestation of grasslands and other natural non-forest habitats. Such perverse incentives may be direct, for example tax write-offs, grants or low-interests loans, or indirect, for example low land rents, low labour costs, construction of "free" access roads and other infrastructure, or weak environmental protection regulations.

Apart from national policies, the policies of some of the major donors (including the EU) have been criticized for encouraging the multiplication of development projects without taking into account their impact on biodiversity.

Undervaluation of Ecosystem Services

Although biodiversity has important cultural, spiritual, recreational, and personal values, government policies frequently recognize natural resources only for their market value, particularly in developing countries, where the environment, including biodiversity, is severely undervalued. Indeed, the fact that quality of life is dependent upon a complex range of ecological functions that provide clean air, pure water, fertile soils and other ecosystem services, is seldom even considered. The undervaluation of ecological services may be partly because dispersed services, such as carbon sequestration, although important globally, are of less significance to national governments, and partly because immediate gains from exploiting a natural resource are frequently more attractive to decision makers than long-term, theoretical benefits from its maintenance. Furthermore, many of the most important values of biodiversity may simply be unquantifiable.

Barriers to Biodiversity Conservation

There are a number of constraints that need to be overcome to address the environmental threats outlined above and achieve more effective conservation of biodiversity and ecosystem services. The main ones are:

- Poor land-use planning.
- Limited capacity and resources for biodiversity conservation.

- Lack of awareness of biodiversity and ecosystem services (particularly their value) among decision makers and the general public.
- Lack of political support, vested interests, corruption and political process.
- Weak and ineffective policy and legislation to support biodiversity conservation.
- Inadequate public participation in decision-making processes.

Poor land use planning: Because many environmental problems and risks either derive from or are exacerbated by the pattern of human land use, the quality of urban and rural planning is often of critical importance for achieving environmental sustainability. On the Mediterranean Basin, with dense coastal populations, inappropriate land use can have much more significant impacts on the environment than in other regions, and there is less room for error in land use planning and management.

Unfortunately, land use planning for agriculture, tourism, industry, forestry and urban development is still largely confined to their own sectors in the region with little consideration of the impacts of these plans on other economic sectors or the environment (Strategic Environmental Assessments [SEA] are still not routinely undertaken in the Mediterranean Basin (with the exception of the EU countries) and environmental costs of development are not generally incorporated into national accounts, which only furthers environmental degradation and biodiversity loss).

Integrated land-use plans are uncommon in the Mediterranean Basin. Generally, land-use planning has been implemented at very small scales, usually for individual projects or municipalities. In addition, although the locations of many key biodiversity and ecosystem services sites have been identified through surveys and mapping exercises in recent years, such as Important Bird Areas (by BirdLife International), this information is still not fully integrated into decision-making in planning processes, consequently ecologically important sites are still targeted for inappropriate developments.

Limited capacity and resources for biodiversity conservation: Although there has been significant progress generally in building institutional and individual capacity (in terms of staffing and financial resources) in biodiversity conservation, the lack of adequate capacity remains, and continues to be recognized, as a major barrier to achieving effective environmental management and sustainable development. In some countries, the need for capacity building within the ministries of environment around the region is an issue.

The size of government environmental departments, in terms of manpower and financial resources allocated to them, is usually not enough to effectively manage the environmental issues they face, and skilled, trained and experienced staff are often overburdened, which means that issues may not receive the attention they need (particularly the case in the review of EIAs which often receive little more than cursory reviews by overburdened government staff). This lack of capacity reflects low awareness and understanding of importance of environment (ecosystem services) among politicians and decision-makers.

Some regional and international NGOs, notably the RSPB and BirdLife International, have targeted institutional capacity building as a major focus for their work in the Hotspot, but much of the capacity building in the NGO community is done through specific project funding as core funds are usually very limited in most NGOs.

Specific areas identified where capacity needs to be built (staffing and/or training) include:

- Development, management and administration of conservation programs and projects.
- Basic research skills and data and information management.
- Development of species management plans.
- Biodiversity monitoring and assessment of threats (including development of indicators for these).
- Procedures, preparation and assessment of EIAs and SEAs.
- Conservation policy development and mainstreaming biodiversity conservation and environmental policy into other sector policy and planning processes.
- Relationship between biodiversity, ecosystem services, livelihoods and poverty.
- Environmental economics and valuation and natural resource accounting tools and their integration into annual budgets, work plans and into national policy and planning processes.
- Protected area management (despite significant and continuing investment from international groups and donors).

Unfortunately, due to the marginalization of the environment sector compared with other sectors such as tourism, and the global crisis, the outlook for additional government investment in capacity building for biodiversity conservation and sustainable environmental management is not encouraging, and there are concerns about capacity to deal with emerging concerns, such as alternative energies, climate change, and environment and trade. It is likely that capacity building will need to continue to be a key focus for external (donor- and international NGO-) investment in the Mediterranean Basin for the foreseeable future.

Lack of awareness and understanding of importance of biodiversity and ecosystem services: As well as lack of knowledge, there is a poor awareness and limited understanding of the ecological, economic, social and cultural values of biodiversity, costs of its loss and its critical importance to human health and well-being among decision-makers (ministers, politicians, political advisors, economists, land-use planners, etc) and the general public in the Mediterranean.

Even in developed countries of the European Mediterranean the level of public awareness on local biodiversity is relatively low. Generally government budgets for environmental awareness-raising are inadequate. Some governments are taking a longer-term strategy with an emphasis on improving coverage of environmental issues in the national school curriculum. These initiatives will, in the long run, increase the proportion of the population with environmental awareness and interest, leading to a greater call for environmental issues to be properly addressed by politicians and other decision-makers, and an increase in the overall pool of individuals with the technical skills required for biodiversity conservation.

Lack of political support, vested interests, corruption and political process: Although there have been a number of important regional environmental agreements commitment among high-level decision makers is still not translated into the necessary political support for biodiversity conservation. Short-term, and frequently shifting, national economic and political interests often take precedence over long-term local social and environmental impacts.

This lack of political will is evidenced by continuing permission for destructive developments in ecologically sensitive areas, usually the result of strong lobbying by vested

economic interests, especially the industrialists and land developers, who argue that environmental protection costs and safeguards will reduce international competitiveness.

These positions are not corrected because there is generally little public pressure for national governments to fulfil their environmental promises as the public does not see the environment as a major political issue and other issues — jobs, the economy, health, etc. — are viewed as more important. This is partly a reflection of the absence of widespread public appreciation of the linkage between environmental degradation and the social and economic costs, and the separation between those groups who damage the environment (usually developers, the rich) and those who pay the price (usually the poorer sectors of society, but ultimately everyone). Consequently NGOs have taken on a critical role of holding governments to account for the environmental consequences of their development policies.

Weak and ineffective policy and legislation to support biodiversity conservation: Even though biodiversity conservation legislation has improved markedly in most countries (it is very good the EU Mediterranean countries with the EU Birds and Habitats Directive), and there has been good progress on updating and harmonizing environmental policy and legislation in recent years (due in part to national obligations under the EU), this process is still incomplete: many environmental policies have basically remained top-down, corrective and regulatory instead of participatory, integrated and anticipatory, and have not been allocated the appropriate resources or interministerial support.

There is currently no existing framework in the Mediterranean Basin to allow States to work together or inform each other on intentions for extension of jurisdiction beyond the territorial sea. Putting in place such a framework of dialogue would reinforce the stability of the international relations between the States of the region and would also contribute to improving the systems of environmental governance of the Mediterranean Basin, in particular of its high seas.

This situation is exacerbated by a lack of institutional mechanisms for coordination and collaboration between the numerous players and programs. Overall, ‘environment’ is still largely seen as a niche issue and chiefly the responsibility of the environmental agencies in government. This is reflected in the lack of integration of environmental objectives into broader sector policies and programs, which is partly a reflection of poor understanding of the linkages between biodiversity and ecosystem services and local livelihoods, employment and national economies among decision makers in non-environment sectors.

This gives rise to politically weak and under-funded environment agencies and biodiversity conservation policy still being seen as incompatible with, and restricting ‘development’ policy, despite the presence of national sustainable development strategies in many countries that highlight the importance of biodiversity. However, attitudes towards the environment at senior level do seem to be changing, due to increasing awareness and international profile of the impact of climate change.

Inadequate public participation in decision-making processes: National and local governance frameworks for environmental planning and management vary greatly from country to country, but governments are generally highly centralized with often high levels of state control, especially in the south and east. Although most recent national policy frameworks include provisions for private sector and public stakeholder participation in environment and development decision-making, and stakeholder participation is promoted under many regional and international initiatives in which Mediterranean Basin governments

participate, government consultation processes have been criticized for being largely cosmetic in many countries, with involvement of public stakeholders only at the end of processes when decisions have essentially already been made such as with EIAs.

Consequently, there is a clear need to improve civil society participation in environmental decisionmaking and governance. The benefits of public involvement in decisionmaking are well documented. Nevertheless, many governments still seem reluctant to include communities and NGOs in meaningful decisionmaking. NGOs in particular are frequently viewed as adversaries/critics rather than potential partners, although NGOs in some countries have begun to be included in policy development processes and consultations.

ASSESSMENT OF CURRENT INVESTMENTS

Introduction

This section summarizes the funding sources for environmental conservation (focused on biodiversity) from aid agencies, multilateral institutions, national government budgets, charities and foundations and other private donors. The amounts provided here involve important donors and investors in conservation: for example, the multilateral agencies (GEF, UNDP, UNEP, EB, European Commission, European Economic Area Grants, some international conventions) and the bilateral donors (governmental aid agencies). Volunteer conservation efforts are also important, but they are rarely calculated in monetary terms, thus they could not be included in this section.

Major Sources of Investment

Multilateral donors

Global Environment Facility (GEF)

The most important multilateral donor throughout the Mediterranean is the Global Environmental Facility (GEF), working through UNDP, the World Bank and UNEP as implementing agencies for medium and large-sized projects (GEF 2008). Since 1991 the GEF Investment in the Mediterranean has included investments in the following focal areas: biodiversity, climate change, international waters, land degradation, persistent organic polutants and multiple focal areas. The total GEF investment amounts to more than $ 447 million. Of this total 26.3 percent has been devoted to biodiversity projects.

Between 1995 and 2009 GEF, through these implementing agencies, supported almost 70 projects related to biodiversity conservation totaling $175.2 million in GEF grants, not including national co-finance (see Table 14 for summary of grants and Appendix 5 for list of granted projects). With a few exceptions (such as BirdLife International) this aid has been provided to national governments of the Balkan States, North Africa and Middle East regions and Cape Verde, mainly to prepare and implement their national strategies on biodiversity, to improve the protected areas management and the conservation of coastal and wetland ecosystems.

Table 13. Distribution of Allocations from GEF's Medium and Large-Sized Projects on Biodiversity in the Mediterranean Basin Hotspot Sub-regions for the Period 1999-2009
Amounts only consider the GEF grant, not including national co-financing some projects have.

	GEF (UNDP)	GEF (WB)	GEF (UNEP)	GEF (IFAD)
Middle East	$29,460,350	$25,500,000	$6,715,300	$0
North Africa	$44,392,972	$31,548,950	$5,392,100	$2,647,272
Macaronesia	$7,561,251	$0	$0	$0
Northern Mediterranean	$0	$0	$0	$0
Balkan States	$10,597,404	$11,386,500	$0	$0
TOTAL	**$92,011,977**	**$68,435,450**	**$12,107,400**	**$2,647,272**

The GEF Small Grants Program is a successful program funded by GEF that is implemented by UNDP. Regarding biodiversity conservation, it has provided support for 564 projects in the Mediterranean Basin countries (Table 14) with relevant actions on species and sites protection, restoration, dissemination and awareness carried out by local NGOs.

Table 14. GEF Small Grant Program Implementation in the Mediterranean Basin Hotspot Countries
Indicates the number of projects approved for biodiversity conservation from 1993 to 2009 and the amount granted by GEF.

	Nº projects	Grant amount
Middle East	298	$7,916,961
North Africa	149	$4,262,713
Macaronesia	---	$0
Northern Mediterranean	---	$0
Balkan States	117	$1,409,510
TOTAL	**564**	**$13,589,184**

EU and EEA and Norway Grants

The EU makes its contribution to the environment in the Mediterranean Basin through a number of funding mechanisms and instruments, with LIFE funding being the most clearly focused on biodiversity conservation (Table 15).

Table 15. Summary of the Most Important EU Financial Instruments and Their Investments in Environmental and Biodiversity Initiatives for Each Sub-region

Financial instrument	Period	Macaronesia	Northern Mediterranean	North Africa	Middle East	Balkan States	Total (million$)
LIFE-Nature	1992-2006	199.6				1.0	**200.6**
LIFE+ Nature and Biodiversity	2007-2009		26.7				**26.7**
LIFE Third Countries	1996-2006		1.2	0.6	8.6	3.8	**14.2**

LIFE is the EU's financial instrument supporting environmental and nature conservation projects throughout the EU, as well as in some candidate, accessing and neighbouring countries. Up to now, LIFE has co-financed 3,104 projects, contributing approximately €2.2

billion to the protection of the environment. It has two phases, the first one from 1992 to 2006 was called the LIFE Fund, and a second one starting in 2007, is the LIFE + Fund.

Until 2006, the LIFE Fund had four components: LIFE Nature, LIFE Environment, LIFE Coop (cooperation amongst other LIFE projects) and LIFE Third countries, with LIFE Nature being the most significant for biodiversity conservation. Between 1992 and 2006, LIFE Nature channeled more than €600 million in 560 projects in EU Mediterranean countries for the implementation of the Birds and Habitats Directives, with a significant contribution towards the implementation of the Natura 2000 network, habitat restoration, species conservation, awareness and demonstration initiatives (Table 16). As Southern EU countries hold a higher richness of biodiversity compared to the Central and Northern EU countries, in the period 1992-2006 they have received 72 percent of the approved projects and 95 percent of the LIFE-Nature funds.

Table 16. Figures in Euros on the Number of Projects and LIFE Funds Dedicated to Each Country
Includes details on the Nature Fund, both in the whole country and in the Mediterranean Basin Hotspot, 1992-2006.

	LIFE Funds (1992-2006) in euros			LIFE-Nature (1992-2006) in euros				
	In the country			In the country			In the Mediterranean Basin Hotspot	
Country	Nº projects	Total budget	EU funding	Nº projects	Total budget	EU financing	Nº projects	Total budget
Cyprus	4	1,563,614	1,089,706	1	1,530,766	2,551,277	1	1,530,766
France	252	474,300,000	116,400,000	89	125,400,000	51,000,000	30	30,678,652
Greece	145	169,600,000	72,500,000	46	58,500,000	33,100,000	46	58,500,000
Italy	419	305,100,000	106,800,000	171	136,500,000	71,400,000	83	-
Malta	9	-	-	1	919,733	459,866	1	919,733
Portugal	118	48,300,000	22,900,000	53	50,500,000	30,300,000	45	42,310,641
Spain	387	281,300,000	72,100,000	188	226,800,000	98,600,000	146	-
Slovenia	16	1,800,000	600,000	11	10,500,000	6,200,000	1	714,440
Total	**1,350**	**1,281,963,614**	**392,389,706**	**560**	**610,650,499**	**293,611,143**	**353**	**134,654,232**

*****_Projects can be found at http://ec.europa.eu/environment/life/publications/lifepublications/evaluation/index.htm_

Between 1992 and 2006, LIFE Environment co-financed 790 projects, investing almost €1 billion, in the Mediterranean Basin countries in the EU (73 percent of 1,076 projects for the EU as a whole) with a focus on climate change, air and water quality, forests and the urban environment.

The LIFE Third countries fund for EU neighboring countries was also a significant source of funding for biodiversity and environment projects in the Mediterranean Basin. Almost 90 percent of LIFE Third countries projects between 1992 and 2006 were in Mediterranean Basin countries, as the EU considers them priority neighbours. In the period 1992-2006 this fund financed 157 projects in these countries (Table 17), with a total budget of €78.4 million, of which 37 were biodiversity conservation projects, with budgets totaling €15.2 million (or around 20 percent of the total investment).

Table 17. Total Number of Third Country LIFE Projects in the Mediterranean Basin Hotspot with Details of Those that Included Biodiversity Conservation Activities

	Total project cost	No of projects (1996-2006)	Biodiversity projects	Biodiversity projects
Palestinian territories	4,108,180	7	2	788,050 €
Israel	5,535,888	10	4	1,175,189 €
Jordan	2,634,190	5	0	-
Lebanon	4,269,342	8	4	1,257,941 €
Syria	1,506,682	5	1	382,000€
Turkey	12,011,688	25	6	2,160,859 €
Algeria	1,032,999	3	2	316,797 €
Egypt	4,388,309	6	0	-
Morocco	5,768,495	12	0	-
Tunisia	5,627,212	9	1	78,016 €
Cyprus	5,989,051	13	2	301,907 €
Malta	2,559,685	6	2	491,770 €
Albania	3,575,285	7	2	1,144,850 €
Bosnia and Herzegovina	4,458,608	10	2	332,000 €
Croatia	8,687,240	14	2	1,064,735 €
Various countries	10,858,534	17	7	5,251,320 €
TOTAL	**78,403,104 €**	**157**	**37**	**15,191,161 € (70% EU co-financed)**

The current phase of the program, LIFE+ (2007-2013), has a total EU budget of €2,143 million, with three components available: Nature and Biodiversity, Environment Policy and Governance, and Information and Communication. Since 2007, the EU has already approved 24 LIFE+ Nature and Biodiversity projects in the Mediterranean Basin Hotspot, with total investment of more than €46 million (58 percent co-financed with LIFE+ funds).

The Directorate General for the Environment of the European Commission annually makes grants to a number of NGOs and international organizations through different types of calls for proposal: a) Operating grants for environmental protection, Europe-wide NGOs (around 30 NGOs receive grants yearly for a total of $6 million such as BirdLife International, WWF, Eurosite, European Union for Coastal Conservation or Climate Action Network Europe); b) Direct grants to support international entities such as the Council of Europe (for the Pan-European Ecological Network), the UNEP (Danube Basin River, ecosystem approach in the Mediterranean Sea, 2010 indicators and meetings and training workshops), IUCN (Countdown 2010), RSPB (biodiversity indicators), Climate Action Network, CITES convention, for a total of $20 million. These grants are dedicated to European wide programs and NGOs, and it is not possible to extract the part of these amounts invested specifically in the Mediterranean Hotspot.

Other EU policies not directly related to biodiversity issues but with implications for conservation are the following:

Europe Aid is also active in protecting biodiversity. For the past 20 years, the Commission has been an important donor for protected area conservation, especially in Africa. Commission projects and programs aim to improve wildlife management techniques and refine the use of wildlife for ranching, hunting, sport, etc. It also encourages wild product development and use; and supports efforts to improve the management of protected areas

and to develop conservation techniques. The Commission provides support for integrated coastal zone area for biodiversity conservation and monitoring of coastal resources (including mapping key areas in collaboration with the EU's Joint Research Centre). One of the financial instruments of Europe Aid is the Instrument for pre-accession Assistance (IPA), providing focussed pre-accession financial aid to the candidate countries and to the potential candidates, including some relating to the environment.

The **European Territorial Co-operation objective** (formerly the INTERREG Community Initiative) is founded with the European Regional Development Fund (ERDF). This objective is one of the pillars of the EU Cohesion and Regional Policy, and contributes to inter-regional cooperation projects to strengthen the social and economic cohesion and integration. For the period 2002-2006 the Interreg IIIc invested €4.8 billion, €26 million for projects with some biodiversity conservation component (coastal and marine sustainable development, ecotourism or forest fires management). For the current period 2007-2013 the European Territorial Co-operation objective has three programs: a) Cross-Border cooperation programs implementing common development strategies on a wide range of issues, which include improving joint management of natural resources and biodiversity (12 of these programs overlapping with the Mediterranean Basin Hotspot, with a total cost of €440 million); b) Transnational cooperation programs within wider European regions (with a Mediterranean Program that has already got approved 50 projects, being three of them relevant for biodiversity — rivers, pollution, tourism — with a cost of €3.7 million); c) Interregional cooperation (INTERREG IVC) to improve regional development policies and tools through networking and experience sharing among all EU countries, addressing innovation and the knowledge economy and environment and risk prevention. One of the two main priorities of Interreg IVC is environment and risk prevention (climate change, protecting nature and biodiversity, quality of environment and management of natural resources and waste), with €125.3 million for the period 2007-2013.

The European Neighbourhood Policy (ENP), had until 2006 three geographical programs (TACIS-for the Eastern countries and Russia, MEDA-for the Mediterranean Basin countries and CARDS for Western Balkans). MEDA I (1996-1999) and MEDA II (2000-2006), addressing governance, development of media, employment, public administration reform, fiscal system, health, education, development of infrastructures, water and waste management, environmental pollution and sustainable development (promote energy efficiency and renewable energy sources). In the last years, the African continent has become a higher priority in the EU foreign affairs agenda, in terms of development cooperation, as a way to decrease the massive migration from some African countries (Morocco, Senegal, Ghana) to Europe. In the current period 2007-2013 the financial instrument is the ENPI (European Neighbourhood and Partnership Instrument) with a total budget of €12 billion for the seven-year period. Around 10 percent is reserved for specific areas of joint activity, cross-border cooperation and specific initiatives like the Neighbourhood Investment Facility (NIF), including a multilateral cross-border cooperation called 'Mediterranean Sea Basin Program' with one of its four priorities being the promotion of environmental sustainability at basin level (with an allocation of €51,561,376 for the period) and will co-finance 90 percent of submitted projects for reduction of marine pollution, protected areas and biodiversity conservation, networking and energy efficiency, amongst others. Main beneficiaries of the projects include regional and local public authorities, NGOs, associations, development agencies, universities and research institutes, as well as private actors. Other Sea Crossing Programs are Spain/Morocco North (total funding 156.7 M€), Atlantic Program (€32 million) and Italy/Tunisia (€25.2 million).

Cohesion funds: funds for member states with a GDP less than 90 percent of EU average. For 2007-2013 will support, within the Mediterranean Basin, Cyprus, Slovenia, Greece, Malta, and Portugal. It can also fund conservation projects.

Rural Development Programs: More than 50 percent of the population of the European Member countries live in rural landscapes that comprise 90 percent of the territory of the EU. Thus the Rural Development Programs aim to improve the competitiveness of the agricultural and forestry sector, improving the environment and the countryside, improving the quality of life in rural areas and encouraging diversification of the rural economy.

Framework Programs (FP7): Depending on the DG Research of the EC, it launches calls for research proposals for administration, research institutes and universities from EU Member States, candidate countries, EEA countries, Switzerland and Israel, up to €7 million/project. It has a priority theme on environment including Climate change, Conservation and sustainable management of natural and man-made resources and biodiversity and management of marine environments.

European Fisheries Fund: Its MARE grants co-finance some interesting initiatives such as "Indicators for sustainable development of aquaculture and guidelines for their use in the Mediterranean" or Marine Species Identification Guides and Catalogues (The State of World Fisheries and Aquaculture 2008), ICCAT activities or marine fisheries reserves management.

EEA and Norway Grants: The beneficiary countries are the 12 countries that have joined the EU since 2004 (Cyprus, Malta and Slovenia, amongst other non-Mediterranean) plus Greece, Spain and Portugal. In the five-year period 2004-2009, €1.3 billion was made available from Iceland, Liechtenstein and Norway. Negotiations on possible new grant schemes are currently ongoing between the donor states — Iceland, Liechtenstein and Norway — and the European Commission. EEA and the Norway Grants 2004-2009 granted a number of projects related to improve "Environment and sustainable development" in those countries: Oil spill response, ocean monitoring, Natura 2000, habitat restoration, etc. (Table 18).

Table 18. Amount of Grants to Mediterranean Basin Hotspot Countries from the EEA and Norway Grants in the Period 2004-2009

Countries	EEA and Norway Grants (2004-2009)
Spain	13,519,823€
Cyprus	1,196,082€
Greece	6,842,666€
Malta	1,435,728€
Portugal	4,438,950€
Slovenia	799,091€
TOTAL	**28,232,340€**

Conventions

The Ramsar Small Grants Fund (SGF) was established in 1990 as a mechanism to assist developing countries and those with economies in transition in implementing the

Convention and to support the conservation and wise use of wetland resources, with a strong human and social dimension. From 1991 to 2008 the Fund has provided a total of $6 million to 227 projects proposed by any agency, NGO or individual, from 108 countries, providing up to $32,000 per project (see Table 19 for 2008 and 2009 grants in the Mediterranean Basin Hotspot). Over this same period, 470 feasible projects were not supported due to lack of funds. The Fund relies exclusively upon the voluntary contributions from government agencies and national and international NGOs.

Table 19. Details of the Projects Granted by Ramsar Small Grant Fund in 2008 and 2009 in the Countries of the Mediterranean Basin Hotspot

Country	Applicant	Title	Total budget	Ramsar grant	Year
Jordan	Jordan Society for Sustainable Development	Designation of Aqaba Birds Observatory; designing a management plan for wise use.	$127,189	$32,442	2009
Turkey	WWF-Turkey	Developing a national action plan; preserving wetlands through communication, education, participation and awareness	$40,098	$35,200	2009
Turkey	Doğa Derneği	Effective management of the Turkish Ramsar sites	$52,990	$32,000	2008
Morocco	Groupe de Recherche pour la protection des Oiseaux au Maroc	National wetlands inventory; toward a sustainable monitoring of wetlands	$82,971	$35,200	2009
Albania	REC Albania	Bringing together all stakeholders of the Lake Skhodra region; national conference on the management and wise use of wetlands	$34,026	$30,110	2008
Bosnia and Herzegovina	Nature Park Hutovo Blato	Bird watching as a response to poaching	$41,745	$34,794	2009
Cape Verde	WWF Cape Verde	Maio Island: Protecting key wetlands	$36,426	$28,554	2008
		TOTAL	**$415,446**	**$228,299**	

The Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) has the economical support of the European Community, Belgium, Denmark, France, Germany, The Netherlands, Switzerland and United Kingdom. In addition, the GEF supports the African-Eurasian Flyways Project that started in July 2006, being executed by Wetlands International in close cooperation with BirdLife International focussed on capacity building, cooperative research and monitoring and communication activities. While many of the actions to be carried out in the new programming period (2009-2016) have to be undertaken and financed at national or local level (such as monitoring, implementing action plans, ringing, etc.), a budget has been allocated to provide small grants for national and local initiatives, and also for training and equipment supply.

Barcelona Convention and Bern Convention on Wildlife protection are also active in nature conservation in the Mediterranean Basin Hotspot. With their budget (provided by contracting members and some other donors) they finance the attendance of low-income countries representatives to the meetings and workshops and can also sub-contract to local NGOs or governments the execution of national activities.

Other Multilateral Funds

FAO apart from supporting the development of agriculture, fisheries and food availability and quality, it also supports a number of projects with biodiversity benefits, such as a responsible fisheries in the Adriatic Sea ($6.9 million) and Eastern Mediterranean ($2.6 million), forestry policy in Egypt ($200,000) and Lebanon ($2.6 million), or climate change risk management in Egypt ($100,000), among many other examples.

The African Development Fund also finances environment initiatives in Cape Verde, but in the last years no investments have been done in environmental conservation and natural resources management.

The eligible countries for the Arab Fund for Economic and Social Development (AFESD) include some of the countries of the Middle East and North Africa sub-regions, and receive grants for studies and research, institutional support and training, emergency programs, seminars and conferences. It also supports UNDP and other international Arab funds.

Bilateral Donors (Governmental Cooperation Agencies)

Developed countries that have signed the Rio conventions have committed themselves to assisting developing countries in the implementation of these conventions. All the governmental cooperation agencies have environmental priorities in their funds, including biodiversity, but they correspond to a very small part of the budget (ranging from 2.5 to 13 percent) compared to other development issues (health, human rights, infrastructures, etc.). In fact, although some of these cooperation agencies would like to provide larger support to environmental projects, in some countries, they do not receive enough applications on this issue. This can be due to the fact that development NGOs are not focused in nature conservation and environmental NGOs are not used to apply to cooperation funds. Furthermore, the number of biodiversity projects granted by these bilateral donors is even lower compared to other environmental priorities, such as reducing pollution, water and waste management. Some cooperation agencies are actively supporting national governments to increase their structural and technical capacities in biodiversity (protected areas, environmental assessment, etc.).

In the Mediterranean Basin Hotspot, the only governmental agency focused on funding biodiversity initiatives is the KNIP (Dutch Ministry of Agriculture, Nature and Food Quality), investing €4 million/year to stimulate NGOs to develop more nature conservation activities in their respective countries and to increase awareness of the public on nature conservation. Other bilateral agencies that have also supported biodiversity projects are the AECID (Spain), GTZ (Germany), AFD (France), Cooperazione Italiana allo Sviluppo (Italy), Hellenic Aid (Greece) and SIDA (Sweden).

Many countries have bilateral agreements with other governments of the region to provide a framework for the exchange of information and expertise in the fields of environmental protection, nature conservation or desertification. Implementation of the agreements takes different forms including exchange visits of professionals, workshops, research studies and joint projects on environmental problems of common interest. Other type of agreements is in the framework of debt-for-development swaps that could have environmental actions.

Gulf countries can also be contributors to conservation activities. For example the government of Qatar is investing in important bird area conservation through BirdLife, and Emirates Centre for Wildlife Propagation in Morocco is working on habitat restoration and fauna rehabilitation. The Mohamed bin Zayed (MBZ) Species Conservation Fund is a significant philanthropic endowment established to do provide targeted grants to individual species conservation initiatives; recognize leaders in the field of species conservation; and elevate the importance of species in the broader conservation debate.

The general features of each of the main governmental cooperation agencies active in the Mediterranean Basin Hotspot are the following:

Agence Française de Développement (AFD, France) invests in the Mediterranean and Middle East. Current biodiversity projects include the developing and protecting of the Ifrane cedar forest in Morocco (€9 million).

Agencia Española de Cooperación Internacional para el Desarrollo (AECID, Spain) co-finance environment projects in the Mediterranean Basin under its **'**Programa Azahar'. In the last years (2002-2009) at least 18 projects, budgeting 6 M€, had biodiversity activities in Cape Verde, Bosnia and Herzegovina, Serbia, Syria, Lebanon, Tunisia, Morocco, Jordan, Egypt, Albania, Montenegro and Turkey. In 2009 it has sponsored the WetCap project for strengthening waterbird and wetland conservation capacities in North Africa (Algeria, Egypt, Mauritania, Morocco and Tunisia), managed by SEO/BirdLife in the framework of the UNEP-GEF African-Eurasian Flyway Project (WOW). Also in Spain, some regional governments are actively supporting conservation cooperation, such as Catalonia, Andalusia, Balearic and the Canary Islands.

Canadian International Development Agency (CIDA, Canada): Its priorities are purely development issues (health, gender equality, etc.) and not biodiversity, but it has supported a Wetlands International's project on **'**Mediterranean Wetlands Capacity Building II' ($2,040,000; Tunisia, Egypt Morocco, Jordan; 2007-2012).

Cooperazione Italiana allo Sviluppo (Italy): At least four projects with biodiversity components with a total budget of €26.5 million, in Albania (monitoring *Posidonia oceanica* and supporting the government in protected area management), FYR Macedonia (environmental protection of the Radika river valley), Tunisia (reforestation of Tataouine mountains). In addition, Italy supports the technical and financial international organizations most involved in the implementation of Agenda 21 emerged in 1992 after the Rio Summit: GEF, UNEP, FAO, IUCN, ICGEB. Italy supports in particular the implementation of the Convention to Combat Desertification. During 2001-2008 there has been an Italian-Egyptian Debt for Development Swap Program, allocating $816 million for 53 projects, including some biodiversity ones (EIA, protecting dolphin habitats, Green Corridor Pilot Project, awareness, drafting plans, inventory, etc.) and support to UNDP.

Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ, Germany): Few projects on biodiversity, such as Adriatic coastal zone management in Croatia or nature conservation at National Parks Toubkal, Sous Massa and Tazzeka in Morocco (amounts allocated not available). Furthermore, the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety undertakes bilateral support to nature conservation projects, such as the Wings over Wetlands (WOW) or the World Migratory Bird Day, both promoted by UNEP, AEWA, CMS, BirdLife International and Wetlands International.

Hellenic Aid (Greece): Under the Greek Ministry of Foreign Affairs, which coordinates and monitors programs of humanitarian and development aid, covering environmental protection. Targets the Balkan states and the Middle East. It has funded projects for the transboundary Doiran Lake.

Japan International Cooperation Agency (JICA, Japan): JICA's approach is based on the sustainable use of natural resources, the conservation of biodiversity, and the restoration of wasteland. Countries from Middle East, North African and Balkan States are eligible for JICA funds, but no recent projects on biodiversity have been submitted.

MATRA (The Netherlands): The Dutch government has since 1996 assigned a special budget, in the Matra program of the Ministry of Foreign Affairs, for the conservation and sustainable use of biodiversity in Central and Eastern Europe. The Matra Biodiversity (BBI) (2008-2011) is the former Matra/PIN. It has two instruments: the subsidy Scheme (for Dutch NGOs and their Partners in Matra countries) and the Matra/KNIP (Small Nature Management Program). These grants are delegated to the Dutch embassies in the Matra range countries; these are in the Mediterranean Basin Hotspot: Slovenia, Croatia, Turkey, Montenegro, Morocco, Syria, Lebanon and Jordan.

Swedish International Development Cooperation Agency (SIDA, Sweden): The Natural resources and environmental care is one of the priorities of Swedish cooperation, and in the Mediterranean Basin countries it represents the 13 percent ($103.5 million) of its total cooperation funds for the period 2000-2009.

Tunisia government contributes to the Barcelona Convention in hosting the RAC/SPA Centre and taking on responsibility for some of the staff.

US AID (USA) has a strong biodiversity conservation program that, inside the Mediterranean Basin Hotspot, acts only in Lebanon (Forest restoration and fire management in 2008, contributing with $500,000). USAID cooperation in Europe and Eurasia does not have environment as a priority theme, but economic growth, democracy transition and health; in the Middle East countries it works with governments to improve sustainable approaches and policies to protect natural resources (creation of protected areas, land-use planning or watershed management).

National Government Expenditure

Government budgets are a critical source of biodiversity financing even though national commitments are sometimes small, depending on the economic development level of the country. In the case of Middle East, North Africa and Balkan States countries, a part of their governmental investments are done thanks to a previous support of international donors to enhance the implementation of international conventions and agreements. The authorities responsible for environment coordinate the national expenditure in nature conservation predominantly, but other departments, such as the agriculture, fisheries, tourism or industry, can also make contributions in crossover or geographically localized issues. In addition, provincial and local government expenditure is also significant in some countries, mainly in the EU. Apart from the direct investments in nature conservation, the governments can also support biodiversity NGOs' activities both contracting projects and by annual grants to develop national conservation strategies. It was not possible to collect information on the national budgets allocated to environmental and biodiversity issues.

International Charities, Trusts and Foundations

Charities obtain their incomes from different sources, but mainly through membership fees, private donations, grants from public and private donors, or long-term cooperation agreements with funding entities. A number of NGOs in the Mediterranean Basin are very active at regional level supporting other local NGOs activities, developing fund-raising to undertake regional initiatives networking with local counterparts. Furthermore, some private or public foundations and trusts are also focussed on supporting biodiversity conservation projects. The most active in the Mediterranean Basin Hotspot are given below.

- **Arcadia Fund (UK)** is a grant-making fund, focused to protect endangered culture and nature. It supports BirdLife Interantional, Oceana and Fauna and Flora International. It provided the funds to buy reserves for the Zino's Petrel in Madeira ($184,000) and for the Iberian lynx in Spain ($450,000).
- **BBVA Foundation (Spain)** is a Spanish bank foundation, that every year launches a call for proposals for Biodiversity Conservation and Climate Change Awards. It also sponsors research on ecology and conservation biology and the editing of publications and conferences on these issues. The budget for research grants is of €3.6 million and for the awards of €500,000 for the Scientific Research on Conservation Ecology and Biology, €250,000 for Actions on Biodiversity Conservation and €80,000 to the Dissemination and Awareness on Biodiversity Conservation. SEO/BirdLife, WWF-Spain and Fundación Oso Pardo are three of the Spanish NGOs awarded on the Action on Biodiversity Conservation category.
- **Bundesstiftung Umwelt (DBU, Germany)** supports local conservation institutions for nature conservation and finance biodiversity projects, particularly in Middle- and East Europe (Croatia, Israel, Lebanon, etc.). It also keeps cooperation with UNESCO and the IUCN.
- The **EECONET Action Fund (EAF, The Netherlands)** operates as an independent fund for urgent conservation actions under the umbrella of NatureNet Europe. It is a joint fund of the Coastal & Marine Union (EUCC), EUROSITE (European Union of Site Management Organisations), Euronatur (European Natural Heritage Fund) and the ECNC (European Centre for Nature Conservation). The goal of the EAF is to fund third parties (semi-state governmental organisations for example, National Parks, and nongovernmental organisations) to buy or lease important natural sites, or purchase concessions, as a means of securing biodiversity and landscape protection in order to contribute to the Pan European Ecological Network. Eligible countries are Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Slovenia, Turkey and other non-Mediterranean countries. Until 2005, the EAF funded not only the purchase of land, but management activities too.
- **European Centre for Nature Conservation (ECNC, The Netherlands)** undertakes a number of projects on biodiversity conservation, with local counterparts, in Croatia, Cyprus, Greece, Italy, FYR Macedonia, Slovenia, Spain, Turkey and other non-Mediterranean countries.
- **Fondazione Cariplo (Italy)** grants initiatives related to climate change, alternative energies, biodiversity conservation, water management, environmental education, etc. in Italy.
- **Fondation Mohammed VI pour la Protection de l'Environnement (Morocco)** seeks to raise awareness and educate institutions, counselors and the general public on the environment, specifically targeting youth.
- **Fondation pour la Recherche sur la Biodiversité (France)** is responsible for promoting at French, EU and international level the development, support and facilitation of research activities on biodiversity and their promotion within the biological, socioeconomic and legal fields, as well as the associated activities of training, awareness and distribution of results.
- **Fondation Prince Albert II de Monaco (Monaco)** favors the creation of forums for environmental players (including researchers, project managers, companies and institutions), raises funds and develops socially responsible investment tools.
- **Fondation Total pour la Biodiversité et la Mer (France)** supports biodiversity protection through research and the restoration of the marine and coastal ecosystems,

and raising public awareness. It is supporting the Mediterranean Observatory on Wetlands, managed by Tour du Valat.

- **Frankfurt Zoological Society (FZS, Germany)** makes its priority in general the conservation of biodiversity. FZS believes that this can be done best by establishment of large-scale protected areas and a network of bio-corridors to link these areas together. Therefore FZS has chosen target species like the brown bear, lynx, wolf, and vultures as good indicators for sound land use and suitable populations of wild living ungulates as well as ecological acceptable land use by domestic animals. In Spain, France and Italy FZS indirectly support the reintroduction of Bearded and Black vultures by supporting the breeding in captivity European network. In Turkey FZS undertakes a project to establish a National park at the Syrian border. In the Balkan States, the support is direct to conservation projects in Albania, FYR Macedonia and Bulgaria and indirectly (via the Balkan Vulture Action Plan) to Serbia, Bosnia and Herzegovina and Croatia. It spend around $600,000 annually in conservation activities in the Mediterranean Hotspot.
- **Fundación Biodiversidad (Spain)**, funded by the Ministry of Environment of the Spanish government, grants biodiversity projects to Spanish NGOs, including an allocation for international proposals.
- **IUCN Pan-Europe (Belgium and Serbia)** develops initiatives on biodiversity, ecosystem management, Energy and Climate Change and Society and Economy, in cooperation with local counterparts, with activities such as training workshops and contracting local NGOs to develop conservation initiatives.
- **King Abdullah II Fund for Development (Jordan)** provides support to university students and to sustainable agricultural initiatives, among others.
- **Leventis Foundation (Cyprus)** supports biodiversity projects developed by HOS/BirdLife-Greece.
- The **MAVA Foundation (Switzerland)** for the Mediterranean Basin supports primarily actions on wetlands, marine and coastal areas and terrestrial ecosystems, (Cape Verde is included in its West African program) and it is one of the main donors in the region, including many government and multilateral organizations. Its budget for 2006-2010 in the Mediterranean Hotspot is of $45 million.
- **Milieukontakt International (The Netherlands)** bases its work on three pillars: building capacities, involving citizens and solving environmental problems. It provides training, coaching, support and advises for organization working for sustainability in Albania, Bosnia and Herzegovina, Croatia, the EU, FYR Macedonia and Montenegro.
- **The Mohamed bin Zayed (MBZ) Species Conservation Fund** is an endowment established to do provide targeted grants to individual species conservation.
- **People's Trust for Endangered Species (UK)** raises funds to support a huge variety of conservation work throughout the world, such as in the Mediterranean (a project on chytridiomycosis mitigation affecting Sardinian newts in Corsica and Sardinia, carried out by the Zoological Society of London).
- **The Pew Charitable Trusts (Belgium)** is the sole beneficiary of seven individual charitable funds of Sun Oil Company. It undertakes conservation projects at EU and Mediterranean Basin level.
- **The Royal Society for the Protection of Birds** (RSPB; BirdLife Partner in the UK) has own funded country programs that provide strategic support to NGOs (other BirdLife Partners) and increase their capacity on nature conservation. In the Mediterranean Basin Hotspot, it is currently supporting BirdLife Partners in Turkey, Portugal, Cyprus and Greece, after finishing a long-term country program in Spain.

- **Rufford Foundation (UK)** grants UK charities to undertake conservation biodiversity projects around the world and also, through the Small Grants, to many small to medium-local NGOs in North Africa, Middle East and Balkan states, among others.
- **SNV-Netherlands Development Organisation (The Netherlands)** supports national and local actors within government, civil society and the private sector to find and implement local solutions to social and economic development challenges in renewable energy, agriculture, forestry or tourism. In the Mediterranean Basin Hotspot, it works in the Balkan states.
- **WWF-International** and its branches in the Mediterranean Basin Hotspot (Greece, Turkey, Italy, France, Spain and MedPO) invest around $700,000 to subsidize local NGOs initiatives, primarily in the North Africa sub-region, in the framework of Across the Waters project.
- **Yad Hanadiv (the Rothschild Foundation)** acts in Israel on behalf of a number of Rothschild family philanthropic trusts. The Foundation focuses on the areas of education, environment, academic excellence, civil society and Arab community.

Other associations are active in raising funds from public and private donors to invest in conservation actions in the Mediterranean Basin Hotspot (mainly in the North Africa, Balkan states and Middle East regions). **Vulture Conservation Foundation** (VCF) is the main supporter to the Balkan Vulture Action Plan (with contribution from Frankfurt Zoological Society, AECID or the EC to implement projects at national and cross-country level for the recovery of vulture populations and its habitat, including raising local NGO capacity and volunteering promotion). **Euronatur** supports many local NGOs in Albania, Montenegro, Spain, Slovenia, France, Lebanon, Bosnia and Herzegovina, FYR Macedonia and Greece by providing resources to develop a wide range of biodiversity conservation projects at regional and local level. **BirdLife International** is developing its Important Bird Areas Program and other programs on bird species and habitat conservation, investing in high priority issues along the Mediterranean through its regional offices for the Middle East (Jordan) and for Europe (Belgium) and its partnership network, which also undertakes activities at the national and regional level. **The Regional Environmental Center for Central and Eastern Europe (REC)** is the most relevant initiative for strengthening environmental NGOs in these countries by providing them with grants, management training, information, fellowships, internships and other initiatives. With SIDA sponsorship, REC is offering grants of €1,460,000 over four years to NGOs of Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro and Serbia to improve the urban environment and to promote sustainable development through regional and national demonstration projects.

Other Sources (Corporate and Individual Donors)

As noted in the section on the Private Sector, that sector is active in supporting biodiversity NGOs in the northern Mediterranean sub-region as well as a few better-developed countries in the Balkan states and the Middle East.. Power companies, aviation, steel, oil, car, and banking are among the businesses that have donated for nature conservation initiatives. This type of fundraising is not as consolidated in the Mediterranean Basin countries as in the United States, UK, Germany or the Netherlands. The same is true for the individual donors, who play an important role in countries such as the United States and the UK. Some of them arrive in the hotspot through international NGOs.

As for the membership fees, in the more developed countries of the region this kind of income is higher. Depending on the organizations, it is around 20 percent to 50 percent of the total annual budget in the northern Mediterranean than in the Balkan states, North Africa and or the Middle East sub-regions. Citizen support to strong NGOs in the UK (RSPB) and in Germany (Frankfurt Zoological Society) allows them to allocate part of these resources to international priorities, including the Mediterranean Basin Hotspot.

Summarized Investment for the Region

Overview of Funding

Based on available information, the main investor in biodiversity in the Mediterranean Basin Hotspot is the EU (Table 20), which is significantly different other hotspots. It has different funding programs, some restricted to member states (such as LIFE-Nature, Interreg), but others are targeted to the accession and pre-accession countries (LIFE Third countries, IPA) and also to other neighbouring countries (MEDA-ENPI). Most of these are available to civil society, while most sources seek government-civil society cooperation as a precondition.

Table 20. Estimated Funds Invested in Biodiversity Conservation in the Mediterranean Basin Hotspot Annually by the Main Donors, 1992-2009
Precise figures are difficult to provide, but these give an idea of a minimum as some donors' budgets are not available.

Kind of donor	Donor	Annual investment
Multilateral	GEF	$13,485,092
	EU	$14,645,210
	EEA and Norway Grants	$7,011,031
	Ramsar Convention	$114,150
Bilateral	Germany	-
	France	$25,330,000
	Spain	$1,771,502
	Italy	$3,950,165
	Canada	$2,000,000
	The Netherlands	$5,960,000
	Sweden	$90,629,536
National	National, regional and local governments	-
Private donors	Trusts, Foundations, NGOs	$39,502,406
	Corporate	-
	TOTAL	**$204,399,094**

- Not available

The following group of important donors is the GEF (with funds managed by UNEP, UNDP or World Bank) together with some governmental cooperation agencies. Many countries devote their international aid exclusively to social, health, democracy, justice, etc. but some are actively supporting biodiversity conservation. This is the case in the Mediterranean Basin Hotspot of the GTZ (Germany), AECID (Spain) and KNIP (The Netherlands), Swedish International Development Cooperation Agency (SIDA) and the Cooperazione Italiana allo Sviluppo.

Some international conventions and NGOs are active fundraisers for conservation and some act as further donors, such as the Frankfurt Zoological Society or the Royal Society for the Protection of Birds. The private foundations and trusts, and also some corporate and individual donors support biodiversity conservation in the hotspot with relevant funds, being the most relevant the Mava Foundation, Arcadia Fund, Milieukontakt International, Netherlands Development Organisation, Rufford Foundation, Fondazione Cariplo, the Pew Chariable Trusts or DBU.

As for the national governments investments for biodiversity conservation, their availability largely depends on the economic level of each country.

In the geographical distribution of funds the main beneficiary is the Northern Mediterranean Basin including the EU Macaronesian territories (Canary Islands and Madeira and Azores Islands). This is because the significant EU, but also the smaller EEA, investments target it predominantly. The other sub-regions, Middle East, North Africa and Balkan states, and Cape Verde (Table 21) get support mostly from GEF and other multilateral and bilateral agencies focussed at less developed countries, and are also priority areas for some foundations and NGOs investments. International entities, such as UNDP or UNEP, are also beneficiaries of funds from some bilateral agencies (like those of France, Canada or Sweden).

Table 21. Distribution of the Annual Investment for Conservation Among the Mediterranean Basin Hotspot Regions and International Agencies

Destiny of the investment	Annual investment
Middle East	$10,739,171
North Africa	$21,078,683
Cape Verde	$2,609,402
Northern Mediterranean, Canaries, Madeira and Azores islands	$43,227,616
Balkan States	$25,842,223
International Agencies	$100,902,000
TOTAL	$204,399,094

These funds go to a wide variety of themes, and different donors have different priorities. The LIFE Funds and the KNIP (The Netherland) are the most clearly focussed on direct conservation measures (monitoring, restoration of habitats, awareness, etc.), despite these can also be funded by other donors. Some trusts prioritize the acquisition of land to create reserves; protected areas and habitat management and restoration projects (being wetlands, forests, coastal and marine the priority ones) are also supported by a number of donors. Some EU initiatives (such as Interreg and IPA), and international NGOs support cross-border and regional networking. International NGOs (apart from more direct conservation actions) finance activities to increase local NGOs capacities too. Sustainable development (involving fishery, agriculture, aromatic plant growing, etc), oils spill capacity response, energy efficiency and climate change, and the preparation and implementation of national plans (to go forward the implementation of international agreements) are other kind of projects also supported by different donors in the region.

Key Strategic Funding Strategies

Innovative financial mechanisms have a great potentiality for environment, like the green lotteries, green taxes from tourism earmarked for conservation, promoting payments for ecosystem services, markets for green products or business engagement in biodiversity conservation (WWF-MPO, 2007). But few examples exist in the Mediterranean Basin Hotspot (Box 2). Some NGOs are already going on with the so-called "biodiversity economics" or "biodiversity and business," like Euronatur, the ECNC, WWF or IUCN. In Spain, stewardship mechanisms have played a key role in protecting and recovering species, such as the Iberian lynx. Some of these key strategic funding possibilities have been mentioned in the section on the private sector (such as green taxes), but it is necessary to develop new funding strategies based on synergies between the biodiversity services to the society and companies and the need to stop the loss of biodiversity.

Box 2. The Environmental Protection Fund of Egypt

In Egypt, the Law 4 of 1994, created the Environmental Protection Fund (EPF) that receives all revenues generated by protected areas (for example, entrance fees, concessions incomes, penalties and other such as permits to film inside the parks) and others. Total annual revenues are around $10 million to $14 million, coming from fines and compensations for environmental damage (50-80 percent), donations, protected areas fees (17-40 percent), hunting fees and others (wastewater treatment stations, selling of organic fertilizers, etc.). The EPF provides financial support to the Egyptian Environmental Affairs Agency (25 percent of the EPF budget) but also, through grants or soft loans, to projects of organizations that apply to the EPF for funding. Every year the EPF issues a plan detailing financial support programs offered for that year. The plan specifies areas of focus based on environmental priorities (air and water quality, waste management, etc.). However, most of the project's applications (90 percent) could not be accepted due to their low quality. This situation seems to be improving.

CEPF NICHE FOR INVESTMENT

CEPF's niche for investment in the Mediterranean Basin Hotspot was formulated through an inclusive, participatory process that engaged civil society, donor and governmental stakeholders throughout the region, and is based on an analysis of information gathered during the profile preparation process. Existing investments in the region were also assessed in detail to identify the site-level gaps to avoid duplication of investments of existing donors. This process will allow CEPF to effectively complement the ongoing conservation programs in the Mediterranean Basin Hotspot. While information for all countries in the hotspot has been compiled, this section focuses on determining where CEPF can add the greatest value in the 15 countries currently eligible to receive CEPF funds both as signatories to the Convention on Biological Diversity and as World Bank client countries: Albania, Algeria, Bosnia and Herzegovina, Cape Verde, Croatia, Egypt, Jordan, Lebanon, Libya, Montenegro, Morocco, Syria, The Former Yugoslav Republic of Macedonia, Tunisia and Turkey. Three additional countries (Bulgaria, Iraq and Serbia) are eligible for CEPF funding but do not contain any key biodiversity areas within the boundary of the Mediterranean Basin Hotspot and therefore are not included as priorities for CEPF investment. Priority countries are listed in Table 22.

Table 22. Priorities for Investment in the Mediterranean Basin Hotspot

Sub-region Name	#	Countries / Territories
Balkan states	1	Albania
	2	Bosnia and Herzegovina
	3	Croatia
	4	Montenegro
	5	The Former Yugoslav Republic of Macedonia
Macaronesia Islands	6	Cape Verde
Middle East	7	Jordan
	8	Lebanon
	9	Syria
	10	Turkey
North Africa	11	Algeria
	12	Egypt
	13	Libya
	14	Morocco
	15	Tunisia

To make the most effective use of CEPF investment, an analysis was undertaken to identify those corridors comprising unique, rich and highly irreplaceable biodiversity facing high levels of current and future predicted threat yet with limited conservation investment to date. To come up with these priority corridors and key biodiversity areas, ongoing conservation investments were evaluated against the level of threats acting on sites. The selected sites include those that were the most threatened and where CEPF investment can make a significant difference. Based upon this analysis, six of the 17 biodiversity conservation corridors were identified as being of overwhelming importance. These six corridors span the breadth of habitats and ecosystems across the basin and are vitally important in safeguarding ecosystem services that sustain many of the

communities in the Mediterranean Basin. The altitudinal range of the corridors, especially in Morocco and Turkey, also ensure ecosystem resilience to climate change and maintain the biological integrity of the hotspot. The six corridors (see Table 23 and Figure 16) are:

- Southwest Balkans;
- Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia;
- Atlas Mountains;
- Taurus Mountains;
- Cyrenaican Peninsula; and
- Orontes Valley and Lebanon Mountains

These six corridors encompass a total of 268 key biodiversity areas, 50 of which were identified as individual priority sites for investment because they are both highly irreplaceable and threatened and therefore require immediate conservation attention. The remaining 218 key biodiversity areas in these six priority corridors will benefit from landscape-level interventions as they are critical for maintaining the integrity of ecosystem processes and services. In addition, a further 20 key biodiversity areas represent highly irreplaceable and vulnerable sites in five other corridors will be the focus of site level investments (Tables 24 and 25; Figure 16).

A number of key biodiversity areas selected for investment are coastal, and are therefore dependent on the health and resilience of the adjacent marine environment. As such, CEPF will adopt the 12-nautical-mile territorial sea definition established by the U.N. Convention on the Law of the Sea as the outermost limit for CEPF attention and investment for these specific key biodiversity areas. This means that conservation actions pertaining to a coastal key biodiversity area can include, as necessary, the belt of ocean measured seaward from the coastal nation and subject to its sovereignty. It should be noted that while the territorial sea definition is based on political, rather than biological criteria, it also aims to assist sovereign nations to protect their marine resources.

The lack of an effective protected area network within eligible countries combined with a paucity of civil society organizations and their ability to tackle emerging threats means that the few remaining sites are under extreme pressure from unregulated development, especially tourism and the secondary effects thereof. At the same time, the respective government departments have limited expertise in reconciling environmental and development aspects.

CEPF's niche will be to work with all actors engaged in conservation and development activities in Mediterranean Basin countries to foster partnerships in priority corridors and sites. Such partnerships will seek to reduce impacts of these developments on natural resources and systems that the large communities are dependent on. In addition, opportunities to increase the benefits and reduce upland shifts in land use by the communities within these landscapes will be explored. These approaches will be based upon applying the experiences of unsustainable development in other parts of the Mediterranean Basin, as well as introducing new approaches. The ecological footprint in the northern part of the Mediterranean is significantly higher than in the South and therefore investment in the South presents an important opportunity to ensure areas with high biodiversity and high levels of threat but not yet as high of an ecological footprint can be effectively protected.

CEPF will also seek to reinforce civil society's role in advocating for improved practices, ensuring that development opportunities are sustainable. Efforts will be made to collaborate with relevant government departments and the private sector.

Table 23. Summary of Conservation Corridors for CEPF Investment in the Mediterranean Basin Hotspot

#	Corridor Name	Size (ha)	# of Key Biodiversity Areas and Size (ha)	Protected Surface Area (ha)	Countries Covered	Key Threats
1	Cyrenaican Peninsula	3,037,789	11 (1,913,874)	*nd**	Egypt, Libya	Tourism development, conversion of coastal wetlands into housing areas, traditional hunting, agricultural expansion, charcoal production and road building.
2	Mountains, Plateaus, and Wetlands of Algerian Tell and Tunisia	13,405,573	75 (1,152,800)	122,415	Algeria, Tunisia	Urban and tourism development and water pollution.
3	The Atlas Mountains	12,812,888	30 (2,126,729)	231,564	Morocco	Unsustainable water management, agricultural intensification, overexploitation of plant collections and overgrazing that cause important soil erosion.
4	The Orontes Valley and Lebanon Mountains	2,631,528	40 (596,422)	69,308	Lebanon, Syria, Turkey	Residential and urban development, illegal hunting and agricultural intensification with poorly irrigated farms.
5	The Southwest Balkans	5,713,629	42 (660,923)	331,240	Albania, FYR Macedonia, Greece, Montenegro, Serbia	Hunting and overfishing and habitat destruction along the coast.
6	The Taurus Mountains	11,724,896	70 (4,315,013)	869,578	Turkey	Residential and commercial development for tourism, forests fires, dams, unsustainable water use, agriculture and aquaculture, and road building.

**no data: 5 protected areas are present in the corridor, however information on their surface area is not available.*

Table 24. Summary of Key Biodiversity Areas for CEPF Investment in the Mediterranean Basin Hotspot

Corridor Name	Southwest Balkans	Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia	The Atlas Mountains	The Taurus Mountains	Cyrenaican Peninsula	Orontes Valley and Lebanon Mountains	Priority KBAs in non-priority corrifors	*Totals*
Priority terrestrial key biodiversity areas	5	3	8	11	1	7	9	***44***
Priority coastal key biodiversity areas	0	2	1	8	4	0	11	***26***
Sub-total	5	5	9	19	5	7	20	***70***
Other terrestrial key biodiversity areas	28	53	19	30	0	32		***162***
Other coastal key biodiversity areas	9	17	2	21	6	1		***56***
Sub-total	37	70	21	51	6	33	0	***218***
Overall totals	**42**	**75**	**30**	**70**	**11**	**40**	**20**	**288**

* See Appendix 1 for the full list of key biodiversity areas.

Figure 16. Site and Corridor Outcomes for the Mediterranean Basin Hotspot

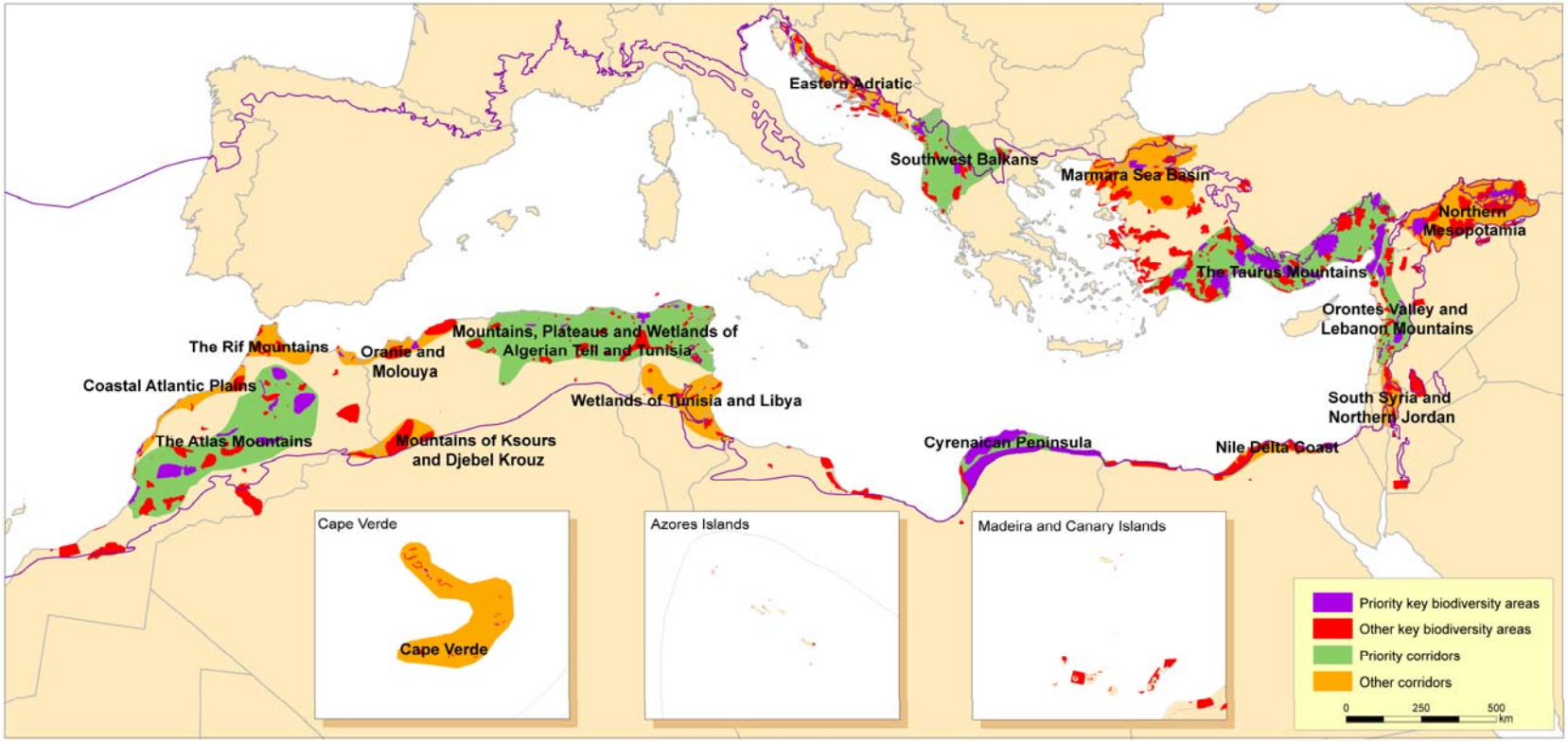


Table 25. Priority Key Biodiversity Areas for CEPF Investment in the Mediterranean Hotspot

no	Corridor Name	Country	Key Biodiversity Area Name
1	Cape Verde	Cape Verde	Beaches of Boavista Island
2	Cape Verde	Cape Verde	Ilheu Raso
3	Cape Verde	Cape Verde	Santa Luzia Island
4	Coastal Atlantic Plains	Morocco	Essaouira Dunes
5	Cyrenaican Peninsula*	Libya	Cyrenaican Peninsula
6	Cyrenaican Peninsula*	Libya	Geziret al Elba - Ayn al Ghazalah Bay
7	Cyrenaican Peninsula*	Libya	Jabal al Akhdar
8	Cyrenaican Peninsula*	Libya	Marmarica
9	Cyrenaican Peninsula*	Libya	Surrounding of Jabal Akhdar
10	Eastern Adriatic	Bosnia and Herzegovina	Hutovo blato
11	Eastern Adriatic	Bosnia and Herzegovina	Neretva River
12	Eastern Adriatic	Bosnia and Herzegovina	Trebizat River Tributary
13	Eastern Adriatic	Croatia	Krka River and Visovac Lake
14	Eastern Adriatic	Croatia	Neretva Delta and Surrounding Area
15	Eastern Adriatic	Croatia	Special Ornithological Reserve on Cres Island
16	Marmara Sea Basin	Turkey	Marmara Islands
17	Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia*	Algeria	Djebel Babor
18	Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia*	Algeria	El Kala National Park
19	Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia*	Algeria	Parc National du Djurdjura
20	Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia*	Tunisia	Ichkeul
21	Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia*	Tunisia	Sidi Mechig Beaches
22	Nile Delta Coast	Egypt	Lake Bardawil
23	Nile Delta Coast	Egypt	Zaranik Protected Area
24	Northern Mesopotamia	Turkey	Southern Euphrates Valley ve Birecik Steppes
25	Northern Mesopotamia	Turkey	Tigris Valley
26	Oranie and Molouya	Algeria	Marais de la Macta
27	Oranie and Molouya	Morocco	Sebkha Bou Areg
28	Orontes Valley and Lebanon Mountains*	Lebanon	Al Chouf Cedars Nature Reserve
29	Orontes Valley and Lebanon Mountains*	Lebanon	Upper Litani River
30	Orontes Valley and Lebanon Mountains*	Lebanon	Western Anti Lebanon Mountains
31	Orontes Valley and Lebanon Mountains*	Syria	Eastern Anti Lebanon Mountains
32	Orontes Valley and Lebanon Mountains*	Syria	Lower Orontes River
33	Orontes Valley and Lebanon Mountains*	Syria	Upper Orontes River
34	Orontes Valley and Lebanon Mountains*	Turkey	Altinozu Hills
35	South Syria and Northern Jordan	Jordan	Jordan River

36	South Syria and Northern Jordan	Jordan	Mujib
37	Southwest Balkans*	Albania	Lake Ohrid and surrounding area
38	Southwest Balkans*	Albania	Lake Shkodra (Lake Scadar)
39	Southwest Balkans*	FYR Macedonia	Dojran Lake
40	Southwest Balkans*	FYR Macedonia	Ohrid Lake
41	Southwest Balkans*	Montenegro	Lake Skadar
42	The Atlas Mountains*	Morocco	Bou Fekrane River
43	The Atlas Mountains*	Morocco	Eastern Middle Atlas Mountains
44	The Atlas Mountains*	Morocco	Fes and Surrounding Area
45	The Atlas Mountains*	Morocco	Oued Oumer Rbid
46	The Atlas Mountains*	Morocco	Parc National de Souss-Massa and Aglou
47	The Atlas Mountains*	Morocco	Parc National de Toubkal
48	The Atlas Mountains*	Morocco	Parc National du Haut Atlas Oriental
49	The Atlas Mountains*	Morocco	Parc Naturel d'Ifrane
50	The Atlas Mountains*	Morocco	Tiradine and Takherhort Hunting Reserves
51	The Taurus Mountains*	Turkey	Acigol Lake
52	The Taurus Mountains*	Turkey	Akseki and Ibradi Forests
53	The Taurus Mountains*	Turkey	Amanos Mountains
54	The Taurus Mountains*	Turkey	Antalya Plain
55	The Taurus Mountains*	Turkey	Aydincik ve Ovacik Coast
56	The Taurus Mountains*	Turkey	Beydaglari
57	The Taurus Mountains*	Turkey	Beysehir Lake
58	The Taurus Mountains*	Turkey	Binboga Mountains
59	The Taurus Mountains*	Turkey	Bolkar Mountains
60	The Taurus Mountains*	Turkey	Dalaman Plain
61	The Taurus Mountains*	Turkey	Ermenek River Valley
62	The Taurus Mountains*	Turkey	Geyik Mountains
63	The Taurus Mountains*	Turkey	Goksu Delta
64	The Taurus Mountains*	Turkey	Goksu River Valley
65	The Taurus Mountains*	Turkey	Koprucay Valley
66	The Taurus Mountains*	Turkey	Koycegiz Lake
67	The Taurus Mountains*	Turkey	Sandras Mountain
68	The Taurus Mountains*	Turkey	Seyhan Delta
69	The Taurus Mountains*	Turkey	Tahtali Mountains
70	Wetlands of Tunisia and Libya	Tunisia	Gafsa

Strategic directions within the hotspot were identified at two sub-regional stakeholder meetings, in Turkey and Morocco in December 2009. These strategic directions will help to fulfill the niche of CEPF described above. During the two stakeholder consultation meetings, regional and national stakeholders were presented with the outcomes of the desk studies on biodiversity (key biodiversity areas), threats and existing conservation investments in the region. The regional stakeholders collectively assessed and refined the data presented and set common strategic priorities for the hotspot, where CEPF investment can make a difference. Although facilitated independently from each other, both stakeholder workshops identified the same priorities, with minor ranking

differences between the west and east Mediterranean. Through the final regional stakeholder workshop in France in March 2010, the strategic directions were reviewed by regional stakeholders and representatives from governmental agencies.

The four strategic directions to be covered under the CEPF investment in the Mediterranean Basin are:

- Promote civil society involvement in Integrated Coastal Zone Management to minimize the negative effects of coastal development in three priority corridors (Southwest Balkans; Cyrenaican Peninsula; and Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia), and in 20 coastal and marine priority key biodiversity areas in other corridors
- Establish the sustainable management of water catchments and the wise use of water resources with a focus on four priority corridors (Atlas Mountains, Taurus Mountains, Orontes Valley and Lebanon Mountains, and Southwest Balkans)
- Improve the conservation and protection status of 44 priority key biodiversity areas
- Provide strategic leadership and effective coordination of CEPF investment through a regional implementation team

CEPF's consultative approach in developing the ecosystem profile builds upon lessons learned from UNDP and the World Bank's approaches in the region and elsewhere (UNDP 2002). This has led to broad stakeholder ownership of the strategic directions and investment priorities proposed, such as adopting an ecosystem approach to conserving biodiversity and integrated management of water resources. There is also a commitment to share experiences and integrate with other networks within the region. Weakly planned infrastructure development driven by the tourism industry is clearly one of the main themes, where CEPF investment requires focusing in the terrestrial and marine realms. Along the northern Mediterranean, tourism development has for many years caused irreversible negative impacts on biodiversity and natural landscapes and resulted in an ecological disaster. However, in the North, there is also a fast accumulating knowledge on best practices that involve integrated coastal and marine management and other tactics, and these could be transferred to the east and south of the Mediterranean Basin. The CEPF investment can effectively stimulate the countries in the South and East, to carry out sustainable tourism practices in areas with high biodiversity value and minimize the negative impacts of mass tourism before it becomes similarly problematic for these countries.

The pressure on scarce water resources resulting from major water investments as well as climate change has recently become the most important pressure on nature. An increasing number and magnitude of water investments has caused irreversible damage to the fragile water cycle of small river basins in the hotspot. Unfortunately, there is very little understanding of integrated management and wise use of water resources in high priority corridors in the east and south of the Mediterranean Basin. Therefore, improved management of water resources is the focus of one of the strategic directions. This strategic direction will involve cooperation with government agencies to demonstrate integrated river basin planning in high priority areas as well as direct community actions to reduce water consumption, especially for agriculture. Such actions may include maintenance of traditional land-use practices and other sustainable ways of using water catchments. Replication of successful water management systems (such as in Israel and Tunisia) will be pursued.

Clearly, there are huge gaps in the protected area networks in the southern and eastern Mediterranean Basin, particularly in the marine realm. CEPF investment in the region will seek to establish new protected areas in priority corridors and key biodiversity areas, and to improve the conservation status of highly irreplaceable protected areas through management plans and increased engagement of the local civil society. Where

appropriate, CEPF will also promote international cooperation for the conservation of priority key biodiversity areas.

In summary, CEPF in the Mediterranean Basin Hotspot will help to reduce the negative impacts of development, including tourism, before it becomes equally problematic for the southern and eastern Mediterranean, as it has been experienced in the north. This will be complemented by supporting the wise use of one of the scarcest resources in the hotspot, water. CEPF will address the ecological and economic aspects of water consumption primarily at the water catchment scale, but also at local and national scales, if appropriate. Some key biodiversity areas within the hotspot will certainly require more in-depth attention due to their high irreplaceability and vulnerability. CEPF will address this via supporting the enhancement of the existing protected areas network. Actions will be targeted at six priority corridors and 70 key biodiversity areas.

CEPF INVESTMENT STRATEGY AND PROGRAM FOCUS

In order to appropriately target the CEPF investment, the 1,110 key biodiversity areas in the region were prioritized. Clearly, all key biodiversity areas are important for global nature conservation, particularly in an area as rich and diverse as the Mediterranean Basin. However, the full number of important sites is far too many for CEPF to effectively support. This profile is intended for broad distribution and the profiling team hopes that these data and information will be used by other donors and organizations in the region. It is hoped that this profile can be used to further target funding and efforts and thus complement and expand the CEPF investment.

The prioritization of key biodiversity areas uses the framework of irreplaceability and vulnerability widely used in systematic conservation planning (Langhammer *et al.* 2005). Combined, these factors indicate the highest priority sites and species that will likely be lost in the absence of CEPF investment. Sites that are high for irreplaceability and high for vulnerability face an extremely high level of threat. In addition to the biological criteria, sites were also evaluated based on knowledge of current investment in that we tried to complement rather than duplicate existing investment. Protection levels of key biodiversity areas and corridors were also used to help prioritize regions. Typically, areas that have lower levels of protection are a higher priority than areas that are well protected. Given that biodiversity is not distributed evenly in the hotspot, the highly irreplaceable and highly vulnerable key biodiversity areas are clustered in Morocco and Turkey. During the prioritization process, efforts were made to maximize the coverage of all regions/countries among the priority key biodiversity areas and corridors. This allowed for targeting of the highest priorities, as well as those in greatest need.

This exercise resulted in the selection of 70 key biodiversity areas as priorities for investment. Of these, 50 are unprotected with eight receiving partial protection and 12 key biodiversity areas fully protected. This highlights the importance of working to increase the area under protection in the hotspot and additionally to work with existing protected areas to strengthen their management. There are many options and opportunities that could be supported to pursue protection of these sites and landscapes, such as stewardship.

Nearly half (34) of these priority key biodiversity areas are in Morocco and Turkey, as these countries hold the majority of threatened species in the hotspot. Together, Libya and Algeria hold nine priority key biodiversity areas, the next highest number. Seven of these key biodiversity areas contain some of the last remaining pristine coastlines in the Mediterranean Basin. The Beaches of Boavista Island Key Biodiversity Area in Cape Verde boasts the largest nesting colony of loggerhead turtle in the hotspot, with approximately 7,600 nesting individuals. Many of these priority key biodiversity areas,

particularly the montane sites, provide essential ecosystem services. It is critical to ensure effective conservation of these sites as nearly all of the principal water sources in the hotspot are contained in these priority key biodiversity areas. Priority key biodiversity areas are listed in Tables 24 and 25.

Priority Corridors

The six priority corridors selected for CEPF investment cover 13 countries. Two of the corridors are restricted to a single country; the Atlas Mountains Corridor is located in Morocco and the Taurus Mountains Corridor is in Turkey. The remaining four priority corridors are all transboundary. The Southwestern Balkans Corridor is particularly notable in that it covers five countries. The six corridors are Southwest Balkans; Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia; the Atlas Mountains; the Taurus Mountains; the Cyrenaican Peninsula; and Orontes Valley and Lebanon Mountains. These six priority corridors hold 17 Critically Endangered, 38 Endangered and 67 Vulnerable species, or 122 of the hotspot's 555 globally threatened species.

Threats to individual corridors vary widely, for example, there are very few protected areas in the Cyrenaican Peninsula, leaving much of the remaining habitats open to increasing anthropogenic threats. The Southwest Balkans corridor is well protected, but requires support with management and implementation of the existing protected areas. These six corridors contain one fourth of the key biodiversity areas in the hotspot, and nearly three-quarters of the priority key biodiversity areas. This further displays the importance of these sites and of these corridors in maintaining biodiversity and ecosystem services in the hotspot. Maps of the priority key biodiversity areas and six priority corridors are included below. The 20 priority key biodiversity areas that are not contained within priority corridors still contain vitally important threatened and endemic biodiversity and critical ecosystem services, and it is believed that civil society could have a significant impact on conserving these sites. Thus, these selected sites are still regarded as high priorities for CEPF support (Figures 17-31). In all instances, CEPF will adopt the 12-nautical-mile territorial sea definition established by the U.N. Convention on the Law of the Sea as the outermost limit for CEPF attention and investment for specific coastal and marine key biodiversity areas

While some of these corridors appear to represent large areas, it must be stressed that the Mediterranean Basin Hotspot covers a vast region of more than 2 million square kilometers. The largest corridor, the Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia, only represents a small fraction of the overall area of the Mediterranean Basin Hotspot (6 percent). However, scaling down to the sites within this corridor, the key biodiversity areas that serve as the core sites for increasing connectivity and resiliency within this corridor comprise less than 0.06 percent of the area of the Mediterranean Basin.

Figure 17. Priority Key Biodiversity Areas for CEPF Investment – Southwest Balkans

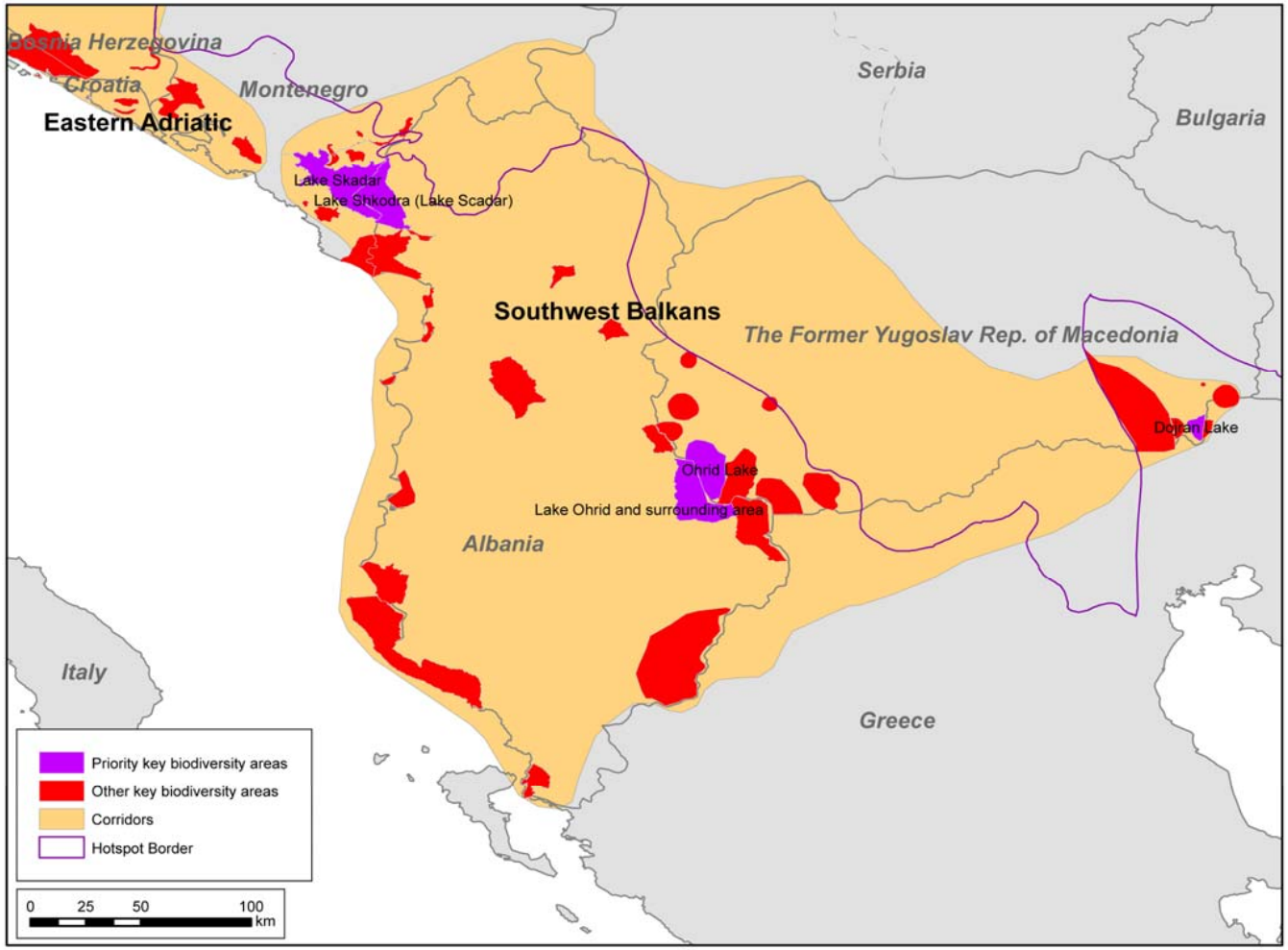


Figure 18. Priority Key Biodiversity Areas for CEPF Investment – Eastern Adriatic

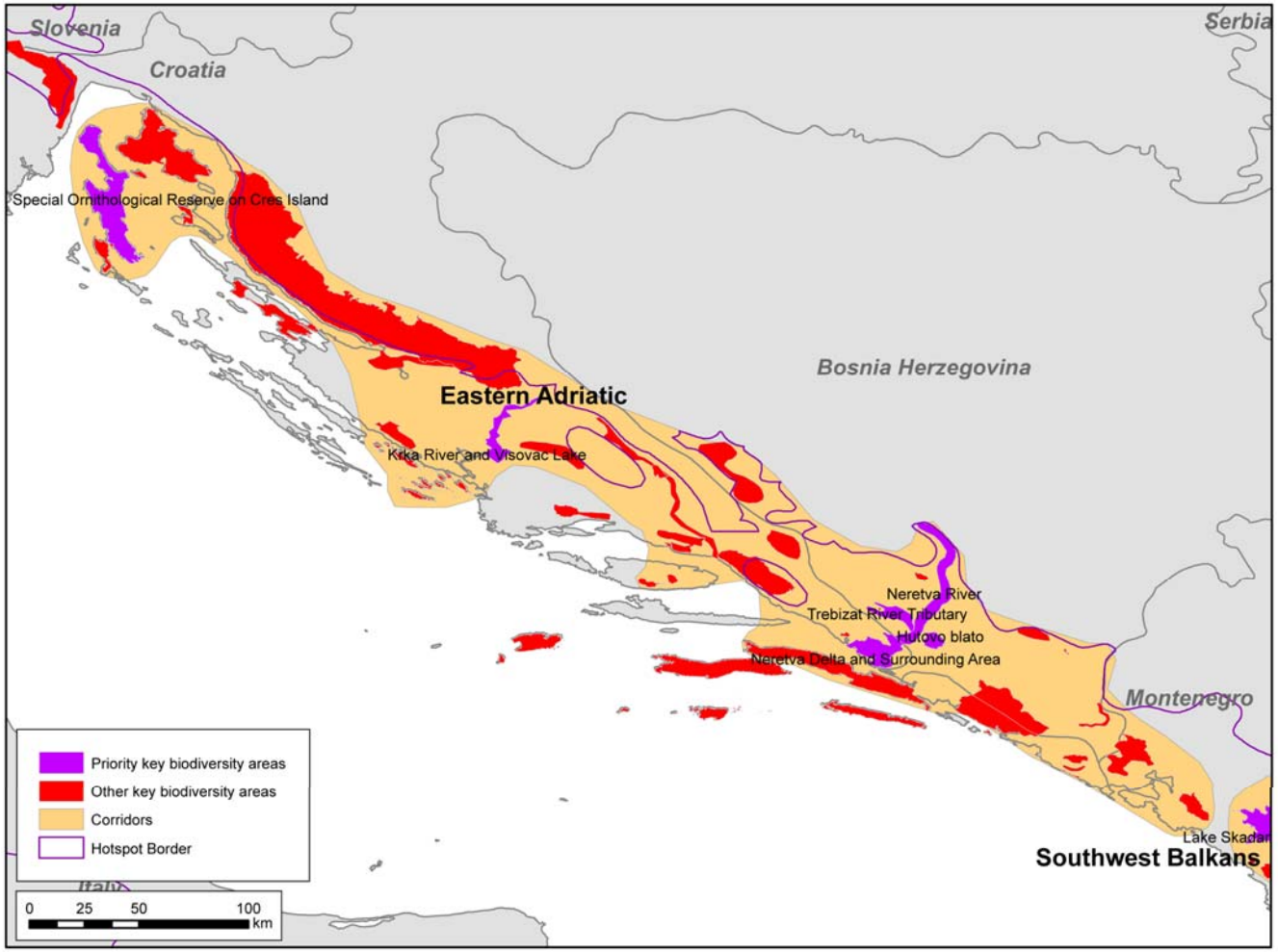


Figure 19. Priority Key Biodiversity Areas for CEPF Investment – The Taurus Mountains

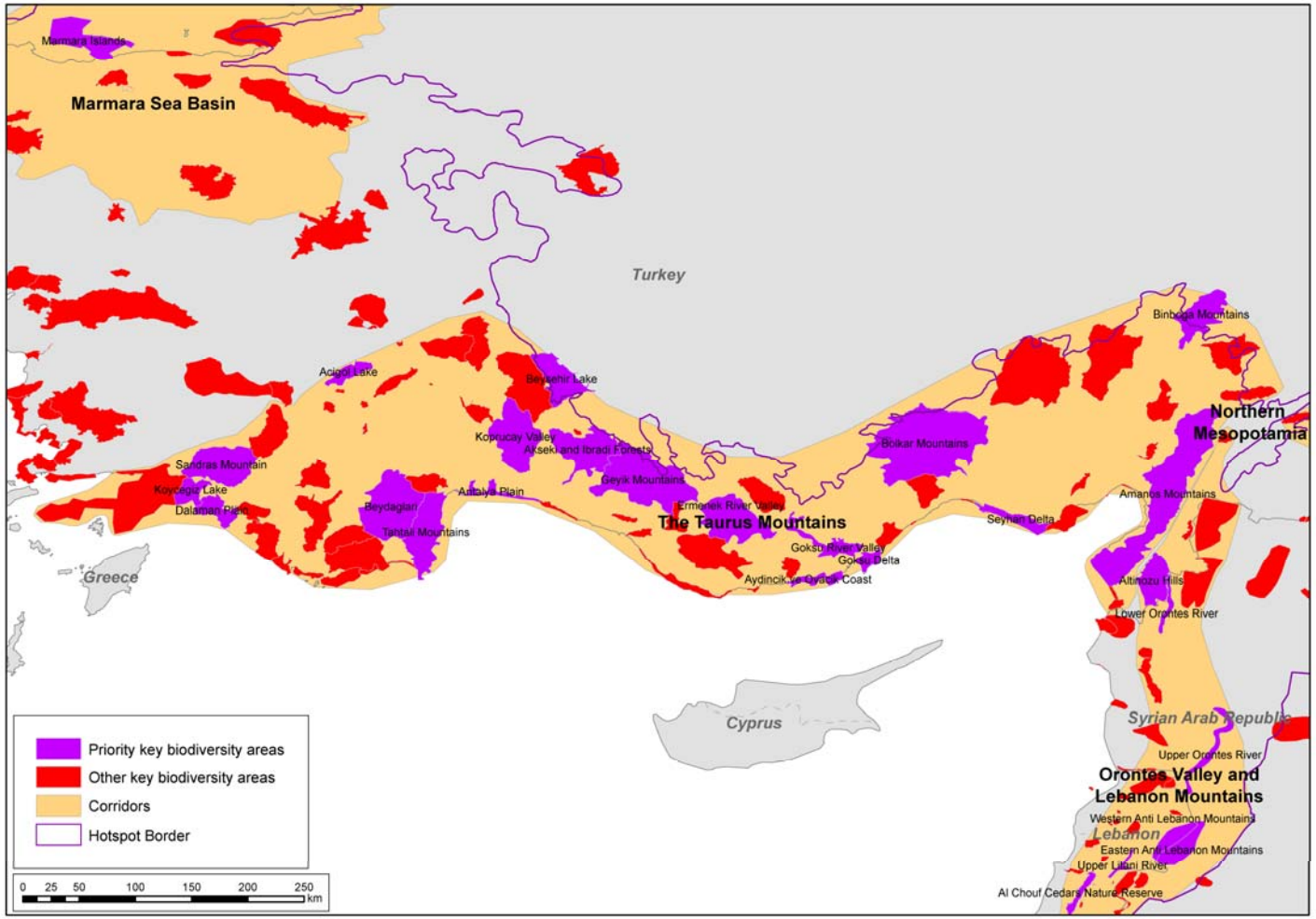


Figure 20. Priority Key Biodiversity Areas for CEPF Investment – Orontes Valley and Lebanon Mountains

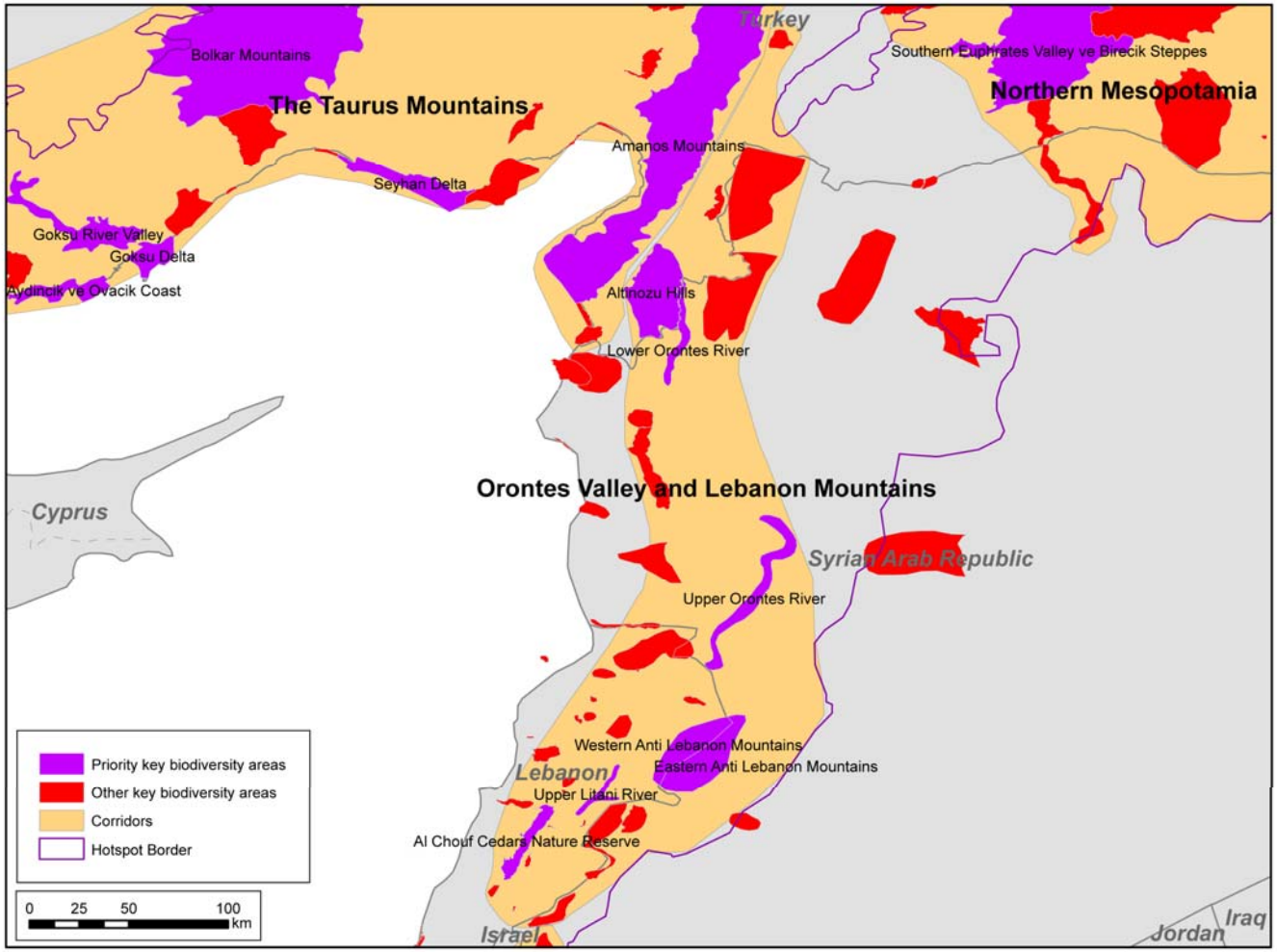


Figure 21. Priority Key Biodiversity Areas for CEPF Investment – Cyrenaican Peninsula

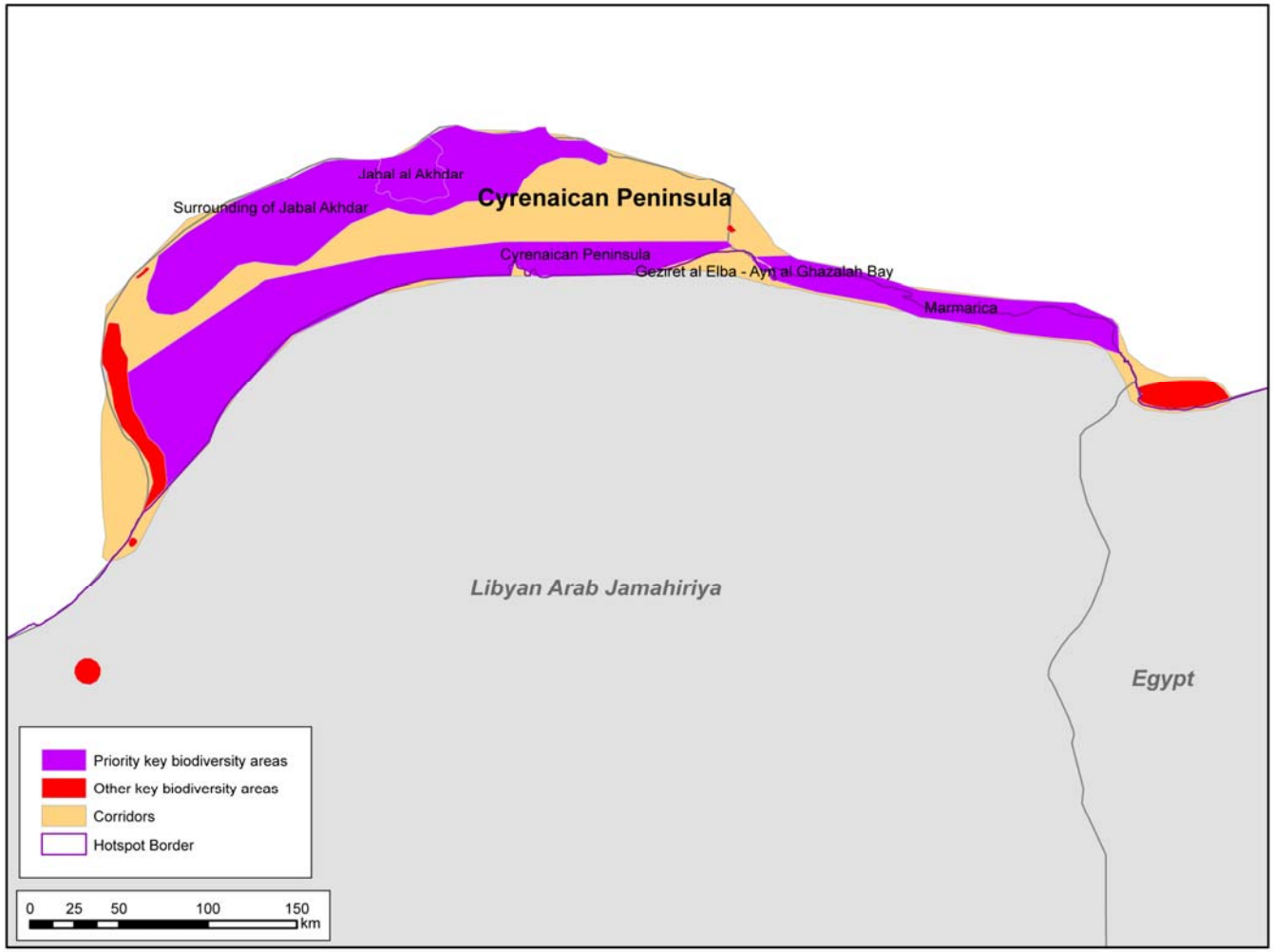


Figure 22. Priority Key Biodiversity Areas for CEPF Investment – The Atlas Mountains

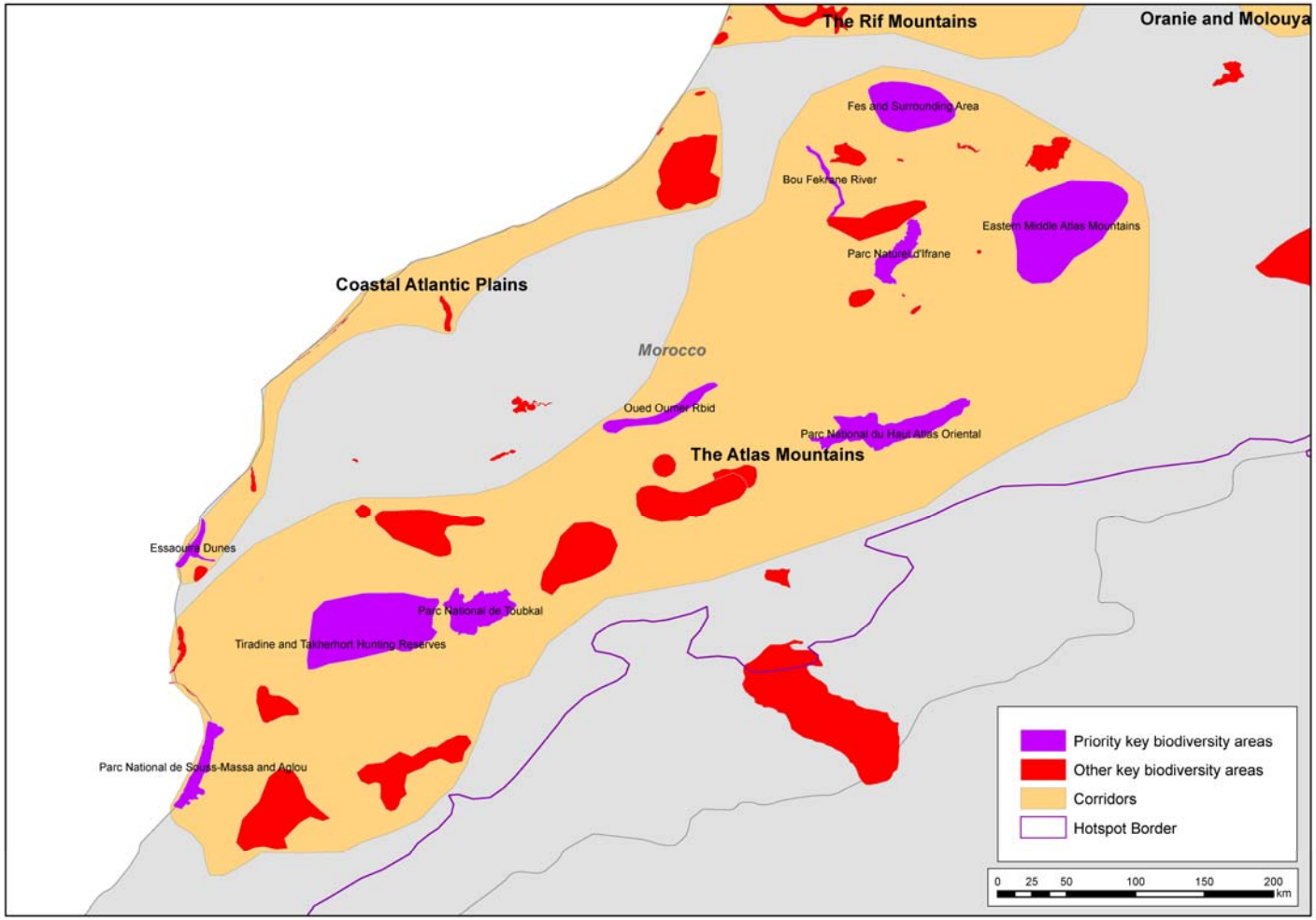


Figure 23. Priority Key Biodiversity Areas for CEPF Investment – Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia

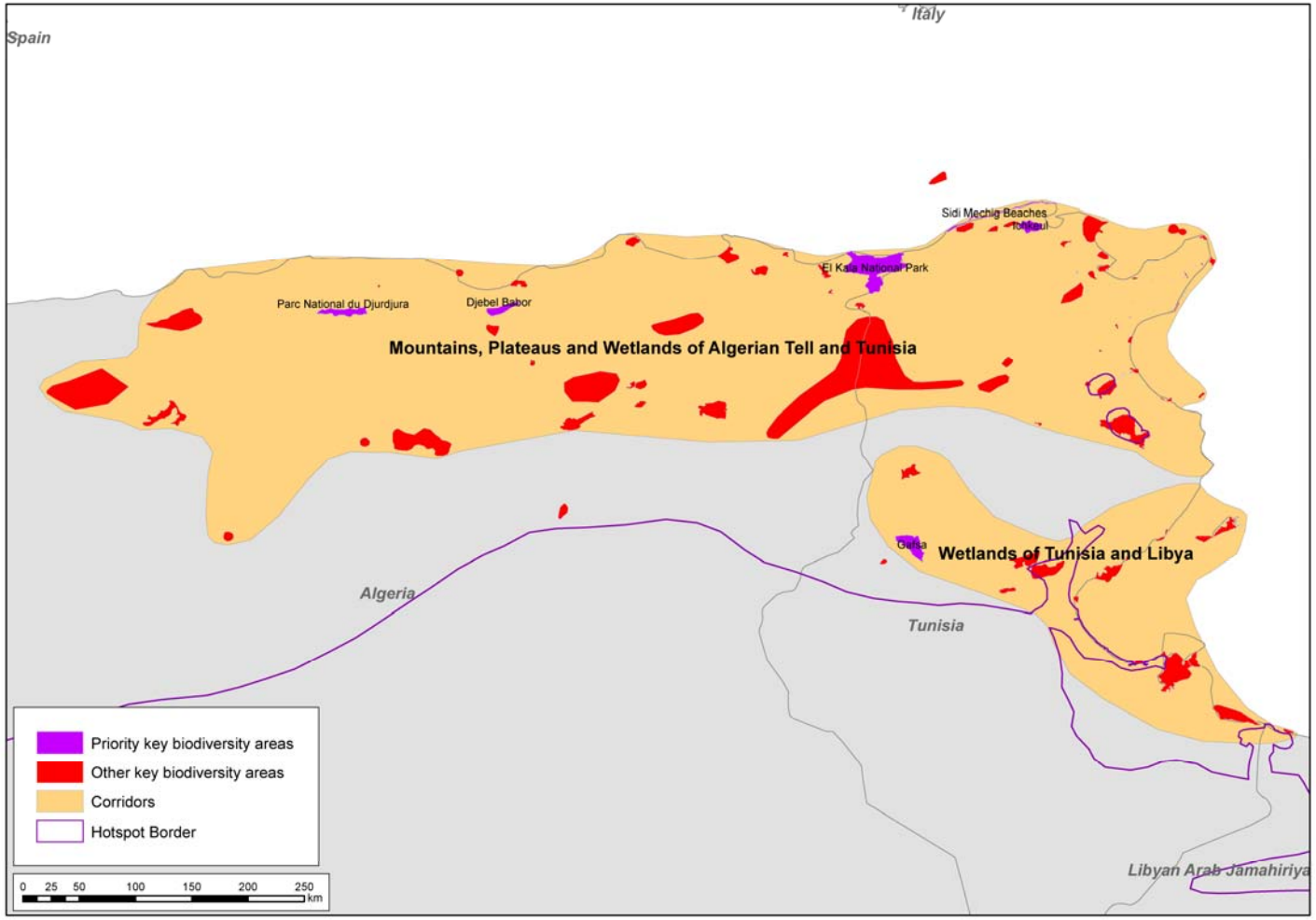


Figure 24. Priority Key Biodiversity Areas for CEPF Investment – Marmara Sea Basin

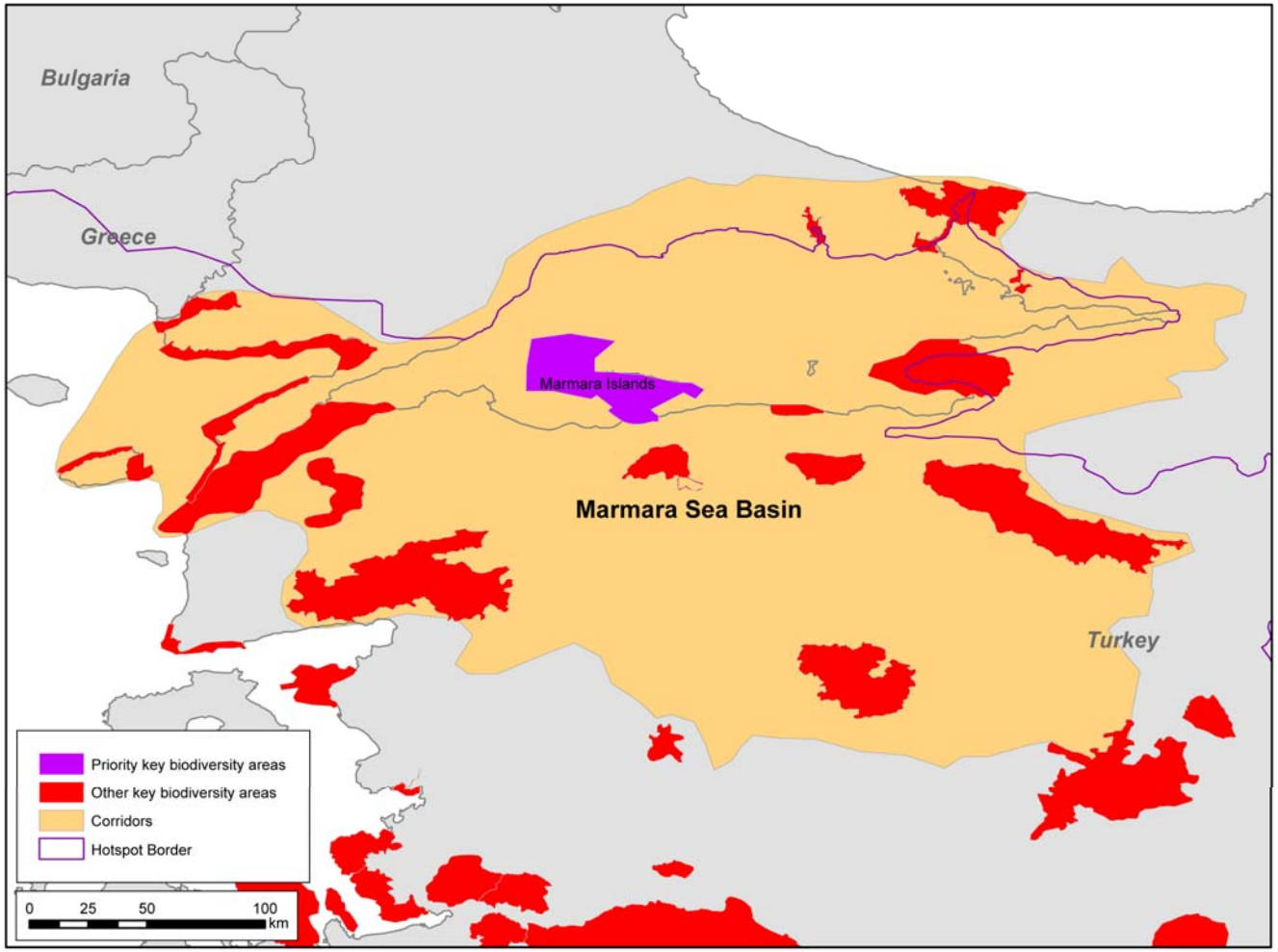


Figure 25. Priority Key Biodiversity Areas for CEPF Investment – Northern Mesopotamia

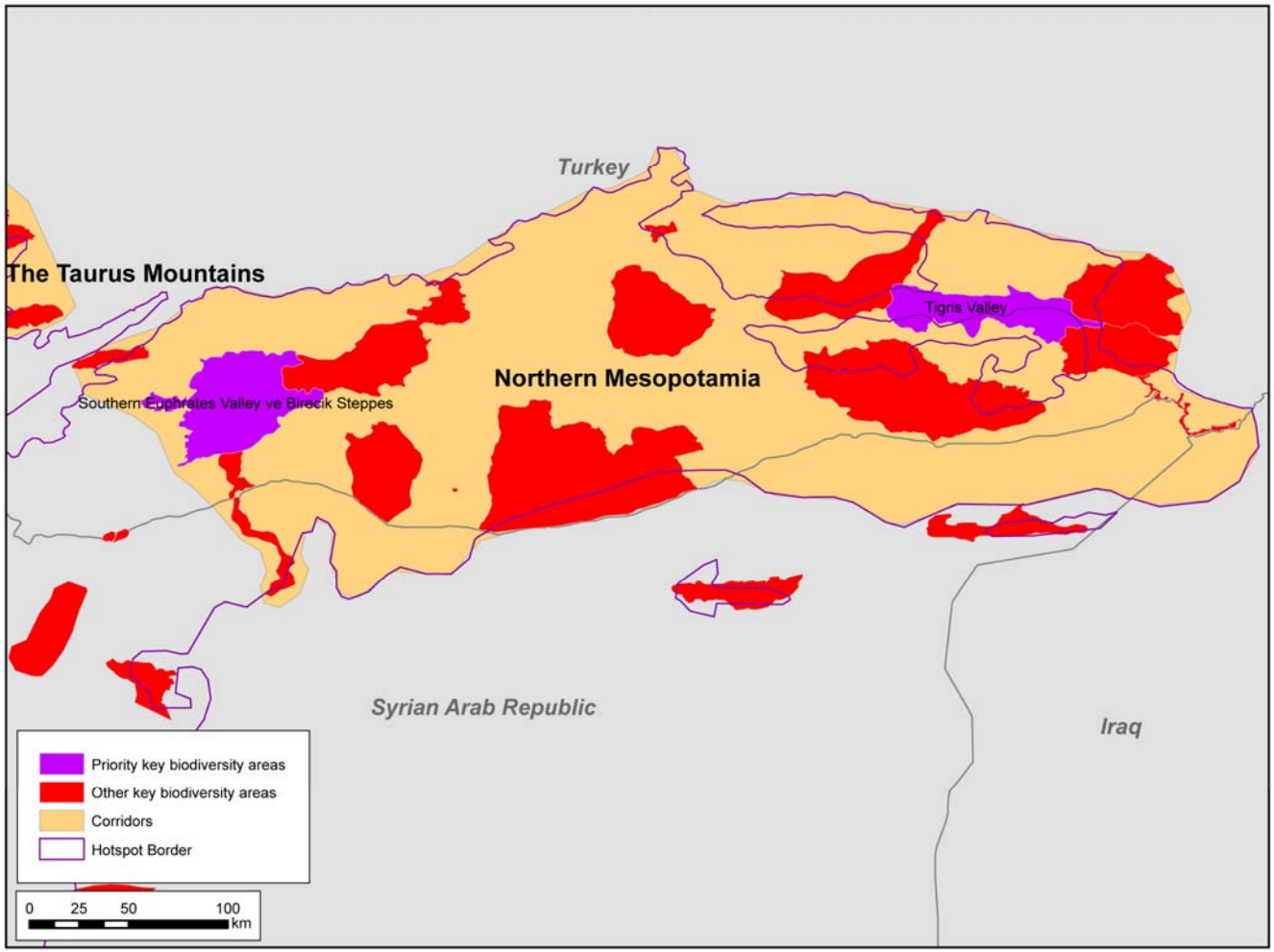


Figure 26. Priority Key Biodiversity Areas for CEPF Investment – South Syria and Northern Jordan

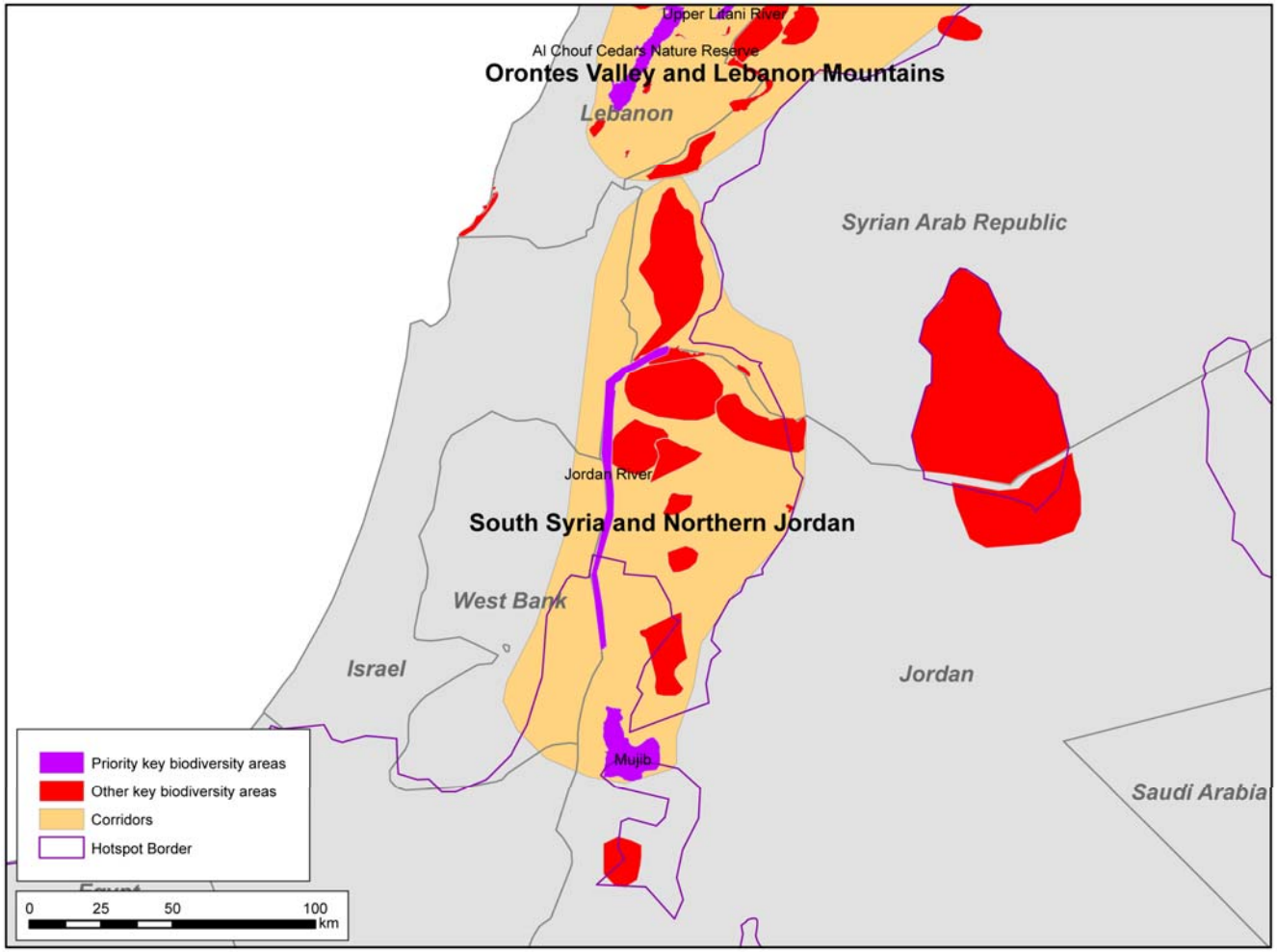


Figure 27. Priority Key Biodiversity Areas for CEPF Investment – Nile Delta Coast

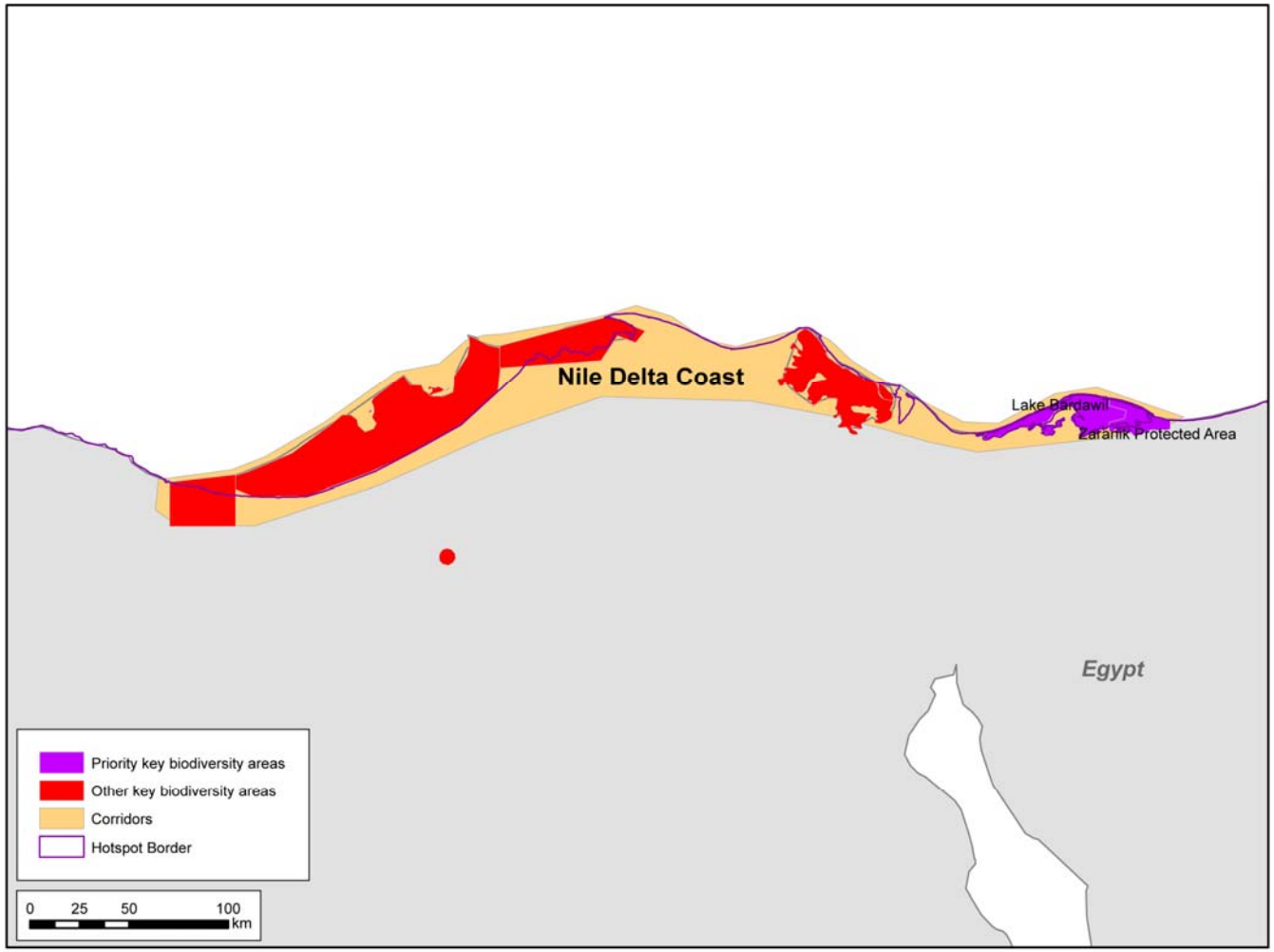


Figure 28. Priority Key Biodiversity Areas for CEPF Investment – Wetlands of Tunisia and Libya

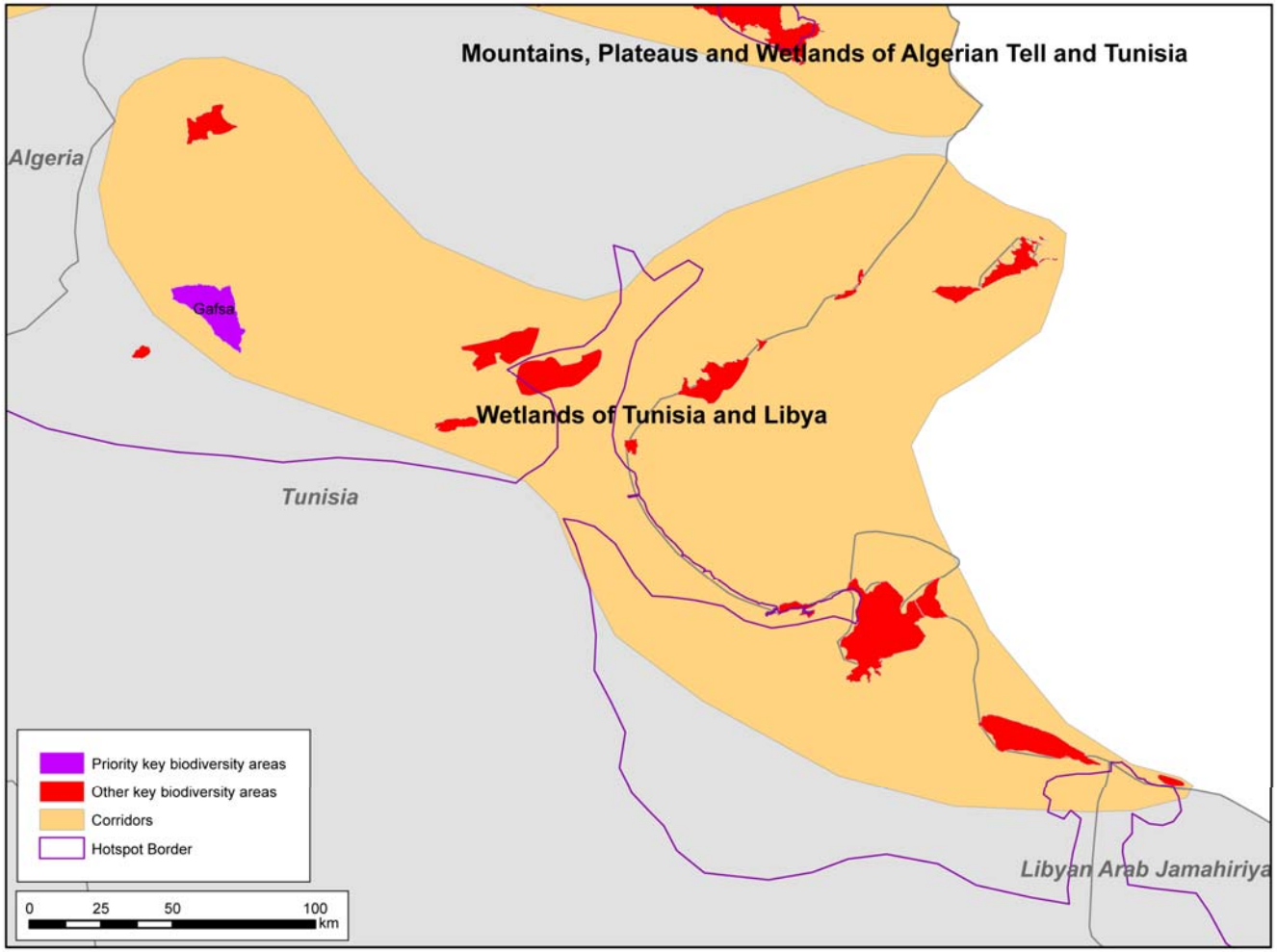


Figure 29. Priority Key Biodiversity Areas for CEPF Investment –Oranie and Molouya

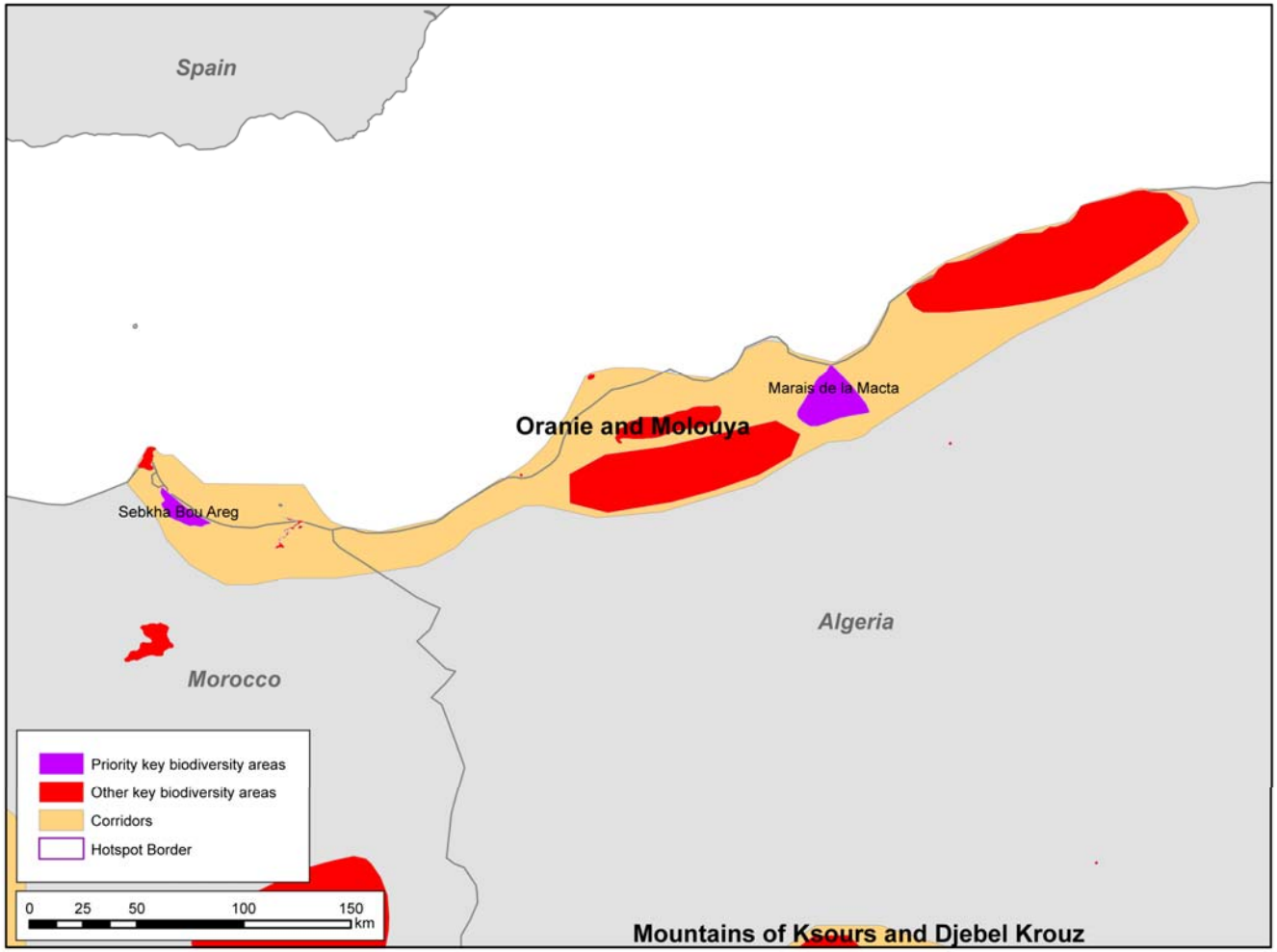


Figure 30. Priority Key Biodiversity Areas for CEPF Investment – Coastal Atlantic Plains

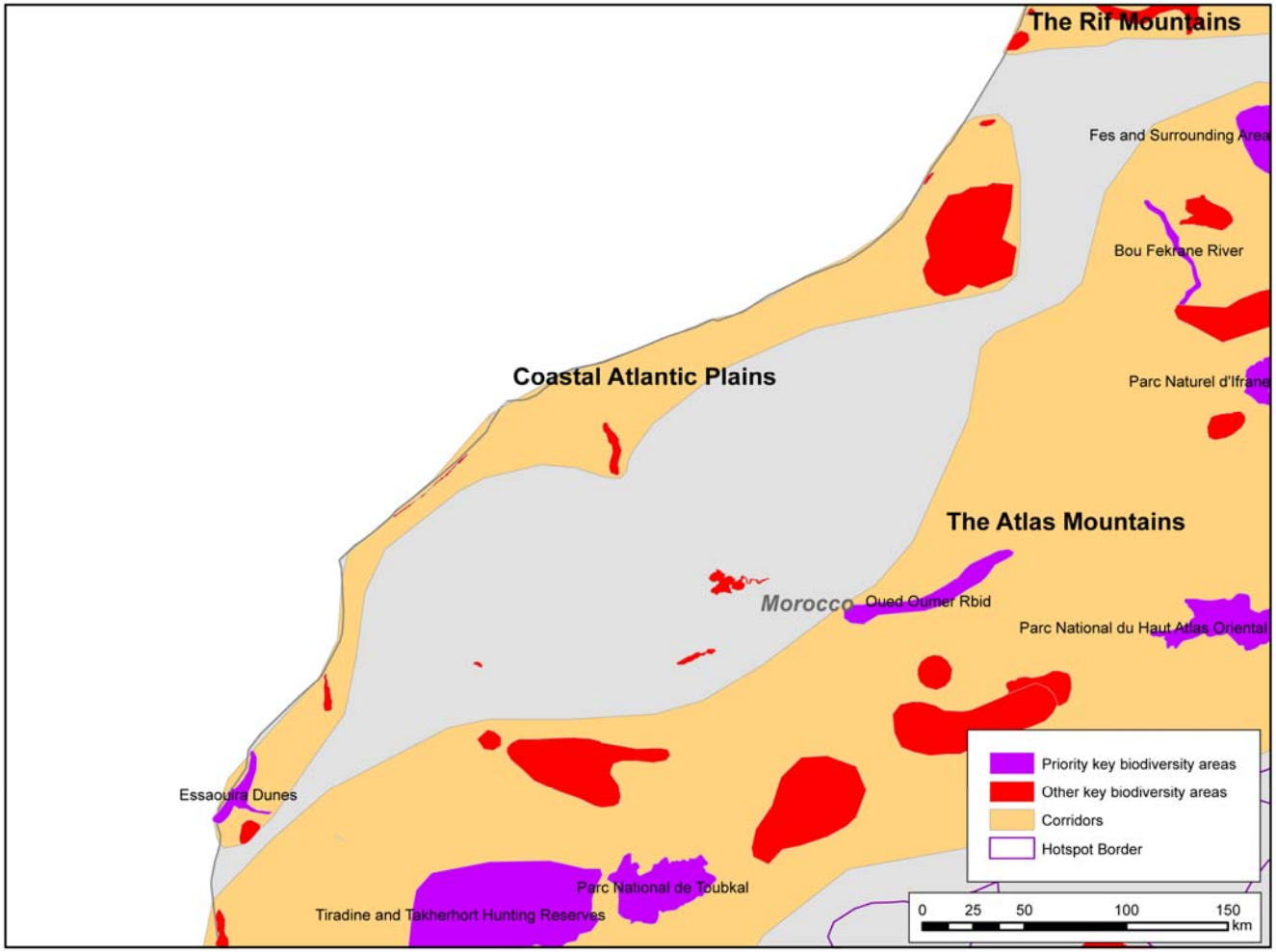
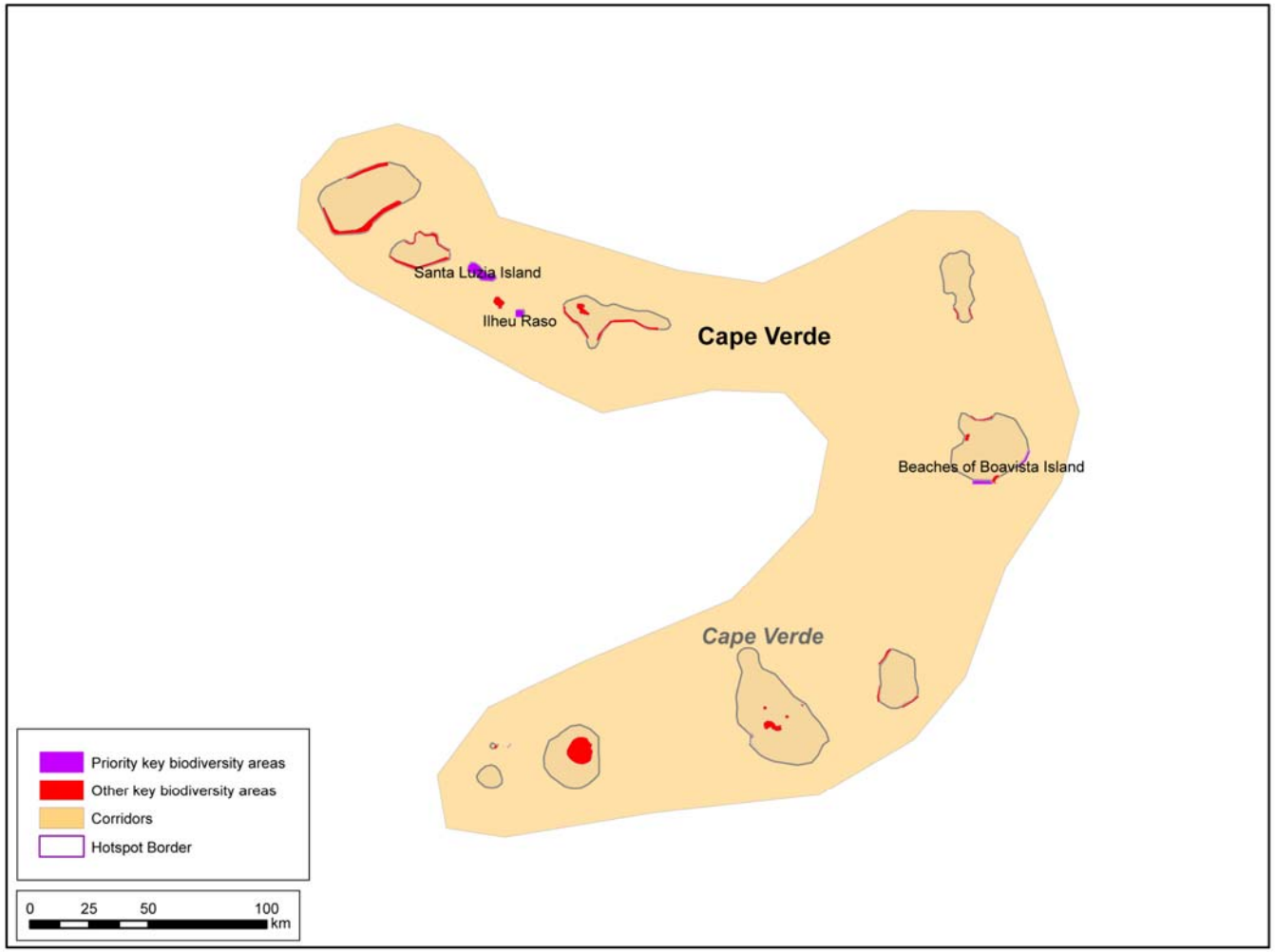


Figure 31. Priority Key Biodiversity Areas for CEPF Investment – Cape Verde



Strategic Directions and Investment Priorities

CEPF's investment strategy for the Mediterranean Basin Hotspot comprises four strategic directions and 12 investment priorities. These are presented in Table 26 and discussed in detail in the section that follows.

Table 26. Strategic Directions and Investment Priorities

STRATEGIC DIRECTIONS	INVESTMENT PRIORITIES
1. Promote civil society involvement in Integrated Coastal Zone Management to minimize the negative effects of coastal development in three priority corridors (Southwest Balkans, Cyrenaican Peninsula, and Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia), and in 20 coastal and marine priority key biodiversity areas in other corridors	1.1 Support civil society involvement in the development and implementation of Integrated Coastal Zone Management (ICZM) and the advancement of best practices in integrating nature conservation with the tourism sector 1.2 Raise awareness and influence the choices of the European tourist market and tourism businesses in favor of tourism practices appropriate for nature 1.3 Support local stakeholders to advance and benefit from nature-based tourism through the diversification of tourism-related activities and generation of alternative livelihoods
2. Establish the sustainable management of water catchments and the wise use of water resources with a focus on the priority corridors of the (1) Atlas Mountains, (2) Taurus Mountains, (3) Orontes Valley and Lebanon Mountains and (4) Southwest Balkans	2.1. Contribute to and establish Integrated River Basin Management (IRBM) initiatives for pilot basins and replicate best practices to reduce the negative impacts of insufficiently planned water infrastructures 2.2. Support IRBM policy and legislation development and implementation through capacity building and advocacy at all appropriate levels 2.3. Support innovative financing mechanisms for conserving and restoring freshwater ecosystems and traditional water catchments 2.4. Facilitate and support adaptation to climate change via improving water use efficiency in agricultural landscapes and allowing environmental flows for key biodiversity areas 2.5 Share and replicate the lessons learned and best practices from and with other river basin management experiences elsewhere in the Mediterranean
3. Improve the conservation and protection status of 44 priority key biodiversity areas	3.1. Establish new protected areas and promote improved management of existing protected areas by developing and implementing sustainable management plans 3.2. Develop financial mechanisms that support protected areas while enhancing sustainable livelihood and promoting community management of priority key biodiversity areas 3.3. Raise awareness of the importance of priority key biodiversity areas, including those that have irreplaceable plant and marine biodiversity
4. Provide strategic leadership and effective coordination of CEPF investment through a regional implementation team	4.1. Build a broad constituency of civil society groups working across institutional and political boundaries toward achieving the shared conservation goals described in the ecosystem. 4.2. Act as a liaison unit for relevant networks throughout the Mediterranean to harmonize investments and direct new funding to priority issues and sites.

Strategic Direction 1. Promote civil society involvement in Integrated Coastal Zone Management to minimize the negative effects of coastal development in three priority corridors (Southwest Balkans, Cyrenaican Peninsula, and Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia), and in 20 coastal and marine priority key biodiversity areas in other corridors

This strategic direction will focus on tourism development in coastal regions as one of the key pressures on the hotspot, which is impacting both terrestrial and marine

ecosystems. This will be achieved through supporting civil society involvement in the development and implementation of Integrated Coastal Zone Management (ICZM) following the newly ratified ICZM protocol under the Barcelona Convention (PAP/RAC 2007) (See Appendix 7). Moreover, local stakeholders will be supported to advance and benefit from nature-based tourism through the diversification of tourism activities and generation of alternative livelihoods.

Moreover, local stakeholders will be supported to advance and benefit from nature-based tourism through the diversification of tourism activities and generation of alternative livelihoods. These approaches will be complemented by influencing the choices of the tourism market in favor of sustainable and nature-based products including ventures of demonstration value where tourism development has been designed and/or is being implemented with a minimum possible negative impact on biodiversity and natural resources. There is considerable experience of ICZM and the promotion of sustainable tourism in the Mediterranean, especially in the North, and it is vital that this experience is shared with stakeholders in priority coastal zones in the East and South and that civil society competencies are strengthened through technical assistance and training.

This strategic direction will focus on three corridors with comparatively undeveloped coastlines but where tourism development is advancing rapidly: (1) Southwest Balkans, (2) Cyrenaican Peninsula, and (3) Wetlands of Algerian Tell and Tunisia, as well as an additional 20 coastal and marine priority key biodiversity areas in other corridors (Table 27). In order to facilitate and target investment, CEPF will support a number of small grants to conduct corridor-scale planning workshops. These would help to build alliances and further refine the focus of investment, including the need to take account of additional plant priorities that are expected to be identified by Plantlife/IUCN during 2010.

1.1 Support civil society involvement in the development and implementation of Integrated Coastal Zone Management (ICZM) and the advancement of best practices in integrating nature conservation with the tourism sector

Lack of proper planning of coastal landscapes is one of the major problems encountered in the Mediterranean Basin. In areas where the tourism industry is growing at a rapid pace, weakly planned infrastructural investments have severely impacted on natural resources with negative consequence over the longer term for the wider economy. Many tactics have so far been developed to address this issue, including Integrated Coastal Zone Management (ICZM). Many areas in the East and South Mediterranean are likely to benefit from ICZM, although integrating nature conservation with tourism is a new approach for many of the target countries of CEPF.

This investment priority will support local stakeholders in target countries to develop and advance multi-sector planning methods in corridors and key biodiversity areas where high-biodiversity values overlap with the interests of the tourism industry. Civil society has a key role to play in *inter alia* (1) identifying and promoting the integration of conservation priorities in land-use zoning and development planning; (2) ensuring environmental impacts of any development are assessed, avoided, and if necessary mitigated (where possible with net-positive gains for nature conservation); (3) mobilizing public and community concerns and brokering partnerships with government and the private sector, (4) implementing nature conservation mitigation or offsets aspects of coastal zone development and (5) enabling civil society to work hand-in-hand with governments to mainstream biodiversity conservation into development planning. CEPF investments should be targeted where civil society engagement can make a difference, where opportunities and mechanisms exist to influence coastal zone development planning at an appropriate stage, and where the relevant government agencies and/or the private sector are open to civil society involvement. These projects will likely require the

forming of partnerships between civil society, the private sector and local and/or national government organizations. These partnerships and relationships will be developed using local frameworks and mechanisms, visioning workshops, and land use planning exercises with relevant government and local authorities.

1.2 Raise awareness and influence the choices of the European tourist market and tourism businesses in favor of tourism practices appropriate for nature

Most tourists in the Mediterranean Basin come from European countries and their choices have huge impacts on the natural resource base of the hotspot. Under this investment priority, projects will be supported with high potential to influence the tourism market in Europe in a more sustainable and nature conservation orientated direction. To this end, cooperation with tourism companies or governments and, where needed, north-south partnerships will be sought. Actions may actively promote alternative destinations of natural value, where tourism activities could have a positive impact on natural resources and local communities. Furthermore, the wider tourism business in the region can also make significant changes by altering their practices in support of biodiversity in priority corridors. Innovative solutions implemented by civil society will receive support to spread tourism practices appropriate for nature. Projects supported here could develop a green seal with the private sector to certify tourist packages, hotels and destinations that meet certain criteria for environmental sustainability. Appropriate communications efforts to ensure effective implementation of any certification program would also be supported.

1.3 Support local stakeholders to advance and benefit from nature-based tourism through the diversification of tourism-related activities and generation of alternative livelihoods

Throughout the Mediterranean Basin Hotspot, the natural and cultural landscapes offer enormous potential for nature-based tourism and other alternative livelihoods for local stakeholders. At present, there is a disproportionate concentration of nature tourists in the European part of the Mediterranean Basin where this activity is making a significant contribution to local economies and nature conservation. There is, however, very limited capacity to realize this potential and to develop and serve the market in the East and South of the Mediterranean Basin. The major gaps in the East and South include guiding services, tourist accommodation, information and interpretation materials and facilities, and internet-based or other information sources on key destinations. Projects supported under this investment priority will aim to pilot and promote nature-based tourism in the priority corridors and key biodiversity areas in the East and South, through addressing these and other gaps, and through support for socioeconomic development of local communities and other stakeholders in a way that sustains natural resources.

Table 27. Key Biodiversity Areas for Investment Under Strategic Direction 1

no	Key Biodiversity Area Name	Country	Corridor Name*
1	Sallum Gulf	Egypt	**Cyrenaican Peninsula**
2	Ajdabiya Marsh Protected Areas	Libya	**Cyrenaican Peninsula**
3	Benghazi	Libya	**Cyrenaican Peninsula**
4	Benghazi Coast	Libya	**Cyrenaican Peninsula**
5	Bumbah Gulf	Libya	**Cyrenaican Peninsula**
6	Geziret al Elba - Ayn al Ghazalah Bay	Libya	**Cyrenaican Peninsula**
7	Geziret Garah	Libya	**Cyrenaican Peninsula**
8	Jabal al Akhdar	Libya	**Cyrenaican Peninsula**
9	Marmarica	Libya	**Cyrenaican Peninsula**
10	Surrounding of Jabal Akhdar	Libya	**Cyrenaican Peninsula**
11	Collo	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
12	Complexe de zones humides de la plaine de Guerbes-Sanhadja	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
13	Edough National Park	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
14	El Kala National Park	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
15	Gouraya	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
16	Marais de Mekhada	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
17	Parc National de Taza	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
18	Djebel el Haouaria	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
19	Kuriat Islands	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
20	Lagune de Korba	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
21	Lake Tunis (Lake Rades)	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
22	Nabeul Lagoons	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
23	Ras el Melan Dunes	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**

no	Key Biodiversity Area Name	Country	Corridor Name*
24	Salines de Monastir	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
25	Sebkhet Ariana	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
26	Sidi Mechig Beaches	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
27	Soliman	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
28	Western Gulf of Tunis	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
29	Zembra and Zembretta Islands	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**
30	Butrinti and surrounding area	Albania	**Southwest Balkans**
31	Drini Delta	Albania	**Southwest Balkans**
32	Karavasta Lagoon	Albania	**Southwest Balkans**
33	Lalzi Bay	Albania	**Southwest Balkans**
34	Narta Lagoon and surrounding area	Albania	**Southwest Balkans**
35	Patoku Lagoon	Albania	**Southwest Balkans**
36	Velipoja and surrounding area	Albania	**Southwest Balkans**
37	Vlora Bay, Karaburun Peninsula and Cika Mountain	Albania	**Southwest Balkans**
38	Bojana Delta	Montenegro	**Southwest Balkans**
39	Beaches of Boavista Island	Cape Verde	Cape Verde
40	Ilheu Raso	Cape Verde	Cape Verde
41	Santa Luzia Island	Cape Verde	Cape Verde
42	Essaouira Dunes	Morocco	Coastal Atlantic Plains
43	Krka River and Visovac Lake	Croatia	Eastern Adriatic
44	Neretva Delta and Surrounding Area	Croatia	Eastern Adriatic
45	Special Ornithological Reserve on Cres Island	Croatia	Eastern Adriatic
46	Marmara Islands	Turkey	Marmara Sea Basin
47	Lake Bardawil	Egypt	Nile Delta Coast
48	Zaranik Protected Area	Egypt	Nile Delta Coast

no	Key Biodiversity Area Name	Country	Corridor Name*
49	Sebkha Bou Areg	Morocco	Oranie and Molouya
50	Parc National de Souss-Massa and Aglou	Morocco	The Atlas Mountains
51	Amanos Mountains	Turkey	**The Taurus Mountains**
52	Antalya Plain	Turkey	**The Taurus Mountains**
53	Aydincik ve Ovacik Coast	Turkey	**The Taurus Mountains**
54	Dalaman Plain	Turkey	**The Taurus Mountains**
55	Goksu Delta	Turkey	**The Taurus Mountains**
56	Koycegiz Lake	Turkey	**The Taurus Mountains**
57	Seyhan Delta	Turkey	**The Taurus Mountains**
58	Tahtali Mountains	Turkey	**The Taurus Mountains**

* Priority corridors are in bold.

Strategic Direction 2: Establish the sustainable management of water catchments and the wise use of water resources with a focus on the priority corridors of the (1) Atlas Mountains, (2) Taurus Mountains, (3) Orontes Valley and Lebanon Mountains and (4) Southwest Balkans

This strategic direction covers water catchment conservation where this is essential to conserve priority sites and habitats with a specific emphasis on agriculture but also covering the other main causes of water consumption such as domestic and industrial use. Integrated River Basin Management (IRBM) initiatives will be promoted through pilot planning projects in a number of basins that hold priority key biodiversity areas, including transboundary systems, through pilot basin projects and enhancement of water basin conservation legislation at appropriate levels. Furthermore, conservation and restoration of freshwater ecosystems as well as innovative financing mechanisms for traditional water-saving landscapes will be encouraged, alongside initiatives to reduce water consumption as part of wider efforts to adapt to climate change. Given the threats to river basins, it will be necessary to explicitly address plans for infrastructure development, especially dams, in these priority corridors and to advance ways of engaging constructively with the stakeholders advancing such plans.

Civil society has a key role to play in *inter alia* (1) identifying and promoting the integration of conservation priorities in IRBM; (2) presenting and promoting options for sustainable water use and management; (3) ensuring environmental impacts of any river basin development are assessed, avoided, and if necessary mitigated (where possible with net-positive gains for nature conservation); (4) mobilizing public and community concerns and brokering partnerships with government and the private sector, and (5) implementing nature conservation components of basin management plans. CEPF investments should be targeted where opportunities and mechanisms exist for civil society to engage in IRBM, and where the relevant government agencies and/or the private sector are open to civil society involvement.

As with Strategic Direction 1, if deemed appropriate, CEPF will support corridor-scale planning workshops to help build alliances for IRBM and further refine the focus of investment, including the need to take account of additional plant priorities that are expected to be identified by Plantlife/IUCN during 2010.

2.1 Contribute to and establish Integrated River Basin Management (IRBM) initiatives for pilot basins and replicate best practices, to reduce the negative impacts of insufficiently planned water infrastructures

Given its intricate landscapes, the Mediterranean Basin comprises many small river basins hosting fragile water systems as well as irreplaceable biodiversity. In most of the river basins in the south and east, water projects are currently being developed independent of one another without planning for downstream consequences or for the basin as whole. This creates a high and unregulated demand on scarce water resources which is impacting negatively on the ecological and economic functions of freshwater ecosystems and other associated habitats. Consequently, there is an urgent need for a basin wide management of the river basins in priority corridors. Integrated basin wide management in areas with high biodiversity value will be supported under this investment priority. Civil society and government partnerships will be sought to undertake such demonstration projects.

2.2 Support IRBM policy and legislation development and implementation through capacity building and advocacy at all appropriate levels

Many governments in the region have the intention of moving towards IRBM policy and legislation as an alternative to traditional water investment projects. However, lack of know-how and awareness of international best practices hinders this transition process. Civil society and government cooperation can significantly facilitate developments

towards IRBM and this investment priority will support such projects. CEPF will seek to support pilot IRBM projects in priority corridors through which national capacity on IRBM can be developed with the cooperation of civil society and governmental organizations. Such pilot projects can be complemented by IRBM policy and legislation development efforts (such as drafting legal documents or awareness activities) at the national scale. North-south or west-east partnerships can be sought under this investment priority in cases where the national know-how in eligible countries is insufficient.

2.3 Support innovative financing mechanisms for conserving and restoring freshwater ecosystems and traditional water catchments

The health of freshwater ecosystems depends on land use in the wider catchment area and the direct human activities in these ecosystems. CEPF can make a major difference in priority corridors by supporting innovative financing mechanisms such as payments for watershed services in water catchment areas that lead to conservation of freshwater and terrestrial ecosystems. Projects supported under this investment priority may include streamlining direct payments for watershed services from local or national governments as well as from other beneficiaries of critical ecosystems in water catchments. Moreover, market development for alternative or traditional land-use practices proven to be instrumental for watershed conservation or restoration can be supported. This investment priority will also support projects that determine the required environmental flows for important wetlands, and which seek to ensure that such flows are secured through appropriate agreements, release of flows from dams and improved irrigation efficiency.

2.4 Facilitate and support adaptation to climate change via improving water use efficiency in agricultural landscapes and allowing environmental flows for key biodiversity areas

Agricultural irrigation accounts for up to 90 percent of total water consumption of the river basins in the Mediterranean Basin Hotspot. In many countries in the south and east, efficient irrigation techniques are still scarce causing significant loss of freshwater resources and making the biodiversity and local communities more vulnerable to climate change. This results in deterioration of lakes and depletion of underground resources, threatening the unique freshwater biodiversity of the Mediterranean Basin. To reduce the water consumption for irrigation, CEPF will support; (i) demonstration projects on how efficiency can be gained, and (ii) awareness raising about the incentives for efficient irrigation schemes, how to get them, and what the rewards are in each of the relevant countries. Projects under this investment priority will assist the stakeholders to switch to efficient irrigation techniques in priority corridors and key biodiversity areas. In the northern Mediterranean, such projects have proven to be extremely useful in preserving biodiversity and water resources, and have reduced the water consumption between 30-100 percent. Traditional farming methods can also be used to increase water efficiency.

2.5 Share and replicate the lessons learned and best practices from and with other river basin management experiences elsewhere in the Mediterranean

There is considerable experience of IRBM, and wetland and water conservation, in the Mediterranean, especially in Israel and in the North. It is vital that this experience is shared with stakeholders in priority coastal zones in the East and South and that civil society competencies are strengthened through technical assistance and training. To this end, CEPF will encourage exchange visits and will develop relevant media to improve the access to information for all stakeholders throughout the Mediterranean Basin.

Strategic Direction 3: Improve the conservation and protection status of 44 priority key biodiversity areas

Aside from the priority coastal key biodiversity areas that are included under Strategic Direction 1, CEPF has prioritized a further 44 terrestrial priority key biodiversity areas falling within six priority corridors and five other corridors for site-level implementation of direct conservation efforts on the ground (Table 28). This strategic direction will address on-theground conservation issues at priority key biodiversity areas, while site conservation actions carried out under Strategic Direction 2 may also involve critical issues that occur outside the boundaries of key biodiversity areas, i.e. immediate effects of wider water policy issues on priority key biodiversity areas.

If these sites can be effectively safeguarded, then a significant proportion of the biodiversity and ecosystem services in the hotspot will be conserved. Twenty-two of the key biodiversity areas are partly or fully protected, however the management on the ground is inadequate and is not successful in abating threats to these sites allowing for further degradation and habitat loss. The remaining 22 sites are totally unprotected from threats, allowing habitat encroachment and loss to occur. These sites lack the legal and institutional frameworks necessary to ensure their protection. Additionally, some sites, such as in Cape Verde islands are threatened by invasive species. Strategic Direction 3 aims to strengthen the management of protected key biodiversity areas and to secure legal conservation for unprotected priority key biodiversity areas. The management of key biodiversity areas can be improved through legally binding management plans or community agreements with an aim of sustaining the natural resources at a given site.

3.1 Establish new protected areas and promote improved management of existing protected areas by developing and implementing sustainable management plans

Improved protected area status of these priority sites is urgently required to conserve the ecosystem services and biodiversity found in the hotspot. This investment priority will lay the groundwork for the legal frameworks to designate these sites as new protected areas. In some areas, for example in the Taurus Mountains and the Cyrenaican Peninsula, formal protected areas will be possible. While in others, mainly coastal areas, multi-use biosphere reserves will be more appropriate. Additionally, this priority will embrace flexible approaches to conservation via community managed areas, private nature reserves and local municipal reserves. CEPF will support the dialogue, framework, technical assistance, stakeholder discussions, management plans and innovative approaches such as stewardship that will enable protected areas under all forms to offer better protection to priority key biodiversity areas. In the Balkan States and Turkey, projects will be supported that help governments to identify and protect sites, for future inclusion in the Natura 2000 network, as part of their plans for accession to the EU and the implementation of the EU Birds and Habitats Directives.

In addition, many of these key biodiversity areas are in need of management plans as well as sufficient and capable protected area staff. CEPF will support the preparation and implementation of sustainable management plans for those key biodiversity areas that lack effective plans. For sites where plans exist, but are weak, CEPF will support the strengthening of these plans and the implementation of best management practices at sites that are weakly governed and supported. Development and implementation of these plans will be essential to ensure the long term institutional, ecological and social viability of these sites, particularly when considering the implications of climate change. A broad base of stakeholders will be engaged to ensure appropriate planning is achieved at local scales.

3.2 Develop financial mechanisms that support protected areas while enhancing sustainable livelihood and promoting community management of priority key biodiversity areas

Habitat degradation has occurred throughout much of the hotspot due to unsustainable agricultural practices. While the first investment priority under this strategic direction will increase management and protection of priority key biodiversity areas, this investment priority will develop sustainable livelihood and financial mechanisms to ensure sustainability of community managed areas. In areas where ecosystem service values are high, Payments for Ecosystem Services will be explored as a possible pathway, whilst in other areas trust funds and other sustainable financing mechanisms will be more appropriate. CEPF will support the development of alternative livelihoods for communities adjacent to high-priority key biodiversity areas where this will help to advance conservation at these sites and address specific threats. This will seek to allow communities to derive tangible benefits from the important biodiversity and ecosystem service resources in their backyards. This will be achieved via innovative conservation approaches from leading NGOs in the region that will promote green development pathways for local communities. Effective and creative financial mechanisms such as offsets could be explored. This investment priority aims to support enterprises that will generate environmentally sustainable income for communities by working with communities to benefit from nature-based tourism and related activities.

3.3. Raise awareness of the importance of priority key biodiversity areas, including those that have irreplaceable plant and marine biodiversity

Although the global importance of the Mediterranean Basin Hotspot is mainly a result of the region's botanical and marine biodiversity, geographical priorities for plants and marine life are comparatively poorly known, and there is disproportionally insufficient conservation investment targeting them. Specifically, a comprehensive inventory of Important Plant Areas in the hotspot (as a subset of key biodiversity areas) is currently lacking, and plant conservation priorities are particularly poorly defined in North Africa. This hinders the implementation of targeted conservation investment both by governments and donors. Addressing this gap is a long overdue conservation priority and would leave a long-lasting CEPF legacy in the region. CEPF will specifically target resources to assess and promote the conservation importance of priority key biodiversity areas irreplaceable for plant and marine biodiversity including the identification of new sites.

Table 28. Key Biodiversity Areas for Investment Under Strategic Direction 3

no	Corridor Name*	Key Biodiversity Area	% Protection	Country	Surface Area (ha)
1	**Southwest Balkans**	Lake Ohrid and surrounding area	100	Albania	32,725.86
2	**Southwest Balkans**	Lake Shkodra (Lake Scadar)	98	Albania	27,571.63
3	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Djebel Babor	0	Algeria	11,199.43
4	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Parc National du Djurdjura	100	Algeria	15,898.19
5	Oranie and Molouya	Marais de la Macta	0	Algeria	43,024.99
6	Eastern Adriatic	Hutovo blato	0	Bosnia and Herzegovina	4,103.63
7	Eastern Adriatic	Neretva River	4	Bosnia and Herzegovina	23,875.78
8	Eastern Adriatic	Trebizat River Tributary	0	Bosnia and Herzegovina	7,687.90
9	South Syria and Northern Jordan	Jordan River	0	Jordan	26,097.74
10	South Syria and Northern Jordan	Mujib	79	Jordan	24,537.60
11	Orontes Valley and Lebanon Mountains	Al Chouf Cedars Nature Reserve	100	Lebanon	18,582.88
12	Orontes Valley and Lebanon Mountains	Upper Litani River	0	Lebanon	8,794.90
13	Orontes Valley and Lebanon Mountains	Western Anti Lebanon Mountains	0	Lebanon	36,023.99
14	**Cyrenaican Peninsula**	Cyrenaican Peninsula	0	Libya	773,124.44
15	**Southwest Balkans**	Dojran Lake	0	Macedonia	4,570.46
16	**Southwest Balkans**	Ohrid Lake	100	Macedonia	24,643.18
17	**Southwest Balkans**	Lake Skadar	3	Montenegro	39,368.50
18	**The Atlas Mountains**	Bou Fekrane River	0	Morocco	14,452.66
19	**The Atlas Mountains**	Eastern Middle Atlas Mountains	0	Morocco	335,272.84
20	**The Atlas Mountains**	Fes and Surrounding Area	0	Morocco	136,976.40
21	**The Atlas Mountains**	Oued Oumer Rbid	0	Morocco	51,994.30
22	**The Atlas Mountains**	Parc National de Toubkal	100	Morocco	90,987.87
23	**The Atlas Mountains**	Parc National du Haut Atlas Oriental	0	Morocco	132,558.75
24	**The Atlas Mountains**	Parc Naturel d'Ifrane	100	Morocco	51,230.70
25	**The Atlas Mountains**	Tiradine and Takherhort Hunting Reserves	0	Morocco	314,710.24

no	Corridor Name*	Key Biodiversity Area	% Protection	Country	Surface Area (ha)
26	**Orontes Valley and Lebanon Mountains**	Eastern Anti Lebanon Mountains	22	Syria	51,282.37
27	**Orontes Valley and Lebanon Mountains**	Lower Orontes River	11	Syria	17,088.06
28	**Orontes Valley and Lebanon Mountains**	Upper Orontes River	0	Syria	41,769.11
29	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Ichkeul	83	Tunisia	12,444.37
30	Wetlands of Tunisia and Libya	Gafsa	0	Tunisia	23,353.40
31	Northern Mesopotamia	Southern Euphrates Valley ve Birecik Steppes	0	Turkey	205,100.31
32	Northern Mesopotamia	Tigris Valley	0	Turkey	132,799.17
33	**Orontes Valley and Lebanon Mountains**	Altinozu Hills	47	Turkey	72,181.13
34	**The Taurus Mountains**	Acigol Lake	2	Turkey	32,115.29
35	**The Taurus Mountains**	Akseki and Ibradi Forests	24	Turkey	131,219.05
36	**The Taurus Mountains**	Beydaglari	19	Turkey	185,769.81
37	**The Taurus Mountains**	Beysehir Lake	96	Turkey	91,288.98
38	**The Taurus Mountains**	Binboga Mountains	0	Turkey	90,733.31
39	**The Taurus Mountains**	Bolkar Mountains	10	Turkey	389,816.50
40	**The Taurus Mountains**	Ermenek River Valley	0	Turkey	135,741.81
41	**The Taurus Mountains**	Geyik Mountains	3	Turkey	244,951.97
42	**The Taurus Mountains**	Goksu River Valley	8	Turkey	51,241.53
43	**The Taurus Mountains**	Koprucay Valley	20	Turkey	143,597.57
44	**The Taurus Mountains**	Sandras Mountain	6	Turkey	130,362.26

***** Priority corridors are in bold.

Strategic Direction 4: Provide strategic leadership and effective coordination of CEPF investment through a regional implementation team

An independent evaluation of the global CEPF program found that CEPF regional implementation teams are particularly effective with the support of the CEPF grant directors in linking the key elements of comprehensive, vertically integrated portfolios such as large anchor projects, smaller grassroots activities, policy initiatives, governmental collaboration and sustainable financing. The responsibilities of these teams, formerly known as coordination units, have now been standardized to capture the most important aspects of their function.

In every hotspot approved for investment as of July 2007, CEPF will support a regional implementation team to convert the plans in the ecosystem profile into a cohesive portfolio of grants that exceeds in impact the sum of their parts. Each regional implementation team will consist of one or more civil society organizations active in conservation in the region. For example, a team could be a partnership of civil society groups or could be a lead organization with a formal plan to engage others in overseeing implementation, such as through an inclusive advisory committee.

The regional implementation team will be selected by the CEPF Donor Council based on an approved terms of reference, competitive process and selection criteria available at www.cepf.net. The team will operate in a transparent and open manner, consistent with the CEPF mission and all provisions of the CEPF Operational Manual. Organizations that are members of the Regional Implementation Team will not be eligible to apply for other CEPF grants within the same hotspot. Applications from formal affiliates of those organizations that have an independent operating board of directors will be accepted, and will be subject to additional external review.

4.1 Build a broad constituency of civil society groups working across institutional and political boundaries toward achieving the shared conservation goals described in the ecosystem

In every hotspot approved for investment as of July 2007, CEPF will support a regional implementation team to provide strategic leadership and local knowledge to build a broad constituency of civil society groups working across institutional and political boundaries toward achieving the conservation goals described in the ecosystem profile. The team's major functions and specific ativities will be based on an approved terms of reference. Given the size and the complexity of the Mediterranean Basin Hotspot and considering the strategic lines proposed before, where mainstreaming conservation into development and promoting participation of a wider group of partners is going to be required, the Regional Implementation Team will play a crucial role supporting the consolidation of basin-wide networks and identifying regional funding opportunities to leverage and complement CEPF's investment. Major functions of the team will include but will not be limited to:

- Act as an extension service to assist civil society groups in designing, implementing, and replicating successful conservation activities.
- Review all grant applications and manage external reviews with technical experts and advisory committees.
- Award grants up to $20,000 and decide jointly with the CEPF Secretariat on all other applications.
- Lead the monitoring and evaluation of individual projects using standard tools, site visits, and meetings with grantees, and assist the CEPF Secretariat in portfolio-level monitoring and evaluation.
- Widely communicate CEPF objectives, opportunities to apply for grants, lessons learned and results.

- Involve the existing regional program of the RIT, CEPF donor and implementing agency representatives, government officials, and other sectors within the hotspot in implementation.
- Ensure effective coordination with the CEPF Secretariat on all aspects of implementation.

4.2. Act as a liaison unit for relevant networks throughout the Mediterranean to harmonize investments and direct new funding to priority issues and sites.
The Mediterranean Basin is unique within the CEPF global portfolio in that there are countries ineligible for CEPF yet there are substantial funding opportunities from multi-national, national, private and public funding sources which to date have been disparate in their respective investments.

In addition to the role of the Regional Implementation Team as stewards of the Ecosystem Profile, this entity should also act as a hub, liaising between existing networks such as Barcelona, Bonn and Ramsar Conventions, as well as Plan Bleu and the nongovernmental and private sectors. It should also be a resource for other donors to refine the areas throughout the entire hotspot — not simply the CEPF eligible countries — that require additional financial support.

SUSTAINABILITY

This profile has incorporated sustainability as a principle into its strategic directions in order to insure the long-term survival of viable ecosystems upon which the life in the Mediterranean Basin depends on. The strategic directions in relation to tourism, water and protected areas are designed in a way to result in self-sustainable systems that will be operational also after the expiration of the CEPF investment in the Mediterranean Basin Hotspot. Such systems include multilateral partnerships between nongovernmental organizations, as well as long-term cooperation between civil society, governments and the corporate sector. The existing north to south and west to east relations offer a great potential to sustain and follow up the results of the CEPF investment phase, as guided by the development phase of this ecosystem profile. Already, several national and international organizations and the donor community have shown great interest to pursue the strategic directions and investment priorities presented in this ecosystem profile.

CEPF will play a crucial role in this, along with the many civil society partners, insuring that three main pillars of sustainability—ecological, social and financial sustainability—are incorporated in all projects supported.

The CEPF investment in the Mediterranean Basin Hotspot will play a major role by supporting civil society and increasing the capacity of nongovernmental organizations and other civil society entities based in the region. CEPF funds will clearly strengthen the ability of civil society organizations and their staff to carry out their conservation mission over the long term. The civil society organizations, of which the grassroots are within the hotspot, will ultimately influence the political decisions with a major influence on natural resources.

There are already several funding resources contributing to conservation in the Mediterranean Basin. The CEPF funding fills the major gaps in those areas where essential activities are not being undertaken at the moment and complements larger funding initiatives coming from multilateral and bilateral sources to government agencies in the region, especially the EU. Along with this, CEPF will also streamline other donors' investments in the hotspot toward a common direction that will remain operational in the hotspot after the five-year investment period. In short, CEPF itself will fill the immediate gaps over the investment period but also trigger long-term interest for

the post-CEPF phase. This will be achieved by establishing strategic partnerships with other organizations during the investment phase.

Mainstreaming biodiversity conservation and ecosystem services into all levels of decisionmaking and development planning is another key approach that will strengthen institutional and financial sustainability of CEPF's investment in the region. For instance, the water- or tourism-related priorities of this profile provide critical openings by which grants for climate change or alternative tourism development can be sought to sustain and multiply best-practices resulting from the investment phase of this profile.

CONCLUSION

The Mediterranean Basin is one of the world's greatest centers of biodiversity and endemism, especially for plants. Nevertheless, this exceptional richness is severely threatened by over-use of water resources, tourism industry, insufficient networks of protected areas and lack of the capacity of the civil society. Many of these threats are accelerated by climate change and also reveal to the marine realm.

Six priority corridors and 70 global key biodiversity areas were defined as targets for investment that will be address under four strategic directions and 12 investment priorities. A regional implementation team that will be established in the hotspot will provide strategic leadership and effective coordination of these investment priorities.

The development of this comprehensive ecosystem profile and the CEPF investment strategy was made possible by extensive consultation with stakeholders. Through this process, for the first time, there has been an attempt to assess threats throughout the Mediterranean Basin and develop a strategy to address these. National/regional coordinators were engaged to gather information from their respective areas, and the three workshops with stakeholders further enriched this process.

The regional partners who developed this profile based on extensive research and consultations consider this document as a strong strategic guide that will help various organizations in the hotspot to work together toward the strategic directions and investment priorities presented here. Certainly, major threats in the region can only be addressed by establishing strong civil society partnerships across the Mediterranean Basin Hotspot as promoted by CEPF in other biodiversity hotspots.

LOGICAL FRAMEWORK

Objective	Targets	Means of Verification	Important Assumptions
Engage civil society in the conservation of globally threatened biodiversity through targeted investments with maximum impact on the highest conservation and ecosystem services priorities	NGOs and civil society actors from CEPF eligible countries, with an emphasis on the priority 6 corridors and 70 key biodiversity areas, effectively participate in conservation programs guided by the ecosystem profile. Development plans, projects and policies which influence the priority 6 corridors and 70 key biodiversity areas mainstream biodiversity and ecosystem services, with a focus on tourism, water and agriculture. 70 priority key biodiversity areas have strengthened protection and management. Strategic areas of production landscapes of six priority corridors under improved management for biodiversity conservation and ecosystem services. The Mediterranean Basin Hotspot ecosystem profile influences and complements other donor's investment strategies.	Grantee and RIT performance reports Annual portfolio overview reports; portfolio mid-term and final assessment	The CEPF grants portfolio will effectively guide and coordinate conservation action in the Mediterranean Basin Hotspot

Indermediate Outcomes	Intermediate Indicators	Means of Verification	Important Assumptions
Outcome 1. Negative effects of coastal development, especially those associated with tourism, minimized via promoting Integrated Coastal Zone Management (ICZM) and sustainable nature-based economic alternatives, with a focus on the priority corridors of the (1) Southwest Balkans, (2) Cyrenaican Peninsula, and (3) Mountains, Plateaus, and Wetlands of Algerian Tell and Tunisia, and in 20 coastal and marine priority key biodiversity areas in other corridors. **Budget:** $2,500,000	Number of income generation projects that contribute to conservation of a key biodiversity area. Number of tourism development plans, tourism authorities, and tourism businesses adopting safeguards and environmentally friendly practices where CEPF investment will take place Coverage area of coastal zones subject of Integrated Coastal Zone Management plans or similar planning tools	Grantee and RIT performance reports and site visits Reports of governments on tourism in target corridors Official reports of governments on coastal zone management in priority corridors	Economic parameters in Europe and in target countries do not significantly deteriorate Tourism sector is willing to engage and participate in joint ventures.
Outcome 2. Sustainable management of water catchments and the wise use of water resources established with a focus on the priority corridors of the (1) Atlas Mountains, (2) Taurus Mountains, (3) Orontes Valley and Lebanon Mountains, and (4) Southwest Balkans. The lessons learned shared and replicated from and with other river basin management experiences elsewhere in the Mediterranean. **Budget:** $3,000,000	Number of basins where IRBM has started Stronger legal basis for IRBM Hectares of habitats restored or protected through innovative financing triggered by CEPF investments Number of initiatives with significant impact to reduce water consumption	Grantee and RIT performance reports and site visits Legal government reports on IRBM policies Management/co-management/ stewardship agreements or contracts	Partners in the region are able to form strong partnerships with governmental organizations Techniques to reduce water consumptions available in the three priority corridors

Indermediate Outcomes	Intermediate Indicators	Means of Verification	Important Assumptions
Outcome 3. Conservation status of 70 priority key biodiversity areas imprioved via enhancing the protected area systems, supporting local communities and promoting international cooperation. **Budget:** $3,505,000	Demonstrable improvements in the conservation and management of priority key biodiversity areas as guided by formal management plan or other appropriate documents. Number of hectares brought under new or upgraded protection. Percent and number of grants that enable effective stewardship by local communities for biodiversity and ecosystem conservation.	Sustainable financing agreements and accounts Global important bird area/key biodiversity area and alliance for zero extinction monitoring framework Formal legal declarations or community agreements designating new protected areas Management plans and reports	Government agencies are interested and willing to support civil society efforts to conserve key biodiversity areas and corridors. Civil society organizations have adequate capacity and are interested in engaging in conservation and management of key biodiversity areas and corridors. Fine scale data on AZE species available
Outcome 4. Strategic leadership and effective coordination of CEPF investment provided through a regional implementation team. **Budget: $**995,000	Regional Implementation Team performance in fulfilling the approved Terms of Reference. Number of groups receiving grants that achieve a satisfactory score on final performance scorecard.	Grantee and RIT performance reports CEPF Secretariat supervision missions and monitoring	Local, national and regional stakeholders remain interested in CEPF RIT good contacts/relations with civil society groups
Strategic Funding Summary	**Amount**		
Total budget requested:	**$10,000,000**		

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APPENDICES

Appendix 1. Key Biodiversity Areas and Corridors in the Mediterranean Basin Hotspot (Priority key biodiversity areas and corridors for CEPF investment given in bold)

no	Country	Corridor Name	Key Biodiversity Area Name
1	Albania	**Southwest Balkans**	Bjeshka e Oroshit
2	Albania	**Southwest Balkans**	Butrinti and surrounding area
3	Albania	**Southwest Balkans**	Drini Delta
4	Albania	**Southwest Balkans**	Erseke
5	Albania	**Southwest Balkans**	Karavasta Lagoon
6	Albania	**Southwest Balkans**	**Lake Ohrid and surrounding area**
7	Albania	**Southwest Balkans**	**Lake Shkodra (Lake Scadar)**
8	Albania	**Southwest Balkans**	Lalzi Bay
9	Albania	**Southwest Balkans**	Lura*
10	Albania	**Southwest Balkans**	Luzni-Bulac
11	Albania	**Southwest Balkans**	Mali i Dajtit
12	Albania	**Southwest Balkans**	Marash mountains*
13	Albania	**Southwest Balkans**	Narta Lagoon and surrounding area
14	Albania	**Southwest Balkans**	Patoku Lagoon
15	Albania	**Southwest Balkans**	Prespa and surrounding area
16	Albania	**Southwest Balkans**	Rrajca
17	Albania	**Southwest Balkans**	Velipoja and surrounding area
18	Albania	**Southwest Balkans**	Vlora Bay, Karaburun Peninsula and Cika mountain
19	Algeria	Mountains of Ksours and Djebel Krouz	Djebel Aissa State Forest
20	Algeria	Mountains of Ksours and Djebel Krouz	El Abiot sidi Cheikh
21	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Akfadou Forests
22	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Barrage de Boughzoul
23	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Barrage de la Cheffia
24	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Chott de Tinnsilt
25	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Chott el Hodna Lake

no	Country	Corridor Name	Key Biodiversity Area Name
26	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Chrea National Park
27	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Collo
28	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Complexe de zones humides de la plaine de Guerbes-Sanhadja
29	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Constantine
30	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	**Djebel Babor**
31	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Djebel Megris
32	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Djelfa
33	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Edough National Park
34	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	**El Kala National Park**
35	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Garaet et-Tarf
36	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Gouraya
37	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Lac des Oiseaux / Garaet et Touyour
38	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Lac Fetzara
39	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Levasseur
40	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Marais de Mekhada
41	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Mergueb
42	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Parc National de Taza

no	Country	Corridor Name	Key Biodiversity Area Name
43	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Parc National de Theinet El Had
44	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Parc National du Belezma
45	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	**Parc National du Djurdjura**
46	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Quenza
47	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Sebkhet Baker
48	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Sebkhet Djendli
49	Algeria	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Sebkhet Ez-Zemoul
50	Algeria	Oranie and Molouya	Chenoua
51	Algeria	Oranie and Molouya	Ile Rachgoune
52	Algeria	Oranie and Molouya	Iles Habibas
53	Algeria	Oranie and Molouya	**Marais de la Macta**
54	Algeria	Oranie and Molouya	Sebkha d'Oran
55	Algeria	Oranie and Molouya	Sidi-Bel-Abbes
56	Algeria		Biskra
57	Algeria		Dayette Morsli - Plaine de Remila (Dayet El Ferd)
58	Algeria		El Bayadh
59	Bosnia and Herzegovina	Eastern Adriatic	Busko Lake and Livanjsko Karstic Field
60	Bosnia and Herzegovina	Eastern Adriatic	Dabarsko Karstic Field
61	Bosnia and Herzegovina	Eastern Adriatic	Fatnicko Polje
62	Bosnia and Herzegovina	Eastern Adriatic	**Hutovo blato**
63	Bosnia and Herzegovina	Eastern Adriatic	Mostarsko Blato
64	Bosnia and Herzegovina	Eastern Adriatic	**Neretva River**
65	Bosnia and Herzegovina	Eastern Adriatic	North Travunija

no	Country	Corridor Name	Key Biodiversity Area Name
66	Bosnia and Herzegovina	Eastern Adriatic	Trebinjsko Jezero
67	Bosnia and Herzegovina	Eastern Adriatic	**Trebizat River Tributary**
68	Cape Verde	Cape Verde	**Beaches of Boavista Island**
69	Cape Verde	Cape Verde	Beaches of Maio Island
70	Cape Verde	Cape Verde	Beaches of Sal Island
71	Cape Verde	Cape Verde	Beaches of Santo Antao Island
72	Cape Verde	Cape Verde	Beaches of Sao Nicolau Island
73	Cape Verde	Cape Verde	Beaches of Sao Vicente Island
74	Cape Verde	Cape Verde	Central mountain range of Ilha de So Nicolau
75	Cape Verde	Cape Verde	Coastal cliffs between Porto Mosquito and Baia do Inferno
76	Cape Verde	Cape Verde	Ilheu Branco
77	Cape Verde	Cape Verde	Ilheu de Curral Velho and adjacent coastal area
78	Cape Verde	Cape Verde	**Ilheu Raso**
79	Cape Verde	Cape Verde	Ilheus do Rombo
80	Cape Verde	Cape Verde	Kapok tree, Boa Entrada
81	Cape Verde	Cape Verde	Mahoganies at Banana, Ribeira Montanha, Ilha de Santiago
82	Cape Verde	Cape Verde	Pedra Badejo lagoons
83	Cape Verde	Cape Verde	Ribeira do Rabil
84	Cape Verde	Cape Verde	**Santa Luzia Island**
85	Cape Verde	Cape Verde	Serra do Pico da Antonia
86	Cape Verde	Cape Verde	Volcano area, Ilha do Fogo
87	Croatia	Eastern Adriatic	Bacina Lakes
88	Croatia	Eastern Adriatic	Biokovo
89	Croatia	Eastern Adriatic	Brac
90	Croatia	Eastern Adriatic	Cavtat
91	Croatia	Eastern Adriatic	Cetina Canyon
92	Croatia	Eastern Adriatic	Cetina River
93	Croatia	Eastern Adriatic	Cetine Estuary
94	Croatia	Eastern Adriatic	Cikola River
95	Croatia	Eastern Adriatic	Imotski Lakes
96	Croatia	Eastern Adriatic	Jadro River
97	Croatia	Eastern Adriatic	Konavle Cliffs
98	Croatia	Eastern Adriatic	**Krka River and Visovac Lake**

no	Country	Corridor Name	Key Biodiversity Area Name
99	Croatia	Eastern Adriatic	Lake Vransko
100	Croatia	Eastern Adriatic	Ljuta River
101	Croatia	Eastern Adriatic	Lokrum
102	Croatia	Eastern Adriatic	Mali Losinj
103	Croatia	Eastern Adriatic	Muc*
104	Croatia	Eastern Adriatic	**Neretva Delta and Surrounding Area**
105	Croatia	Eastern Adriatic	Pasko polje*
106	Croatia	Eastern Adriatic	Peljesac
107	Croatia	Eastern Adriatic	Pometeno brdo*
108	Croatia	Eastern Adriatic	Prvic island*
109	Croatia	Eastern Adriatic	Rab
110	Croatia	Eastern Adriatic	Sibenik Archipelago
111	Croatia	Eastern Adriatic	Sinj Field
112	Croatia	Eastern Adriatic	Sipan*
113	Croatia	Eastern Adriatic	Snjeznica-Konavle
114	Croatia	Eastern Adriatic	South Travunija
115	Croatia	Eastern Adriatic	**Special Ornithological Reserve on Cres Island**
116	Croatia	Eastern Adriatic	Special Ornithological Reserves on Krk Island
117	Croatia	Eastern Adriatic	Velebit
118	Croatia	Eastern Adriatic	Vrgorac and Polje Lake*
119	Croatia	Eastern Adriatic	Vrpolje-Tijarica-Krivodol*
120	Croatia		Baldarka Bay*
121	Croatia		Cape Kamenjak
122	Croatia		Dolina Mirne*
123	Croatia		Kolocep
124	Croatia		Korcula
125	Croatia		Kornati i Telascica*
126	Croatia		Kornati National Park and Telascica Nature Park*
127	Croatia		Kozjak and Opor
128	Croatia		Lastovo
129	Croatia		Mirna Valley
130	Croatia		Mljet
131	Croatia		Nin*
132	Croatia		Pag
133	Croatia		Pakleni Islands*

no	Country	Corridor Name	Key Biodiversity Area Name
134	Croatia		Palagruza
135	Croatia		Palud*
136	Croatia		Rasa Estuary*
137	Croatia		Rtina-Miosici*
138	Croatia		Svetac*
139	Croatia		Ueka and Sisarija
140	Croatia		Vis and Bisevo
141	Cyprus		Adelphi forest*
142	Cyprus		Akamas Peninsula*
143	Cyprus		Akhna dam*
144	Cyprus		Cape Aspro*
145	Cyprus		Cape Greco
146	Cyprus		Kyrenia range between Kornos and Pentadactylos peaks*
147	Cyprus		Larnaca salt-lakes*
148	Cyprus		Paphos State Forest and Stavros tis Psokas Forest Station*
149	Egypt	**Cyrenaican Peninsula**	Sallum Gulf
150	Egypt	Nile Delta Coast	Alexandria Coast
151	Egypt	Nile Delta Coast	El Malaha
152	Egypt	Nile Delta Coast	El Omayed Managed Natural Resource Protected Area
153	Egypt	Nile Delta Coast	**Lake Bardawil**
154	Egypt	Nile Delta Coast	Lake Burullus Protected Area
155	Egypt	Nile Delta Coast	Lake Idku
156	Egypt	Nile Delta Coast	Lake Manzala
157	Egypt	Nile Delta Coast	Lake Maryut
158	Egypt	Nile Delta Coast	**Zaranik Protected Area**
159	Egypt		Coastal Dune
160	Egypt		Wadi el Natrun
161	France		Basse Ardêche*
162	France		Basse Vallée de la Durance*
163	France		Basse vallée du Var
164	France		Basses Corbières
165	France		Bec de Crigne*
166	France		Bois de Palayson, du Rouet et de Malvoisin*
167	France		Bois du Chapitre*
168	France		Camargue

no	Country	Corridor Name	Key Biodiversity Area Name
169	France		Chaîne des Alpilles*
170	France		Col de l'Escrinet
171	France		Cordon lagunaire de Sète à Agde
172	France		Crau
173	France		Détroit de Bonifaccio et Iles Lavezzi*
174	France		Etang de Biguglia
175	France		Etang de Capestang*
176	France		Etang de Thau
177	France		Etang du Bagnas*
178	France		Etang d'Urbino et zones humides périphériques*
179	France		Etangs de Canet et de Villeneuve-de-la-Raho et embouchure du Tech
180	France		Etangs de Citis, Lavalduc, Engrenier, Pourra, l'Estomac, Fos et salines de Rassuen et de Fos
181	France		Etangs de Leucate et Lapalme
182	France		Etangs de Vendres, Pissevache et Lespignan*
183	France		Etangs Montpellierains
184	France		Etangs Narbonnais
185	France		Forêt de Saou*
186	France		Forêts domaniales de Corse
187	France		Golfe de Porto, presqu'île de Scandola & golfe de Galeria
188	France		Gorges de la Dourbie et causses avoisinants
189	France		Gorges de la Vis & cirque de Navacelles*
190	France		Gorges du Gardon
191	France		Gorges du Rieutord-Fage-Cagnasses*
192	France		Gorges du Tarn et de la Jonte
193	France		Hautes Corbières*
194	France		Hautes garrigues du Montpellierais
195	France		Ile de la Platière*
196	France		Iles Cerbicale*
197	France		Iles d'Hyères
198	France		Iles Finocchiarola & côte de Tamarone à Centuri
199	France		Iles Marseillaises: Maire, Jarron, Jarre, Riou, Calseraigne, Congloue & Pomègues*
200	France		Iles Sanguinaires*
201	France		Marais de L'Ile Vieille*

no	Country	Corridor Name	Key Biodiversity Area Name
202	France		Marais de Manteyer*
203	France		Marais entre Crau et Grand Rhône: Meyranne, Chanoine, Plan de Bourg et Salins du Caban
204	France		Massif des Albères*
205	France		Massif du Canigou-Carança
206	France		Massif du Madres et Mont Coronat*
207	France		Massif du Petit Lubéron*
208	France		Minervois*
209	France		Montagne de la Clape*
210	France		Montagne Sainte-Victoire*
211	France		Montagnes de Marcou, de l'Espinouse et du Caroux*
212	France		Moyenne Vallée de la Durance
213	France		Parc National des Cévennes*
214	France		Parc National du Mercantour*
215	France		Petite Camargue fluvio-lacustre
216	France		Petite Camargue laguno-marine
217	France		Plaine des Maures*
218	France		Plateau de l'Arbois, garrigues de Lancon et chaîne des Côtes
219	France		Plateau de Valensole
220	France		Préalpes de Grasse*
221	France		Salines de l'Etang de Berre*
222	France		Salins d'Hyères et de Pesquiers
223	France		Val de Drôme: Les Ramières-printegarde
224	France		Vallée d'Asco
225	France		Vallée de la Durance: de Tallard à Sisteron*
226	France		Vallée de la Restonica
227	France		Vallée du Régino*
228	France		Vallée du Verghello
229	Gibraltar		Rock of Gibraltar
230	Greece	**Southwest Balkans**	Lake Agras*
231	Greece	**Southwest Balkans**	Lake Kastoria (Orestiada)
232	Greece	**Southwest Balkans**	Lakes Cheimaditis and Zazari
233	Greece	**Southwest Balkans**	Lakes Vegoritis and Petron
234	Greece	**Southwest Balkans**	Mount Grammos*
235	Greece	**Southwest Balkans**	Prespa National Park and Varnountas mountains

no	Country	Corridor Name	Key Biodiversity Area Name
236	Greece		Acheloos valley*
237	Greece		Acherontas gorge and estuary
238	Greece		Agioi Theodoroi islet, Crete
239	Greece		Agios Efstratios island
240	Greece		Agios Mamas marsh
241	Greece		Agrafa mountains*
242	Greece		Akarnanika mountains
243	Greece		Aliakmon gorge*
244	Greece		Alyki Angelochoriou lagoon (Megalou Emvolou)
245	Greece		Alyki Kitrous lagoon
246	Greece		Alyki lagoon, Aigio*
247	Greece		Amorgos island
248	Greece		Amvrakikos gulf
249	Greece		Anafi island
250	Greece		Andros island and surrounding islets*
251	Greece		Anthofyto area
252	Greece		Antichasia mountains and Meteora*
253	Greece		Antikythira island and surrounding islets
254	Greece		Artemisio and Lyrkeio mountains*
255	Greece		Artzan reservoir
256	Greece		Astypalaia island and surrounding islets
257	Greece		Athamanika mountains (Tzoumerka)*
258	Greece		Axios, Loudias and Aliakmon rivers' deltas
259	Greece		Barmpas and Klokos mountains and Selinountas gorge*
260	Greece		Central Zagori and eastern mount Mitsikeli*
261	Greece		Chalki island and surrounding islets
262	Greece		Christiana and Aspronisi islets, Thira
263	Greece		Dia island, Crete
264	Greece		Diapontia islands (Othonoi, Ereikousa, Mathraki islands and surrounding islets)*
265	Greece		Dionysades islets, Crete
266	Greece		Divari Pylou (Gialova) lagoon and Sfaktiria island
267	Greece		Douskon and Kasidiaris mountains, Delvinaki lakes and Gormou valley*
268	Greece		East Lakonia mountains*

no	Country	Corridor Name	Key Biodiversity Area Name
269	Greece		Echinades, Kalamos and Atokos islands*
270	Greece		Elassona area
271	Greece		Epanomi lagoon*
272	Greece		Evros delta
273	Greece		Evrotas delta
274	Greece		Falkonera, Velopoula and Karavia islets*
275	Greece		Farsala area
276	Greece		Filiouri valley and eastern Rodopi mountains
277	Greece		Fournoi island
278	Greece		Galaxidi
279	Greece		Gallikos estuary and Kalochori lagoon
280	Greece		Gavdos and Gavdopoula islands, Crete*
281	Greece		Gera gulf, Ntipi and Charamida marshes, Lesvos
282	Greece		Geropotamos estuary, Crete
283	Greece		Gramvousa peninsula and Gramvouses and Pontikonisi islets, Crete
284	Greece		Ikaria island
285	Greece		Ioannina city
286	Greece		Ios, Sikinos and Folegandros islands
287	Greece		Islands and islets of northern Dodecanese
288	Greece		Islands and islets of northern Sporades and northwestern coast of Alonnisos
289	Greece		Islets of western Limnos and cape Mourtzeflos
290	Greece		Kalamaki gorge and Zarkou mountains*
291	Greece		Kalamas delta
292	Greece		Kalloni gulf, Lesvos
293	Greece		Kalogria lagoon, Strofylia forest and Lamia marshes
294	Greece		Karpathian sea islets
295	Greece		Kasos island and surrounding islets
296	Greece		Kato Olympos, Tempi gorge and mount Ossa*
297	Greece		Kavalloi islets, Crete*
298	Greece		Kinaros and Levitha islands and surrounding islets
299	Greece		Kompsatos valley
300	Greece		Kotychi lagoon
301	Greece		Koufonisi island, Crete*
302	Greece		Kythira island

no	Country	Corridor Name	Key Biodiversity Area Name
303	Greece		Lagoons of Corfu island
304	Greece		Lake Amvrakia*
305	Greece		Lake Dystos
306	Greece		Lake Kalodiki, Margariti and Karteri marshes*
307	Greece		Lake Kerkini
308	Greece		Lake Kourna, Almyros delta and Georgioupolis coast, Crete*
309	Greece		Lake Mitrikou (Ismaris)
310	Greece		Lake Pamvotis (Ioanninon)
311	Greece		Lake Pikrolimni
312	Greece		Lake Stymfalia*
313	Greece		Lakes Chortarolimni and Alyki, Moudros gulf, Diapori fen and Fakos peninsula, Limnos
314	Greece		Lakes Trichonis and Lysimachia
315	Greece		Lakes Volvi, Koroneia and Rentina Gorge
316	Greece		Lavreotiki peninsula and Patroklos islet*
317	Greece		Lefka Ori mountains, Crete*
318	Greece		Lower Kalamas gorge
319	Greece		Mati wetland of Tyrnavos
320	Greece		Megalo and Mikro Livari lagoons, Istiaia*
321	Greece		Mesolongi and Aetoliko lagoons, Acheloos delta and Evinos estuary
322	Greece		Mikres Kyklades island complex
323	Greece		Mount Asterousia (Kofinas), Crete*
324	Greece		Mount Athos*
325	Greece		Mount Beles (Kerkini)*
326	Greece		Mount Chelmos (Aroania)*
327	Greece		Mount Cholomontas*
328	Greece		Mount Dikaios, lake Psalidi and Alyki lagoon, Kos
329	Greece		Mount Dikti, Crete*
330	Greece		Mount Erymanthos*
331	Greece		Mount Foloi*
332	Greece		Mount Giouchtas, Crete*
333	Greece		Mount Gkiona
334	Greece		Mount Idi, Crete*
335	Greece		Mount Itamos*
336	Greece		Mount Kantili*

no	Country	Corridor Name	Key Biodiversity Area Name
337	Greece		Mount Kedros and Kourtaliotiko gorge, Crete*
338	Greece		Mount Kerketio (Koziakas)*
339	Greece		Mount Kerkis, Samos*
340	Greece		Mount Kochylas, Skyros
341	Greece		Mount Koutroulis, Mount Agios Dikaios and Modia plateau, Crete*
342	Greece		Mount Krousia (Mavrovouni and Dysoro)
343	Greece		Mount Kryoneritis, Crete*
344	Greece		Mount Kyllini (Ziria)*
345	Greece		Mount Lepetymnos, Lesvos
346	Greece		Mount Mavrovouni, Larisa
347	Greece		Mount Menoikio*
348	Greece		Mount Ochi
349	Greece		Mount Oiti*
350	Greece		Mount Olympos
351	Greece		Mount Olympos and pine forest of central Lesvos
352	Greece		Mount Othrys*
353	Greece		Mount Pangaio*
354	Greece		Mount Parnassos
355	Greece		Mount Parnitha*
356	Greece		Mount Peristeri*
357	Greece		Mount Pilio*
358	Greece		Mount Taygetos
359	Greece		Mount Vardousia*
360	Greece		Mount Vourinos*
361	Greece		Mount Ymittos
362	Greece		Mount Zakrou, Crete*
363	Greece		Mountains of central Evvoia*
364	Greece		Mountains of Naxos*
365	Greece		Mounts Agia Dynati and Kokkini Rachi, Kefallonia*
366	Greece		Mounts Orliakas and Tsourgiakas*
367	Greece		Nea Fokaia marshes*
368	Greece		Nestos delta and coastal lagoons
369	Greece		Nestos gorge
370	Greece		Nisyros island and surrounding islets
371	Greece		North Kalymnos, Telendos, Kalolimnos and surrounding islets

no	Country	Corridor Name	Key Biodiversity Area Name
372	Greece		Northeastern peninsula of Crete
373	Greece		Northern Chios*
374	Greece		Northern Sifnos*
375	Greece		Northern Syros*
376	Greece		Paramythia mountains*
377	Greece		Paros and Antiparos islands and surrounding islets
378	Greece		Patmos island and surrounding islets
379	Greece		Pineios delta
380	Greece		Porto Lagos, lake Vistonis and coastal lagoons
381	Greece		Prasson gorge, Crete*
382	Greece		Psara and Antipsara islands and surrounding islets
383	Greece		Psili Ammos lagoon, Samos*
384	Greece		Reservoirs of former lake Karla
385	Greece		River Axios
386	Greece		Rodopos peninsula, Crete*
387	Greece		Samothraki island*
388	Greece		Saria island and northern Karpathos*
389	Greece		Schinias marsh
390	Greece		Serifos island*
391	Greece		South forest complex of Evros prefecture
392	Greece		Southern Mani, mount Sangias and cape Tainaro
393	Greece		Southwestern Lesvos and Petrified forest
394	Greece		Spercheios valley and delta and Maliakos gulf
395	Greece		Strofades islets*
396	Greece		Strymonas estuary
397	Greece		Symi island and surrounding islets
398	Greece		Syrna island and surrounding islets
399	Greece		Thasos island and Xironisi islet*
400	Greece		Thessaly plain
401	Greece		Thrypti and Orno mountains, Crete*
402	Greece		Tilos island and surrounding islets
403	Greece		Tinos island and surrounding islets*
404	Greece		Tokmakia islets, Lesvos
405	Greece		Tsamanta, Filiaton, Farmakovouni and Megali Rachi mountains
406	Greece		Tymfi (Gkamila) and Smolikas mountains

no	Country	Corridor Name	Key Biodiversity Area Name
407	Greece		Tyrnavos area
408	Greece		Valia Kalnta (Pindos National Forest Park)*
409	Greece		Valtou mountains*
410	Greece		Venetiko islet, Chios*
411	Greece		Vouraikos gorge and Kalavryta*
412	Greece		West and north Zakynthos
413	Greece		Western Milos, Antimilos and Polyaigos islands and surrounding islets*
414	Greece		Western Skyros and islets
415	Greece		Western, eastern and southern Rhodes*
416	Israel	South Syria and Northern Jordan	Hula valley
417	Israel	South Syria and Northern Jordan	Lake Kinneret and Kinerot
418	Israel		Carmel coast
419	Israel		Hefer valley
420	Israel		Jezre'el, Harod and Bet She'an valleys
421	Israel		Judean foothills
422	Israel		Pole Harutzim Biosphere
423	Israel		Ramot Menashe
424	Israel		Tel Qeriyyot
425	Israel		Zevulun valley
426	Italy		Abruzzo National Park
427	Italy		Alburni mountains*
428	Italy		Alpi Apuane
429	Italy		Alpi Apuane*
430	Italy		Alpi Marittime, alte Valli Pesio e Tanaro, Cima di Piano Cavallo, M.ti Carpasina, Gerbonte e Abellio
431	Italy		Altopiano di Abbasanta and Lake Omodeo*
432	Italy		Altopiano di Budduso'
433	Italy		Altopiano di Campeda*
434	Italy		Appennino Lucano
435	Italy		Appennino Tosco-Emiliano e Appennino lucchese-pistoiese
436	Italy		Arcipelago La Maddalena
437	Italy		Arcipelago Toscano
438	Italy		Area delle Murge e delle Gravine
439	Italy		Arezzo heathlands*

no	Country	Corridor Name	Key Biodiversity Area Name
440	Italy		Argentario, Orbetello Lagoon and Burano Lake
441	Italy		Asinara island and Stintino peninsula cliffs
442	Italy		Aspromonte
443	Italy		Aspromonte*
444	Italy		Ausoni and Aurunci mountains
445	Italy		Beigua e Monte Dente
446	Italy		Berchida e Bidderosa
447	Italy		Biviere and Plain of Gela
448	Italy		Bolgheri*
449	Italy		Boschi dell'alta Valle del Nestore*
450	Italy		Boschi di Niscemi e costa di Gela
451	Italy		Boschi di Stilo e Archiforo e Vallata dello Stilaro
452	Italy		Boschi di Terne-Pupaggi, M.ti Serano-Brunette e F.so di Camposolo*
453	Italy		Boschi Ficuzza e Cappelliere e Rocca Busambra
454	Italy		Cagliari wetlands
455	Italy		Campi Flegrei
456	Italy		Campo d'Ozieri*
457	Italy		Caorle lagoon*
458	Italy		Capanne di Marcarolo, Praglia, M. Leco e M. Gazzo
459	Italy		Cape Caccia*
460	Italy		Cape Otranto*
461	Italy		Capo Caccia, M. Rodedo e Punta Argentiera
462	Italy		Capo dell'Armi
463	Italy		Capo Gallo, Rilievi di Palermo e F. Oreto
464	Italy		Capo Mannu, Isola Mal di Ventre, Mari Ermi, Is Arenas e Stagno Sale 'e Porcus
465	Italy		Capo Mele
466	Italy		Capo San Vito e M.ti di Castellammare
467	Italy		Capri
468	Italy		Capri island*
469	Italy		Carso triestino e goriziano e foce dell'Isonzo
470	Italy		Carso*
471	Italy		Casaraccio pool, Stintino saltpans and Pilo pool*
472	Italy		Catena Alburni-Cervati-Sacro-Centaurino*
473	Italy		Catena del Marghine e del Goceano e Altopiano di Campeda

no	Country	Corridor Name	Key Biodiversity Area Name
474	Italy		Central Campidano*
475	Italy		Coast between Bosa and Alghero*
476	Italy		Coast between Cape Boi and Cape Ferrato
477	Italy		Coast between Cape Teulada and Pula
478	Italy		Coast between Marina di Camerota and Policastro Bussentino*
479	Italy		Coast from Coghinas river-mouth to Cape Testa*
480	Italy		Colfiorito*
481	Italy		Colline di Pentimele, Orti e Terreti
482	Italy		Colline di Pomarico
483	Italy		Colline di Sassuolo e di Canossa*
484	Italy		Cornate e Fosini*
485	Italy		Costa di Sampieri
486	Italy		Costa tra S. Teresa di Gallura e Valledoria
487	Italy		Costa tra Sa Salina e Cala Lunga*
488	Italy		Costa tra Spiaggia Piscinni e Chia
489	Italy		Costa Viola
490	Italy		Crete Senesi*
491	Italy		Cuglieri coast*
492	Italy		Daunia mountains*
493	Italy		Diaccia Botrona*
494	Italy		Dolomiti di Pietrapertosa*
495	Italy		Dolomiti di Pietrapertosa, Foresta Gallipoli-Cognato e valle del Basento
496	Italy		Egadi islands*
497	Italy		Eolie islands
498	Italy		Ernici and Simbruini mountains*
499	Italy		Etna
500	Italy		Favignana
501	Italy		Ferro valley*
502	Italy		Finalese*
503	Italy		Fiumara Amendola
504	Italy		Flumendosa and Colostrai pools*
505	Italy		Foci dei Fiumi Verdura, Magazzolo e Platani
506	Italy		Foreste Casentinesi, Monte Fumaiolo e Alta Valle del Tevere
507	Italy		Fucecchio marsh*

no	Country	Corridor Name	Key Biodiversity Area Name
508	Italy		Gargano Promontory and Capitanata Wetlands
509	Italy		Gargano, litorale delle foci del Biferno e Saccione e Capitanata
510	Italy		Giara di Gesturi*
511	Italy		Gola del Furlo
512	Italy		Gole di Frasassi e della Rossa e M. San Vicino*
513	Italy		Golfo di Orosei e Gennargentu
514	Italy		Grado and Marano lagoon
515	Italy		Gran Sasso and Laga mountains
516	Italy		Gravine
517	Italy		Ischia
518	Italy		Isola Asinara e Punta Rumasinu
519	Italy		Isola dei Cavoli, Serpentara, Campu Longu e M. Macioni
520	Italy		Isola di Dino
521	Italy		Isola di S. Pietro
522	Italy		Isole Tavolara, Molare e Molarotto
523	Italy		Isonzo mouth, Cona island and Panzano Gulf*
524	Italy		Laghi di Montepulciano e Chiusi*
525	Italy		Lago di Massacciuccoli e Selva Pisana
526	Italy		Lago di S. Giusta e stagni di S'Ena Arrubia e Pauli Maiori
527	Italy		Lago Trasimeno e rilievi circostanti*
528	Italy		Lagonegrese and gorges of River Calore
529	Italy		Laguna di Marano e Grado e boschi di Muzzana e Sacile
530	Italy		Laguna di Venezia e Penisola del Cavallino
531	Italy		Lake Bolsena*
532	Italy		Lake Massaciuccoli*
533	Italy		Lake Trasimeno
534	Italy		Lakes Montepulciano and Chiusi*
535	Italy		Lampedusa
536	Italy		Le Cesine*
537	Italy		Lepini mountains
538	Italy		Levanzo
539	Italy		Lido di Maratea
540	Italy		Lido di Orrì*
541	Italy		Ligurian Alps*
542	Italy		Linosa

no	Country	Corridor Name	Key Biodiversity Area Name
543	Italy		Litorale di Ascea
544	Italy		Litorale di Lecce
545	Italy		Litorale Metaponto-Policoro
546	Italy		Litorale Petrosino-Selinunte, Laghetti di Preola e Gorghi Tondi*
547	Italy		Litorale Romano*
548	Italy		Litorale tra Otranto e Leuca
549	Italy		Lucretili mountains*
550	Italy		M. Bulgheria e Capo Palinuro
551	Italy		M. Carmo, M. Settepani, M. Acuto, M. Galero e Castell'Ermo
552	Italy		M. Letegge e Gola di S. Eustachio
553	Italy		M. Linas, costa di Nebida e Capo Pecora
554	Italy		M. Mannu, Lago del Temo e costa tra Alghero e Bosa*
555	Italy		M. Puro, Valleremita e M. Giuoco del Pallone*
556	Italy		M.ti Catria, Acuto e Nerone, Monte Cucco, Gola del Corno di Catria, Torrente Vetorno
557	Italy		Maddalena archipelago
558	Italy		Madonie
559	Italy		Madonie*
560	Italy		Maiella
561	Italy		Maiella, Pizzi and Frentani mountains
562	Italy		Manferrara forest*
563	Italy		Marchesato and River Neto*
564	Italy		Marengo heronry
565	Italy		Marettimo
566	Italy		Matese*
567	Italy		Migliarino-San Rossore*
568	Italy		Monte Albo
569	Italy		Monte Argentario e Laguna di Orbetello
570	Italy		Monte Cetona*
571	Italy		Monte dei Sette Fratelli
572	Italy		Monte Fasce
573	Italy		Monte Grammondo e Capo Mortola
574	Italy		Monte Leoni*
575	Italy		Monte Limbara e Lago del Coghinas
576	Italy		Monte Nero e Monte Bignone

no	Country	Corridor Name	Key Biodiversity Area Name
577	Italy		Monte Pisano, Cerbaie, Padule di Fucecchio e Lago di Sibolla
578	Italy		Monte Sole, valle del Reno, Gessi Bolognesi e Calanchi dell'Abbadessa*
579	Italy		Monte Subasio e Fiume Tescio*
580	Italy		Monte Vulture
581	Italy		Monte Zatta, Passo Bocco e Passo Chiapparino*
582	Italy		Montemercello, Fiume Magra e Laghetti della Piana del Magra
583	Italy		Monti Amiata e Labbro
584	Italy		Monti Aurunci
585	Italy		Monti Ausoni e Lago di Fondi
586	Italy		Monti della Tolfa
587	Italy		Monti dell'Uccellina e foce dell'Ombrone
588	Italy		Monti Ferru
589	Italy		Monti Foi
590	Italy		Monti Iblei
591	Italy		Monti Lattari
592	Italy		Monti Lucretili
593	Italy		Monti Peloritani e Rupi di Taormina
594	Italy		Monti Picentini
595	Italy		Monti Rognosi e ansa del Tevere*
596	Italy		Monti San Pancrazio - Oriolo*
597	Italy		Monti Sibillini, M.ti Fema e Cavallo, Pantani di Accumoli
598	Italy		Monti Sicani
599	Italy		Mount Beigua*
600	Italy		Mount Cervati*
601	Italy		Mount Cofano, Cape San Vito and Mount Sparagio*
602	Italy		Mount Conero*
603	Italy		Mount Pecoraro and Pizzo Cirina*
604	Italy		Mount Sette Fratelli and Sarrabus*
605	Italy		Murge
606	Italy		Nebrodi Est
607	Italy		Nebrodi Ovest
608	Italy		Nebrodi*
609	Italy		Orosei Gulf and Gennargentu mountains
610	Italy		P.ta Mesco, Costa Riomaggiore, Portovenere e S. Benedetto

no	Country	Corridor Name	Key Biodiversity Area Name
611	Italy		Palmas Gulf wetlands
612	Italy		Pantani di Capo Passero*
613	Italy		Pantelleria
614	Italy		Pantelleria and Isole Pelagie
615	Italy		Parco dell'Antola, Vobbia, Laghi Brugneto e Marcotto, Roccabruna, Gifarco, Val Boreca e alto Trebbia
616	Italy		Parco di Portofino
617	Italy		Pareti rocciose del Salto e del Turano e Piana di San Vittorino
618	Italy		Peloritani mountains
619	Italy		Picentini mountains*
620	Italy		Po Delta
621	Italy		Pollino
622	Italy		Pools of Florence plain*
623	Italy		Punta Ala - Padule di Diaccia Botrona*
624	Italy		Punta Maxia e Monte Arcosu
625	Italy		Rieti lakes*
626	Italy		Rieti mountains*
627	Italy		Rilievi ad Est di Bobbio e valle del Trebbia*
628	Italy		Rilievi di Fagnano Castello*
629	Italy		Rilievi di Sefro
630	Italy		Riserva Naturale Tevere-Farfa*
631	Italy		River Biferno
632	Italy		River Cecina*
633	Italy		Rocca dei Corvi, Mao, Mortou, Finalese e Capo Noli
634	Italy		Rocca dell'Adelasia e Foresta Cadibona
635	Italy		Rupe di Marianopoli
636	Italy		Saline di Marsala e Isole dello Stagnone
637	Italy		Saline di Trapani
638	Italy		San Pietro and Sant'Antioco islands
639	Italy		Sant'Andrea island
640	Italy		Sasso Simone e Simoncello, M. Carpegna e Valmarecchia*
641	Italy		Scogliera dei Rizzi
642	Italy		Selva del Lamone*
643	Italy		Selva di Meana (Allerona), Monte Rufeno e Fiume Paglia*
644	Italy		Sentina*

no	Country	Corridor Name	Key Biodiversity Area Name
645	Italy		Serre Persano
646	Italy		Sibillini mountains*
647	Italy		Sila
648	Italy		Sila Grande*
649	Italy		Sila Piccola
650	Italy		Simeto mouth and Biviere di Lentini
651	Italy		Sinis and Oristano wetlands
652	Italy		Sirente, Velino and Duchessa mountains*
653	Italy		Stagno di Corru S'Ittiri e Capo della Frasca*
654	Italy		Stagno di Mistras e Capo S. Marco
655	Italy		Stagno di San Teodoro e costa di Lu Impostu
656	Italy		Stagno e ginepreto di Platamona
657	Italy		Stagno Santa Caterina, Porto Pino, Capo Teulada e M. Lapanu
658	Italy		Stagnone di Marsala and Trapani saltpans*
659	Italy		Stromboli
660	Italy		Taro river*
661	Italy		Tarquinia saltpans*
662	Italy		Tavolara island
663	Italy		Torre del Pizzo e Isola di S. Andrea
664	Italy		Torre Manfria
665	Italy		Tremiti
666	Italy		Tremiti islands*
667	Italy		Tuscan Archipelago
668	Italy		Uccellina mountains, Trappola marshes and Ombrone mouth*
669	Italy		Valle Bertuzzi and Goro lagoon
670	Italy		Valle del Fiume Cecina*
671	Italy		Valle del Taro*
672	Italy		Valle dell'Enza*
673	Italy		Valle F. Ippari e Punta Braccetto
674	Italy		Valli dei fiumi Argentino, Abatemarco, Rosa ed Esaro
675	Italy		Vallombrosa, Pratomagno
676	Italy		Valnerina, M.ti Coscerno-Civitella-Aspra e Monte Maggio, Monti Reatini, Lago di Ventina*
677	Italy		Vena del Gesso romagnola
678	Italy		Vendicari, Capo delle Correnti e pantani della Sicilia meridionale

no	Country	Corridor Name	Key Biodiversity Area Name
679	Italy		Venice lagoon
680	Italy		Vico lake*
681	Italy		Vulcano*
682	Jordan	South Syria and Northern Jordan	Ajlum
683	Jordan	South Syria and Northern Jordan	Dibbin
684	Jordan	South Syria and Northern Jordan	**Jordan River**
685	Jordan	South Syria and Northern Jordan	Madaba - Hisban - Kafrein
686	Jordan	South Syria and Northern Jordan	Mafraq - Irbid plain
687	Jordan	South Syria and Northern Jordan	**Mujib**
688	Jordan	South Syria and Northern Jordan	Salt
689	Jordan	South Syria and Northern Jordan	Samra sewage station
690	Jordan	South Syria and Northern Jordan	Um Queis
691	Jordan	South Syria and Northern Jordan	Yarmuk river
692	Jordan	South Syria and Northern Jordan	Zubia - Shatana
693	Jordan		Karack
694	Jordan		Lava Safawai
695	Jordan		Rum - Qa Hizma
696	Lebanon	**Orontes Valley and Lebanon Mountains**	Ainata
697	Lebanon	**Orontes Valley and Lebanon Mountains**	Ain-el-Qam
698	Lebanon	**Orontes Valley and Lebanon Mountains**	**Al Chouf Cedars Nature Reserve**
699	Lebanon	**Orontes Valley and Lebanon Mountains**	Al Mjar - Ras Baalbek
700	Lebanon	**Orontes Valley and Lebanon Mountains**	Ammiq wetland
701	Lebanon	**Orontes Valley and Lebanon Mountains**	Beirut River Valley
702	Lebanon	**Orontes Valley and Lebanon Mountains**	Ehden Forest Nature Reserve
703	Lebanon	**Orontes Valley and Lebanon Mountains**	Hasroun
704	Lebanon	**Orontes Valley and Lebanon Mountains**	Hima Ebel es-Saqi
705	Lebanon	**Orontes Valley and Lebanon Mountains**	Jabal el Barouk
706	Lebanon	**Orontes Valley and Lebanon**	Jabal Moussa

no	Country	Corridor Name	Key Biodiversity Area Name
		Mountains	
707	Lebanon	**Orontes Valley and Lebanon Mountains**	Jebel Sannine
708	Lebanon	**Orontes Valley and Lebanon Mountains**	Jezzine Bassine
709	Lebanon	**Orontes Valley and Lebanon Mountains**	Kfar Zabad - Anjar
710	Lebanon	**Orontes Valley and Lebanon Mountains**	Qaa El Rim - Sannine
711	Lebanon	**Orontes Valley and Lebanon Mountains**	Qaraoun Lake
712	Lebanon	**Orontes Valley and Lebanon Mountains**	Ramlieh*
713	Lebanon	**Orontes Valley and Lebanon Mountains**	Southern El Kabir River
714	Lebanon	**Orontes Valley and Lebanon Mountains**	Tannourine Nature Reserve
715	Lebanon	**Orontes Valley and Lebanon Mountains**	**Upper Litani River**
716	Lebanon	**Orontes Valley and Lebanon Mountains**	Upper Mountains of Akkar-Donnieh
717	Lebanon	**Orontes Valley and Lebanon Mountains**	Western Akroum
718	Lebanon	**Orontes Valley and Lebanon Mountains**	**Western Anti Lebanon Mountains**
719	Lebanon		Beirut Coast
720	Lebanon		Bentael Nature Reserve
721	Lebanon		El Monsouri Beach
722	Lebanon		North Coast of Tyre
723	Lebanon		Palm Islands Nature Reserve
724	Lebanon		Qoleileh-Naqoura Coastal Zone
725	Lebanon		Tyre Beach
726	Libya	**Cyrenaican Peninsula**	Ajdabiya Marsh Protected Areas
727	Libya	**Cyrenaican Peninsula**	Benghazi
728	Libya	**Cyrenaican Peninsula**	Benghazi Coast
729	Libya	**Cyrenaican Peninsula**	Bumbah Gulf
730	Libya	**Cyrenaican Peninsula**	**Cyrenaican Peninsula**
731	Libya	**Cyrenaican Peninsula**	**Geziret al Elba - Ayn al Ghazalah Bay**

no	Country	Corridor Name	Key Biodiversity Area Name
732	Libya	**Cyrenaican Peninsula**	Geziret Garah
733	Libya	**Cyrenaican Peninsula**	**Jabal al Akhdar**
734	Libya	**Cyrenaican Peninsula**	**Marmarica**
735	Libya	**Cyrenaican Peninsula**	**Surrounding of Jabal Akhdar**
736	Libya	Wetlands of Tunisia and Libya	Farwa Island
737	Libya		Alheessa
738	Libya		Gulf of Sirte
739	Libya		Karabolli
740	Libya		Nefhusa
741	Libya		New Hisha
742	Libya		Taworgha
743	Libya		Tawuoryhe Sebkha
744	Libya		Wadi al Farigh
745	FYR Macedonia	**Southwest Balkans**	Belasica
746	FYR Macedonia	**Southwest Balkans**	Bogdanci (Chuchurlum-Paljurci)
747	FYR Macedonia	**Southwest Balkans**	Crn Drim gorge
748	FYR Macedonia	**Southwest Balkans**	**Dojran Lake**
749	FYR Macedonia	**Southwest Balkans**	Galichica Mountain
750	FYR Macedonia	**Southwest Balkans**	Ilinska Planina Mt.
751	FYR Macedonia	**Southwest Balkans**	Jablanica
752	FYR Macedonia	**Southwest Balkans**	Lake Doirani
753	FYR Macedonia	**Southwest Balkans**	Lake Prespa
754	FYR Macedonia	**Southwest Balkans**	Monospitovo swamp
755	FYR Macedonia	**Southwest Balkans**	**Ohrid Lake**
756	FYR Macedonia	**Southwest Balkans**	Pelister
757	FYR Macedonia	**Southwest Balkans**	Stogovo
758	FYR Macedonia	**Southwest Balkans**	Vardar River
759	Malta		Buskett and Wied il-Luq*
760	Malta		Comino island*
761	Malta		Filfla islet*
762	Malta		Rdum Tal-Madonna*
763	Malta		Ta'Cenc cliffs*
764	Montenegro	Eastern Adriatic	Hill Spas*
765	Montenegro	Eastern Adriatic	Kotor Risan bay*
766	Montenegro	Eastern Adriatic	Lovcen

no	Country	Corridor Name	Key Biodiversity Area Name
767	Montenegro	Eastern Adriatic	Orjen
768	Montenegro	Eastern Adriatic	Platamuni*
769	Montenegro	Eastern Adriatic	Tivat Salina*
770	Montenegro	**Southwest Balkans**	Bojana Delta
771	Montenegro	**Southwest Balkans**	Cemovsko Field
772	Montenegro	**Southwest Balkans**	Cijevna Canyon and Hum Orahovski
773	Montenegro	**Southwest Balkans**	Kakaricka gora
774	Montenegro	**Southwest Balkans**	**Lake Skadar**
775	Montenegro	**Southwest Balkans**	Rumija
776	Montenegro	**Southwest Balkans**	Vrsuta
777	Montenegro	**Southwest Balkans**	Zeta Stream
778	Montenegro		Buljarica*
779	Montenegro		Katici, Donkova and Velja Seka*
780	Montenegro		Trebjesa
781	Morocco	Coastal Atlantic Plains	Archipel d'Essaouira
782	Morocco	Coastal Atlantic Plains	Canton Forestier de Sidi Bou Ghaba
783	Morocco	Coastal Atlantic Plains	Dayas dEssaouira
784	Morocco	Coastal Atlantic Plains	Dayas du Gharb
785	Morocco	Coastal Atlantic Plains	**Essaouira Dunes**
786	Morocco	Coastal Atlantic Plains	Falaise Sidi-Moussa
787	Morocco	Coastal Atlantic Plains	Lower Oum Er Rbia
788	Morocco	Coastal Atlantic Plains	Lower Tensift River
789	Morocco	Coastal Atlantic Plains	Mamora
790	Morocco	Coastal Atlantic Plains	Région Jorf Lasfar
791	Morocco	Coastal Atlantic Plains	Sidi Moussa - Oualidia
792	Morocco	Mountains of Ksours and Djebel Krouz	Jbel Krouz
793	Morocco	Oranie and Molouya	Aguas de Melilla-Nador (L'Orientale)*
794	Morocco	Oranie and Molouya	Embouchure Oued Moulouya
795	Morocco	Oranie and Molouya	**Sebkha Bou Areg**
796	Morocco	Oranie and Molouya	Trois Fourches
797	Morocco	**The Atlas Mountains**	Aguelmane de Sidi Ali Ta'nzoult
798	Morocco	**The Atlas Mountains**	Aguelmane n'Tifounassine
799	Morocco	**The Atlas Mountains**	Ait Bougmes
800	Morocco	**The Atlas Mountains**	Anti-Atlas Mountains
801	Morocco	**The Atlas Mountains**	Azilal

no	Country	Corridor Name	Key Biodiversity Area Name
802	Morocco	**The Atlas Mountains**	Barrage Idriss Premier
803	Morocco	**The Atlas Mountains**	**Bou Fekrane River**
804	Morocco	**The Atlas Mountains**	Dwiyate
805	Morocco	**The Atlas Mountains**	**Eastern Middle Atlas Mountains**
806	Morocco	**The Atlas Mountains**	**Fes and Surrounding Area**
807	Morocco	**The Atlas Mountains**	Imouzzer Du Kandar
808	Morocco	**The Atlas Mountains**	Imzi
809	Morocco	**The Atlas Mountains**	Jbel Tichouket
810	Morocco	**The Atlas Mountains**	Jbel Zerhoun
811	Morocco	**The Atlas Mountains**	Lac Ouiouane
812	Morocco	**The Atlas Mountains**	Oued Matil: Ksob
813	Morocco	**The Atlas Mountains**	**Oued Oumer Rbid**
814	Morocco	**The Atlas Mountains**	Oulad Teima (Sous River)
815	Morocco	**The Atlas Mountains**	**Parc National de Souss-Massa and Aglou**
816	Morocco	**The Atlas Mountains**	Parc National de Tazekka
817	Morocco	**The Atlas Mountains**	**Parc National de Toubkal**
818	Morocco	**The Atlas Mountains**	**Parc National du Haut Atlas Oriental**
819	Morocco	**The Atlas Mountains**	**Parc Naturel d'Ifrane**
820	Morocco	**The Atlas Mountains**	Sidi Chiker (M'Sabih Talas)
821	Morocco	**The Atlas Mountains**	Tamga and Aqqa Wabzaza
822	Morocco	**The Atlas Mountains**	Tamri and Imsouane
823	Morocco	**The Atlas Mountains**	Tarhazoute
824	Morocco	**The Atlas Mountains**	TasgaTasga
825	Morocco	**The Atlas Mountains**	**Tiradine and Takherhort Hunting Reserves**
826	Morocco	**The Atlas Mountains**	Upper Tensift River
827	Morocco	The Rif Mountains	Bou Hachem Reserve
828	Morocco	The Rif Mountains	Cap Spartel
829	Morocco	The Rif Mountains	Jbel Moussa
830	Morocco	The Rif Mountains	Loukkos River
831	Morocco	The Rif Mountains	Marais Larache
832	Morocco	The Rif Mountains	Merja Bargha
833	Morocco	The Rif Mountains	Merja Halloufa
834	Morocco	The Rif Mountains	Merja Zerga
835	Morocco	The Rif Mountains	Oued Tahadart
836	Morocco	The Rif Mountains	Parc National d'Al Hoceima

no	Country	Corridor Name	Key Biodiversity Area Name
837	Morocco	The Rif Mountains	Parc Naturel de Talassemtane
838	Morocco		Aguas del norte de Marruecos (Alhucemas)*
839	Morocco		Barrage al Massira
840	Morocco		Barrage Mohamed V
841	Morocco		Lagune de Khnifiss
842	Morocco		Msseyed
843	Morocco		Oued Chebeika
844	Morocco		Oued Mird
845	Morocco		Piste de Tagdilt
846	Morocco		Plage Blanche - Ras Takoumba
847	Morocco		Plataforma continental de Tarfaya*
848	Morocco		Region Fouchal - Matarka
849	Morocco		Sahb al Majnoun
850	Morocco		Sebkha Zima
851	Morocco		Zone Humide de Laayoune
852	Palestine Territory		Jenin
853	Palestine Territory		Jenin 2
854	Palestine Territory		Jenin 3
855	Palestine Territory		Jenin 4
856	Palestine Territory		Nablus
857	Palestine Territory		Nablus 2
858	Palestine Territory		Nablus 3
859	Palestine Territory		Yaseed
860	Palestine Territory	South Syria and Northern Jordan	Jerusalem wilderness
861	Palestine Territory		Jerusalem city
862	Portugal		Évora plains
863	Portugal		Albufeira do Caia
864	Portugal		Alter do Chão
865	Portugal		Arraiolos*
866	Portugal		Baía do Varadouro
867	Portugal		Berlenga and Farilhões islands
868	Portugal		Côa valley*
869	Portugal		Cabeço do Fogo*
870	Portugal		Cabeção*
871	Portugal		Cabo Espichel*

no	Country	Corridor Name	Key Biodiversity Area Name
872	Portugal		Cabrela
873	Portugal		Campo Maior
874	Portugal		Capelinhos
875	Portugal		Castro Marim
876	Portugal		Castro Verde plains
877	Portugal		Contendas
878	Portugal		Costa das Flores
879	Portugal		Costa do Corvo
880	Portugal		Costa Sudeste do Pico
881	Portugal		Cuba
882	Portugal		Estrela Mountains*
883	Portugal		Faial da Terra e Ponta do Arnel
884	Portugal		Fajã das Almas
885	Portugal		Feteiras
886	Portugal		Furnas - Santo António
887	Portugal		Ilhas Desertas
888	Portugal		Ilheu da Praia
889	Portugal		Ilheu da Vila
890	Portugal		Ilheu das Lagoínhas e Costa Adjacente
891	Portugal		Ilheu de Baixo e Costa Adjacente
892	Portugal		Ilheu do Topo e Costa Adjacente
893	Portugal		Ilheus do Porto Santo
894	Portugal		Ilhéu da Baleia e Ponta da Barca*
895	Portugal		Ilhéu das Cabras*
896	Portugal		Lagoa Pequena*
897	Portugal		Lajes do Pico*
898	Portugal		Laurissilva
899	Portugal		Leixão da Gaivota*
900	Portugal		Lomba Grande*
901	Portugal		Luzianes*
902	Portugal		Maciço Montanhoso Oriental
903	Portugal		Malcata mountains
904	Portugal		Mistério da Prainha*
905	Portugal		Mondego Estuary
906	Portugal		Monforte plains

no	Country	Corridor Name	Key Biodiversity Area Name
907	Portugal		Montesinho and Nogueira mountains*
908	Portugal		Mosteiros - Bretanha
909	Portugal		Mourão, Moura e Barrancos
910	Portugal		Murta dam
911	Portugal		Paul de Arzila*
912	Portugal		Paul de Madriz*
913	Portugal		Paul do Boquilobo*
914	Portugal		Paul do Taipal
915	Portugal		Pera marsh*
916	Portugal		Pico da Vara
917	Portugal		Ponta da Ilha e Terra Alta
918	Portugal		Ponta da Malbusca e Ponta do Castelete
919	Portugal		Ponta da Piedade*
920	Portugal		Ponta de São Lourenço
921	Portugal		Ponta do Cintrão
922	Portugal		Ponta do Pargo
923	Portugal		Ponta dos Rosais - Urzelina
924	Portugal		Portas de Ródão e Vale Mourão*
925	Portugal		Raminho - Pesqueiro Velho*
926	Portugal		Reguengos de Monsaraz
927	Portugal		Ria de Aveiro
928	Portugal		Ria Formosa (Faro lagoon)
929	Portugal		Ribeirinha
930	Portugal		River Guadiana
931	Portugal		Sabôr and Maçãs*
932	Portugal		Sado estuary
933	Portugal		Salinas de Alverca e do Forte da Casa*
934	Portugal		Santo André and Sancha lagoons
935	Portugal		Selvagens
936	Portugal		Serra Branca
937	Portugal		Serra de Monchique*
938	Portugal		Serra de Penha Garcia e Campina de Toulões
939	Portugal		Serra do Caldeirão*
940	Portugal		South-west coast of Portugal*
941	Portugal		Tejo estuary

no	Country	Corridor Name	Key Biodiversity Area Name
942	Portugal		Upper River Douro and Águeda valleys*
943	Portugal		Upper River Tejo
944	Portugal		Vila Fernando
945	Portugal		Vilamoura*
946	Portugal		Zona Central do Pico*
947	Slovenia		Akocjan Bay*
948	Slovenia		Karst*
949	Slovenia		Reka valley*
950	Slovenia		Sečovlje saltpans*
951	Slovenia		Sne`nik plateau and Pivka valley*
952	Slovenia		Southern slopes of Trnovo forest and Nanos plateau*
953	Spain	Oranie and Molouya	Chafarinas Islands
954	Spain	Oranie and Molouya	Islas Chafarinas
955	Spain	The Rif Mountains	Ceuta
956	Spain		Acantilados de Santo Domingo y roque de Garachico*
957	Spain		Aguas de Formentera y sur de Ibiza
958	Spain		Aguas de La Gomera-Teno
959	Spain		Aguas de Sur de Mallorca y Cabrera
960	Spain		Aguas del Baix Llobregat-Garraf
961	Spain		Aguas del levante de Ibiza
962	Spain		Aguas del norte de Mallorca
963	Spain		Aguas del norte y oeste de Menorca
964	Spain		Aguas del poniente de Mallorca
965	Spain		Aguas del poniente y norte de Ibiza
966	Spain		Aguas del sureste de Menorca
967	Spain		Aguas y acantilados del norte de la Palma*
968	Spain		Alange
969	Spain		Alborán island
970	Spain		Albufera de Mallorca and Albufereta de Pollença marshes
971	Spain		Albufera de Valencia
972	Spain		Albufera de Valencia marshes
973	Spain		Alcañiz salt lakes*
974	Spain		Alcarama mountain and Alhama river
975	Spain		Alcarria de Alcalá steppes
976	Spain		Alcántara reservoir-Cuatro Lugares

no	Country	Corridor Name	Key Biodiversity Area Name
977	Spain		Alcázar de San Juan-Quero endorreic lagoons
978	Spain		Alcubierre and Sigena mountain ranges*
979	Spain		Alcudia valley and mountain range
980	Spain		Aldeaquemada-Dañador
981	Spain		Alhamilla mountain range-Campo de Níjar plain*
982	Spain		Alicante islets*
983	Spain		Almenara marshes
984	Spain		Alto Lozoya-La Pedriza
985	Spain		Altos de Barahona high moor
986	Spain		Ampurdán marshes
987	Spain		Anaga rocky islets*
988	Spain		Ancares mountains*
989	Spain		Antequera mountain range-El Chorro*
990	Spain		Archipelago of Cabrera
991	Spain		Areta, Archuba and Zariquieta mountain ranges
992	Spain		Arico pine woodland
993	Spain		Arlanza Valley-Peñas de Cervera
994	Spain		Arnedillo-Isasa crag*
995	Spain		Arribes del Duero-Fermoselle*
996	Spain		Ayllón mountain range*
997	Spain		Azuaga-Llerena-Peraleda de Zaucejo
998	Spain		Azután reservoir
999	Spain		Bahía de Almeria
1000	Spain		Bahía de Cádiz*
1001	Spain		Bahía de Cádiz*
1002	Spain		Bahía de Málaga-Cerro Gordo
1003	Spain		Bajo Alcanadre-Serreta de Tramaced*
1004	Spain		Ballobar-Candasnos
1005	Spain		Banco de la Concepcion*
1006	Spain		Bardenas Reales
1007	Spain		Belchite-Mediana*
1008	Spain		Belver de los Montes-Gallegos del Pan
1009	Spain		Bienvenida-Usagre-Ribera del Fresno
1010	Spain		Blancas-Torralba de los Sisones*
1011	Spain		Borbollón reservoir

no	Country	Corridor Name	Key Biodiversity Area Name
1012	Spain		Bornos reservoir
1013	Spain		Botoa-Villar del Rey
1014	Spain		Boumort mountains*
1015	Spain		Brozas-Membrío
1016	Spain		Bujeo, Ojn, del Nio and Blanquilla mountain ranges
1017	Spain		Burete, Cambrón and Espuña mountain ranges*
1018	Spain		Córdoba countryside
1019	Spain		Cabras, Aljibe and Montecoche mountain range
1020	Spain		Campo Arañuelo-Valdecañas reservoir
1021	Spain		Campo de Argañán*
1022	Spain		Campo de Calatrava
1023	Spain		Campo de Montiel
1024	Spain		Campo Visiedo*
1025	Spain		Canalizos mountain range (Saceruela)
1026	Spain		Canyons on the middle section of the Cabriel river*
1027	Spain		Cape Barbaria
1028	Spain		Cape Freu-Cape Farrutx*
1029	Spain		Cape Nonó-Isle of Murada
1030	Spain		Cape Pinar*
1031	Spain		Cape Vermell*
1032	Spain		Cardó, Tivissa and Llabería mountains*
1033	Spain		Carmona countryside
1034	Spain		Carrión-Frómista
1035	Spain		Castrejón reservoir*
1036	Spain		Castronuño-Zamora*
1037	Spain		Cazorla and Segura mountain ranges
1038	Spain		Cedillo reservoir
1039	Spain		Centinela mountain and La Esquina plain*
1040	Spain		Central Badajoz mountain ranges
1041	Spain		Cerrato high moor
1042	Spain		Cijara reservoir
1043	Spain		Cinca river rice fields and steppe area
1044	Spain		Cinco Villas ponds*
1045	Spain		Coast between Arinaga and Castillo del Romeral*
1046	Spain		Coast between Corralejo and Tostón

no	Country	Corridor Name	Key Biodiversity Area Name
1047	Spain		Coast of Esquinzo-Puertito de Los Molinos*
1048	Spain		Coastal cliffs between Cape Enderrocat and Cala Pí*
1049	Spain		Coastal cliffs between isles of Malgrats and Cala Figuera*
1050	Spain		Cogul-Alfés steppes*
1051	Spain		Columbretes islands
1052	Spain		Condado-Campiña
1053	Spain		Conde, Chinche and Honda lakes
1054	Spain		Coria mountain ranges
1055	Spain		Cortados del Jarama
1056	Spain		Costa occidental del Hierro*
1057	Spain		Costa y aguas de Mogan*
1058	Spain		Cádiz bay
1059	Spain		Cuchillete de Buenavista-gully of La Torre-Los Alares
1060	Spain		Cuenca mountain ranges
1061	Spain		De la Plata mountain range
1062	Spain		Don Benito-Guareña
1063	Spain		Dragonera Island-La Trapa
1064	Spain		Duratón canyon
1065	Spain		East Gata mountain range
1066	Spain		East mountain range of Huelva*
1067	Spain		Ebro delta
1068	Spain		Ecija-Osuna plain
1069	Spain		El Canal y Los Tiles laurel forest
1070	Spain		El Escorial-San Martín de Valdeiglesias
1071	Spain		El Hito
1072	Spain		El Hondo wetland
1073	Spain		El Mojón*
1074	Spain		El Moro marshes
1075	Spain		El Médano coast*
1076	Spain		El Pardo-Viñuelas
1077	Spain		El Roque coastal cliffs*
1078	Spain		El Valle, Altaona and Escalona mountains*
1079	Spain		Embid-Molina high moors*
1080	Spain		Enguera mountain range-La Canal de Navarrés*
1081	Spain		Entrepeñas and Buendía reservoirs*

no	Country	Corridor Name	Key Biodiversity Area Name
1082	Spain		Esla dam
1083	Spain		Espadán mountain range*
1084	Spain		Estrecho de Gibraltar
1085	Spain		Estrecho de la Bocaina
1086	Spain		Famara crag*
1087	Spain		Famara sandy plain*
1088	Spain		Fausilla mountains*
1089	Spain		Frontera laurel forest
1090	Spain		Fuente de Cantos-Montemolín
1091	Spain		Fuente de Piedra, Gosque and Campillos lakes
1092	Spain		Fuentelapeña-Jambrina
1093	Spain		Gabriel y Galán reservoir*
1094	Spain		Gallocanta lake
1095	Spain		Garachico rocky islet*
1096	Spain		Garafía rocky islets*
1097	Spain		Garajonay National Park
1098	Spain		Gistreo and Coto mountain ranges*
1099	Spain		Golfo de Cádiz
1100	Spain		Gorges of Iregua, Leza and Jubera*
1101	Spain		Gredos and Candelario mountain ranges*
1102	Spain		Gádor mountain range*
1103	Spain		Guadalentín saltmarshes*
1104	Spain		Guadalquivir marshes
1105	Spain		Guara mountain range
1106	Spain		Gully of Ajuí-Betancuria
1107	Spain		Haría-Tabayesco*
1108	Spain		Hinojosa del Duque-El Viso
1109	Spain		Hoya de Baza*
1110	Spain		Hoya de Guadix*
1111	Spain		Humada-Peña Amaya*
1112	Spain		Iruelas valley
1113	Spain		Isla Cristina and Ayamonte marshes and Prado lagoon
1114	Spain		Isla de Alborán
1115	Spain		Island of Lobos
1116	Spain		Isle of Conejera and islets of Bledes and Espartar (Ibiza)

no	Country	Corridor Name	Key Biodiversity Area Name
1117	Spain		Islets of Santa Eulalia, Redona and Es Canar (Ibiza)
1118	Spain		Islets Vedrá and Vedranell
1119	Spain		Islotes de Alicante*
1120	Spain		Islotes de Alicante*
1121	Spain		Islotes litorales de Murcia y Almería*
1122	Spain		Islotes litorales de Murcia y Almería*
1123	Spain		Isthmus of Jandía sandy plain*
1124	Spain		Janubio saltpans*
1125	Spain		Jaén countryside
1126	Spain		Jerez de los Caballeros dehesas
1127	Spain		La Almenara mountain range-Cape Cope*
1128	Spain		La Cabrera mountain range*
1129	Spain		La Caldera de Taburiente National Park
1130	Spain		La Dehesa grasslands*
1131	Spain		La Demanda mountains*
1132	Spain		La Janda
1133	Spain		La Limia*
1134	Spain		La Mola of Formentera
1135	Spain		La Palma laurel forest
1136	Spain		La Playa islet*
1137	Spain		La Safor and North Alicante mountain ranges*
1138	Spain		La Serena
1139	Spain		Lajares sandy plain-Cotillo-Ezquinzo*
1140	Spain		Langa-Mara-Belmonte de Calatayud plains*
1141	Spain		Lanzarote islets
1142	Spain		Las Cañas lake
1143	Spain		Las Cabras plain*
1144	Spain		Las Contiendas mountain range*
1145	Spain		Las Mercedes, Mina y Yedra, Aguirre, La Goleta, and Pedro Alvarez mountains
1146	Spain		Las Villuercas mountain range
1147	Spain		Las Vueltas, Aguas Negras and Quebradas mountains
1148	Spain		Layna high moors*
1149	Spain		Lebrija, Las Cabezas and Espera lagoons
1150	Spain		Lerida steppes

no	Country	Corridor Name	Key Biodiversity Area Name
1151	Spain		Littoral islets of Murcia and Almería
1152	Spain		Llobregat delta
1153	Spain		Los Blázquez-La Granjuela-Fuenteovejuna
1154	Spain		Los Gigantes coastal cliff*
1155	Spain		los islotes de Lanzarote
1156	Spain		Los Molinos gully-Plain of La Laguna
1157	Spain		Los Monegros (South)
1158	Spain		Los Rodeos-La Esperanza*
1159	Spain		Los Tollos lake
1160	Spain		Low Tietar river and La Vera valley*
1161	Spain		Lower course of the river Huerva*
1162	Spain		Lower course of the river Matarraña-Ribarroja*
1163	Spain		Lácara-Morante
1164	Spain		Líjar mountain range-Zaframagon crag
1165	Spain		Madrona and And·jar mountain ranges
1166	Spain		Majona coast*
1167	Spain		Malpartida de Cáceres-Arroyo de la Luz
1168	Spain		Malpica island (River Tagus)
1169	Spain		Mar del Emporda
1170	Spain		Mar Menor coastal lagoon
1171	Spain		Marina mountain ranges*
1172	Spain		Marismas del Tinto y del Odiel y lagunas costeras de Huelva*
1173	Spain		Marmolejo reservoir-La Ropera*
1174	Spain		María mountain range-Los Vélez*
1175	Spain		Mata and Torrevieja lagoons
1176	Spain		Medas islands
1177	Spain		Medina and Puerto Real lagoons
1178	Spain		Medina-Sidonia
1179	Spain		Middle section of river Guadalquivir reservoirs*
1180	Spain		Moncayo mountain range
1181	Spain		Monegrillo-Pina steppe area-Pina
1182	Spain		Monfrag³e
1183	Spain		Montagut and Montmell mountains*
1184	Spain		Montejo de la Vega-Riaza canyon
1185	Spain		Montes Aquilanos range*

no	Country	Corridor Name	Key Biodiversity Area Name
1186	Spain		Montes Universales-Albarracín mountain range*
1187	Spain		Montsant and Prades mountains*
1188	Spain		Montsech and Montgai mountains*
1189	Spain		Montánchez mountain range-Cornalvo reservoir
1190	Spain		Moratalla mountain range*
1191	Spain		Morella pass*
1192	Spain		Morro Tabaiba-Morro de los Rincones-Vallebrón mountains
1193	Spain		Mountain of Agua, gully of Los Cochinos and gully of Cuevas Negras
1194	Spain		Mountain range and saltpans at Cabo de Gata
1195	Spain		Mountain ranges of Cordoba*
1196	Spain		Mountain ranges of Ronda, Bermeja and Crestellina*
1197	Spain		Mountain ranges south of Jaén*
1198	Spain		Mountains of Barcelona*
1199	Spain		Mouth of the river Guadalhorce
1200	Spain		Muela mountain range and Cape Tiñoso*
1201	Spain		Mérida-Montijo reservoir
1202	Spain		Naos Bay-Hoya de Tacorón*
1203	Spain		Negro rocky islet*
1204	Spain		Nizdafe plains*
1205	Spain		North and east coasts of Minorca and island of Aire
1206	Spain		Northern slope of Guadarrama mountain range
1207	Spain		Oña and Tesla mountain ranges*
1208	Spain		Odiel and Tinto marshes and Huelva coastal lagoons
1209	Spain		Olivenza-La Albuera
1210	Spain		Oropesa plains
1211	Spain		Pajonales, Ojeda, Inagua and La Data pine woodlands
1212	Spain		Pass of Beceite-Turmell mountain*
1213	Spain		Peña de Francia
1214	Spain		Peña Labra and Cordel mountain ranges*
1215	Spain		Peñagolosa*
1216	Spain		Pedro Muñoz-Manjavacas endorreic lagoons
1217	Spain		Pego-Oliva marshes*
1218	Spain		Pela mountain range-Orellana reservoir-Zorita
1219	Spain		Peninsula of Jandía
1220	Spain		Pila mountain range*

no	Country	Corridor Name	Key Biodiversity Area Name
1221	Spain		Pitillas and Dos Reinos lagoons*
1222	Spain		Plain between Cáceres and Trujillo-Aldea del Cano
1223	Spain		Plains of La Corona-Las Honduras*
1224	Spain		Plains of Mareta-Hoya de la Yegua*
1225	Spain		Plasencia and San Bernabé mountain range
1226	Spain		Plataforma marina del Delta del Ebro-Columbretes
1227	Spain		Plataforma-talud marinos del cabo de la Nao
1228	Spain		Pozo Negro mountain-Vigán
1229	Spain		Prat de Cabanes-Torreblanca
1230	Spain		Prelittoral mountain ranges of Granada*
1231	Spain		Puebla de Beleña lagoons
1232	Spain		Puebla de Don Fadrique-Las Cañadas
1233	Spain		Puerto de Mejoral-Almorchón-Cabeza del Buey
1234	Spain		Puerto Peña reservoir-Valdecaballeros
1235	Spain		Pétrola-Almansa-Yecla
1236	Spain		Quipar reservoir, Molino mountain range and Cagitán plains*
1237	Spain		Rasca lava fields-Guaza mountain-Las Mesas plain*
1238	Spain		Ravines and pinewoods in central Minorca*
1239	Spain		Redbeeds and copses of Aranjuez*
1240	Spain		Ricote and Nevela mountain ranges*
1241	Spain		River Cega-Tierra de Pinares-Cantalejo*
1242	Spain		River Ebro ox-bow lakes*
1243	Spain		River Guadalope
1244	Spain		River Jalón canyon*
1245	Spain		River Lobos canyon*
1246	Spain		River Martín canyons and Arcos mountain range
1247	Spain		River Mesa canyons*
1248	Spain		River Mijares mouth
1249	Spain		River Moros*
1250	Spain		River Mundo and river Segura canyons*
1251	Spain		River Piedras marshes and Rompido sandbank*
1252	Spain		River Pisuerga at Dueñas*
1253	Spain		Rivers Cabriel and J·car canyons*
1254	Spain		Rivers Cinca and Alcanadre riverine forest*
1255	Spain		Roque de la Playa*

no	Country	Corridor Name	Key Biodiversity Area Name
1256	Spain		Roques de Anaga*
1257	Spain		Roques de Salmor*
1258	Spain		Rosarito and Navalcán reservoirs-La Iglesuela (Tietar valley)
1259	Spain		Río Cabras gully
1260	Spain		Río Huebra-Arribes del Duero
1261	Spain		Salmor rocky islets*
1262	Spain		Salobrar de Campos Lagoons-Sa Vall*
1263	Spain		Salt-pans of Ibiza and Formentera and Freus isles
1264	Spain		San Andrés, Pijaral and Anaga mountains
1265	Spain		San Clemente-Villarrobledo
1266	Spain		San Juan de la Peña-Oroel crag*
1267	Spain		San Pedro mountain range
1268	Spain		Sandy plain of Corralejo*
1269	Spain		Sant Gervás mountains*
1270	Spain		Santa Pola salt-pans
1271	Spain		Santa Trsula and La Victoria laurel forest
1272	Spain		Santo Domingo coastal cliffs*
1273	Spain		Santo Domingo-Riglos-Gratal
1274	Spain		Sariñena lake and La Estación pond*
1275	Spain		Segovia*
1276	Spain		Sierra Morena de Córdoba
1277	Spain		Sierra Morena de Sevilla
1278	Spain		Sierra Nevada mountain range*
1279	Spain		Sierra Pelada mountain range
1280	Spain		Siruela-Agudo
1281	Spain		Sotavento beach*
1282	Spain		South-west coast of La Gomera*
1283	Spain		Step rocks of Hermigua and Agulo
1284	Spain		Tabarca-cabo de Palos
1285	Spain		Tabernas desert*
1286	Spain		Tablas de Daimiel marshes; 'Vicario' and 'Gasset' reservoirs and Malagón lakes
1287	Spain		Tagomago island
1288	Spain		Tajo de Barbate coastal cliffs
1289	Spain		Talamanca-Camarma

no	Country	Corridor Name	Key Biodiversity Area Name
1290	Spain		Tamadaba pine woodland
1291	Spain		Tarajalejo mountain range
1292	Spain		Tarancón-Ocaña-Corral de Almaguer
1293	Spain		Tarifa
1294	Spain		Tauro pine woodland*
1295	Spain		Tembleque-La Guardia plains
1296	Spain		Teneg³ime gully*
1297	Spain		Terry lagoons
1298	Spain		Tiermes-Caracena*
1299	Spain		Tierra de Campiñas steppes
1300	Spain		Tierra de Campos steppes
1301	Spain		Tietar valley
1302	Spain		Tigaiga slope
1303	Spain		Tirajana pine woodland*
1304	Spain		Toledo mountains-Cabañeros
1305	Spain		Topas
1306	Spain		Tordesillas-Mota del Marqués
1307	Spain		Tormos reservoir (La Sotonera)
1308	Spain		Torrecilla and Gigante mountain ranges*
1309	Spain		Torrijos
1310	Spain		Tramuntana mountains
1311	Spain		Trujillo-Torrecillas de la Tiesa
1312	Spain		Tágara gully
1313	Spain		Turia canyon and Los Serranos*
1314	Spain		Ubrique and Grazalema mountain ranges
1315	Spain		Upper Ebro and Rudrón canyons
1316	Spain		Upper sections of the rivers Tajo and Tajuña
1317	Spain		Urbión and Cebollera Mountain Ranges*
1318	Spain		Valdehornillos-Santa Amalia
1319	Spain		Valdurrios-Serreta Negra and Los Rincones mountain ranges*
1320	Spain		Vallehermoso coast*
1321	Spain		Valongo
1322	Spain		Valuengo reservoir
1323	Spain		Ventejís mountain*
1324	Spain		Vilaflor pine woodland

no	Country	Corridor Name	Key Biodiversity Area Name
1325	Spain		Villafáfila
1326	Spain		Villalba de los Barros
1327	Spain		Villanueva del Fresno
1328	Spain		West Andévalo
1329	Spain		Western coast of El Hierro*
1330	Spain		Wetlands at south Córdoba
1331	Spain		Wetlands of western Almería
1332	Spain		Zuera mountains*
1333	Syria	Northern Mesopotamia	Euphrates valley
1334	Syria	**Orontes Valley and Lebanon Mountains**	Abu Zad
1335	Syria	**Orontes Valley and Lebanon Mountains**	Afrin
1336	Syria	**Orontes Valley and Lebanon Mountains**	Eastern Akroum
1337	Syria	**Orontes Valley and Lebanon Mountains**	**Eastern Anti Lebanon Mountains**
1338	Syria	**Orontes Valley and Lebanon Mountains**	Jabal al-Shuah
1339	Syria	**Orontes Valley and Lebanon Mountains**	Jabal Slenfeh
1340	Syria	**Orontes Valley and Lebanon Mountains**	Jebel El Wastani
1341	Syria	**Orontes Valley and Lebanon Mountains**	**Lower Orontes River**
1342	Syria	**Orontes Valley and Lebanon Mountains**	Marmousa
1343	Syria	**Orontes Valley and Lebanon Mountains**	Mount Hermon
1344	Syria	**Orontes Valley and Lebanon Mountains**	Northern El Kabir River
1345	Syria	**Orontes Valley and Lebanon Mountains**	Qadmus
1346	Syria	**Orontes Valley and Lebanon Mountains**	**Upper Orontes River**
1347	Syria	**Orontes Valley and Lebanon Mountains**	Wadi al-Qarn - Burqush
1348	Syria	**Orontes Valley and Lebanon Mountains**	Zebdani

no	Country	Corridor Name	Key Biodiversity Area Name
1349	Syria	South Syria and Northern Jordan	Golan Heights
1350	Syria	South Syria and Northern Jordan	Muzaireeb Lake
1351	Syria	South Syria and Northern Jordan	Yarmuk valley*
1352	Syria		Buhayrat al-Laha*
1353	Syria		Djebel el-Druze
1354	Syria		Fronloq
1355	Syria		Jabal Abdul Aziz
1356	Syria		Jebel Bilas
1357	Syria		Lattakia Beach
1358	Syria		Nahr al Hawaiz River
1359	Syria		North of Wuguf Plain
1360	Syria		Quwayq River
1361	Syria		Sabkhat al-Jabbul
1362	Syria		Umm al-Tuyyur
1363	Syria		Wadi al-Azib*
1364	Syria		Wadi al-Radd
1365	Syria		Wadi Qandil Beach
1366	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Ain Dhabghana
1367	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Barrage Moussa Chami
1368	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Bezikh Reservoir
1369	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Chiba Reservoir
1370	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Djebel el Haouaria
1371	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Ebba Ksoui
1372	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	El Feidja
1373	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	El Houareb reservoir
1374	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	El Jem

no	Country	Corridor Name	Key Biodiversity Area Name
1375	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Garaet Mabtouh
1376	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	**Ichkeul**
1377	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Jebel Seij
1378	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Kairouan plains
1379	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Khairat Reservoir
1380	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Kuriat Islands
1381	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Lagune de Korba
1382	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Lake Tunis (Lake Rades)
1383	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Lebna reservoir
1384	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Masri reservoir
1385	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Metbassta
1386	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Mlaabi reservoir
1387	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Mogods
1388	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Mornaguia reservoir
1389	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Moussa Reservoir
1390	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Nabeul Lagoons
1391	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Oued El Haajar Reservoir

no	Country	Corridor Name	Key Biodiversity Area Name
1392	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Oued El Zouara
1393	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Oued Rmal Reservoir
1394	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Oued Sed
1395	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Ras el Melan Dunes
1396	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Sagjanan
1397	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Salines de Monastir
1398	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Sebkhet Ariana
1399	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Sebkhet Halk el Menzel
1400	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Sebkhet Kelbia
1401	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Sebkhet Sedjoumi
1402	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Sebkhet Sidi el Hani
1403	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Sebkhet Sidi Khelifa
1404	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Sidi Abdelmonem reservoir
1405	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Sidi Jedidi Reservoir
1406	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	**Sidi Mechig Beaches**
1407	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Soliman
1408	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Western Gulf of Tunis

no	Country	Corridor Name	Key Biodiversity Area Name
1409	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Zaghouan
1410	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Zaghouan aqueduct
1411	Tunisia	**Mountains, Plateaus and Wetlands of Algerian Tell and Tunisia**	Zembra and Zembretta Islands
1412	Tunisia	Wetlands of Tunisia and Libya	Bibane
1413	Tunisia	Wetlands of Tunisia and Libya	Bordj Kastil
1414	Tunisia	Wetlands of Tunisia and Libya	Boughrara
1415	Tunisia	Wetlands of Tunisia and Libya	Chaambi National Park
1416	Tunisia	Wetlands of Tunisia and Libya	**Gafsa**
1417	Tunisia	Wetlands of Tunisia and Libya	Gourine
1418	Tunisia	Wetlands of Tunisia and Libya	Kerkennah islands
1419	Tunisia	Wetlands of Tunisia and Libya	Kneiss
1420	Tunisia	Wetlands of Tunisia and Libya	Oued Maltine
1421	Tunisia	Wetlands of Tunisia and Libya	Parc national de Djebel Bou-Hedma
1422	Tunisia	Wetlands of Tunisia and Libya	Salines de Thyna
1423	Tunisia	Wetlands of Tunisia and Libya	Sebkhet Dreiaa
1424	Tunisia	Wetlands of Tunisia and Libya	Sebkhet En Noual
1425	Tunisia	Wetlands of Tunisia and Libya	Sebkhet Sidi Mansour
1426	Tunisia		Galite archipelago
1427	Tunisia		Garaet Douza
1428	Turkey	Marmara Sea Basin	Alacam Mountains
1429	Turkey	Marmara Sea Basin	Armutlu Penisula
1430	Turkey	Marmara Sea Basin	Biga Mountains
1431	Turkey	Marmara Sea Basin	Bosphorus
1432	Turkey	Marmara Sea Basin	Buyukcekmece Lake
1433	Turkey	Marmara Sea Basin	Canakkale Strait
1434	Turkey	Marmara Sea Basin	Gelibolu Kemikli Headland
1435	Turkey	Marmara Sea Basin	Gokceada Lagoon
1436	Turkey	Marmara Sea Basin	Kaz Mountains
1437	Turkey	Marmara Sea Basin	Kocacay delta
1438	Turkey	Marmara Sea Basin	Kus Lake / Manyas Lake
1439	Turkey	Marmara Sea Basin	**Marmara Islands**
1440	Turkey	Marmara Sea Basin	Meric Delta

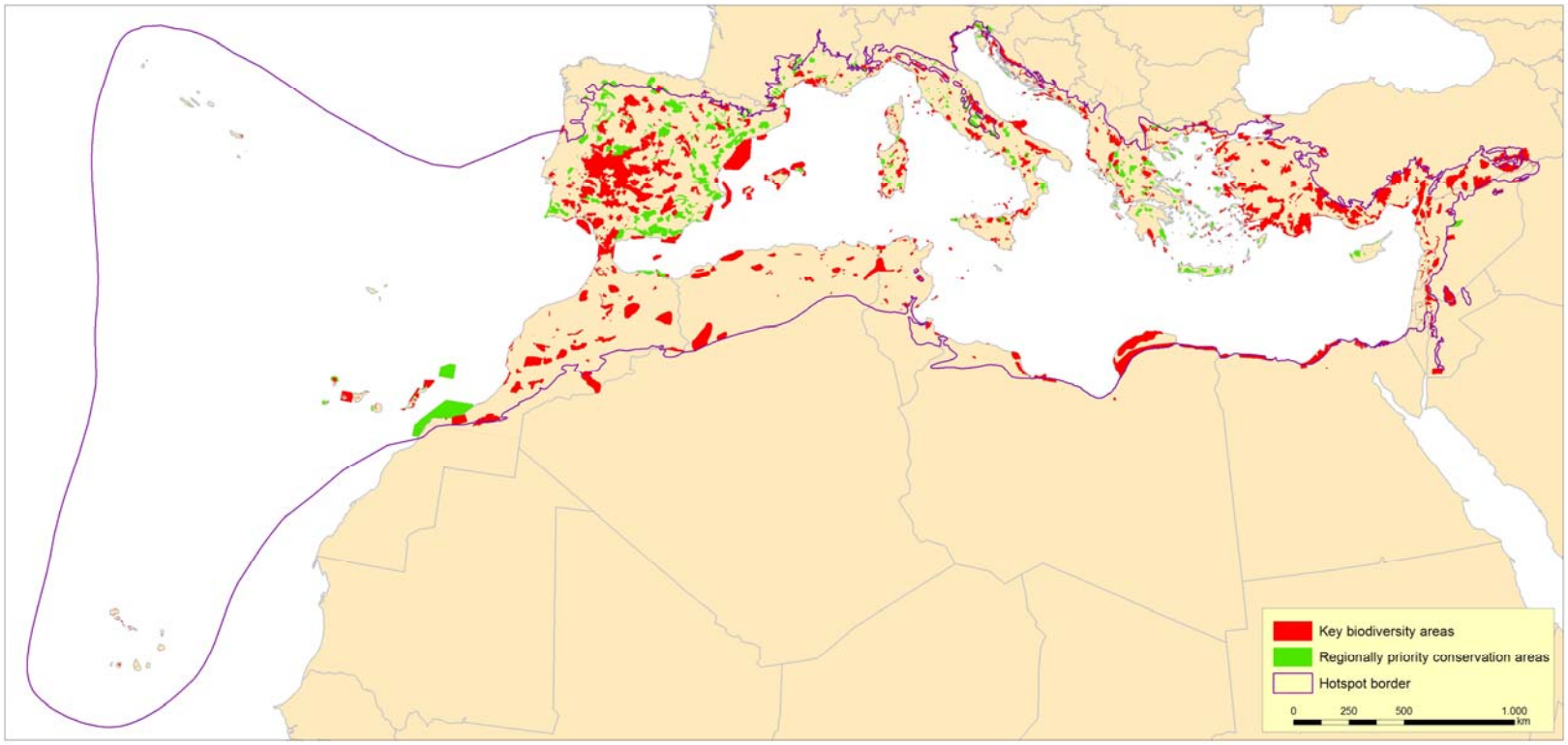
no	Country	Corridor Name	Key Biodiversity Area Name
1441	Turkey	Marmara Sea Basin	Northern Coast of Gokceada
1442	Turkey	Marmara Sea Basin	Pendik Valley
1443	Turkey	Marmara Sea Basin	Saros Bay
1444	Turkey	Marmara Sea Basin	Uluabat Lake
1445	Turkey	Marmara Sea Basin	Uludag
1446	Turkey	Northern Mesopotamia	Akcakale Steppes
1447	Turkey	Northern Mesopotamia	Araban Hills
1448	Turkey	Northern Mesopotamia	Bismil Plain
1449	Turkey	Northern Mesopotamia	Bozova
1450	Turkey	Northern Mesopotamia	Ceylanpinar
1451	Turkey	Northern Mesopotamia	Cizre and Silopi
1452	Turkey	Northern Mesopotamia	Devegecidi Dam
1453	Turkey	Northern Mesopotamia	Eruh Mountains
1454	Turkey	Northern Mesopotamia	Harran Ruins
1455	Turkey	Northern Mesopotamia	Karacadag
1456	Turkey	Northern Mesopotamia	Karkamis
1457	Turkey	Northern Mesopotamia	Kupeli Mountain
1458	Turkey	Northern Mesopotamia	Mardin Mountains
1459	Turkey	Northern Mesopotamia	**Southern Euphrates Valley ve Birecik Steppes**
1460	Turkey	Northern Mesopotamia	**Tigris Valley**
1461	Turkey	**Orontes Valley and Lebanon Mountains**	**Altinozu Hills**
1462	Turkey	**Orontes Valley and Lebanon Mountains**	Gavur Lake
1463	Turkey	**Orontes Valley and Lebanon Mountains**	Incirli Hills
1464	Turkey	**The Taurus Mountains**	**Acigol Lake**
1465	Turkey	**The Taurus Mountains**	Ahir Mountain
1466	Turkey	**The Taurus Mountains**	**Akseki and Ibradi Forests**
1467	Turkey	**The Taurus Mountains**	Aksu Valley
1468	Turkey	**The Taurus Mountains**	Aladaglar
1469	Turkey	**The Taurus Mountains**	Alata Dunes
1470	Turkey	**The Taurus Mountains**	**Amanos Mountains**
1471	Turkey	**The Taurus Mountains**	Andirin
1472	Turkey	**The Taurus Mountains**	**Antalya Plain**

no	Country	Corridor Name	Key Biodiversity Area Name
1473	Turkey	**The Taurus Mountains**	**Aydincik ve Ovacik Coast**
1474	Turkey	**The Taurus Mountains**	Baba Mountain
1475	Turkey	**The Taurus Mountains**	Barla Mountain
1476	Turkey	**The Taurus Mountains**	Berit Mountain
1477	Turkey	**The Taurus Mountains**	**Beydaglari**
1478	Turkey	**The Taurus Mountains**	**Beysehir Lake**
1479	Turkey	**The Taurus Mountains**	**Binboga Mountains**
1480	Turkey	**The Taurus Mountains**	**Bolkar Mountains**
1481	Turkey	**The Taurus Mountains**	Bozyazi Coasts
1482	Turkey	**The Taurus Mountains**	Burdur Lake
1483	Turkey	**The Taurus Mountains**	Burnaz Dunes
1484	Turkey	**The Taurus Mountains**	Ceyhan Delta
1485	Turkey	**The Taurus Mountains**	Ciglikara Forests and Avlan Lake
1486	Turkey	**The Taurus Mountains**	Corak Lake
1487	Turkey	**The Taurus Mountains**	**Dalaman Plain**
1488	Turkey	**The Taurus Mountains**	Datca and Bozburun Peninsulas
1489	Turkey	**The Taurus Mountains**	Dedegol Mountains
1490	Turkey	**The Taurus Mountains**	Dimcay Valley
1491	Turkey	**The Taurus Mountains**	Eastern Boncuk Mountains
1492	Turkey	**The Taurus Mountains**	Egirdir Lake
1493	Turkey	**The Taurus Mountains**	**Ermenek River Valley**
1494	Turkey	**The Taurus Mountains**	Feke
1495	Turkey	**The Taurus Mountains**	Fethiye
1496	Turkey	**The Taurus Mountains**	Gazipasa - Anamur Coast
1497	Turkey	**The Taurus Mountains**	Gevne Valley and Gokbel Highland
1498	Turkey	**The Taurus Mountains**	**Geyik Mountains**
1499	Turkey	**The Taurus Mountains**	Girdev Lake ve Akdalar
1500	Turkey	**The Taurus Mountains**	Gokdere
1501	Turkey	**The Taurus Mountains**	**Goksu Delta**
1502	Turkey	**The Taurus Mountains**	**Goksu River Valley**
1503	Turkey	**The Taurus Mountains**	Golcuk Lake
1504	Turkey	**The Taurus Mountains**	Golgeli Mountains
1505	Turkey	**The Taurus Mountains**	Gulluk Mountain
1506	Turkey	**The Taurus Mountains**	Gulnar
1507	Turkey	**The Taurus Mountains**	Kale

no	Country	Corridor Name	Key Biodiversity Area Name
1508	Turkey	**The Taurus Mountains**	Karakuyu Marshes
1509	Turkey	**The Taurus Mountains**	Karatas Lake
1510	Turkey	**The Taurus Mountains**	Kargi River Valley
1511	Turkey	**The Taurus Mountains**	Kas-Kalkan Coasts
1512	Turkey	**The Taurus Mountains**	Kastabala Valley
1513	Turkey	**The Taurus Mountains**	Kazanli
1514	Turkey	**The Taurus Mountains**	Kekova
1515	Turkey	**The Taurus Mountains**	Kibriscik
1516	Turkey	**The Taurus Mountains**	Kilic Mountain
1517	Turkey	**The Taurus Mountains**	Kizildag
1518	Turkey	**The Taurus Mountains**	Kizilot
1519	Turkey	**The Taurus Mountains**	**Koprucay Valley**
1520	Turkey	**The Taurus Mountains**	**Koycegiz Lake**
1521	Turkey	**The Taurus Mountains**	Kumluca
1522	Turkey	**The Taurus Mountains**	Limonlu Basin
1523	Turkey	**The Taurus Mountains**	Mersin Hills
1524	Turkey	**The Taurus Mountains**	Patara
1525	Turkey	**The Taurus Mountains**	Salda Lake
1526	Turkey	**The Taurus Mountains**	Samandag Dunes
1527	Turkey	**The Taurus Mountains**	**Sandras Mountain**
1528	Turkey	**The Taurus Mountains**	**Seyhan Delta**
1529	Turkey	**The Taurus Mountains**	Sugozu - Akkum
1530	Turkey	**The Taurus Mountains**	**Tahtali Mountains**
1531	Turkey	**The Taurus Mountains**	Taseli Plateau
1532	Turkey	**The Taurus Mountains**	Yarisli Lake
1533	Turkey	**The Taurus Mountains**	Yilanlikale Hills
1534	Turkey		Acikir Steppes
1535	Turkey		Akbuk Coasts
1536	Turkey		Akdag - Civril
1537	Turkey		Akdag - Denizli
1538	Turkey		Alacati
1539	Turkey		Altintas Plain
1540	Turkey		Ayvalik
1541	Turkey		Babakale-Asos Coast
1542	Turkey		Bafa Lake

no	Country	Corridor Name	Key Biodiversity Area Name
1543	Turkey		Bakırçay Delta
1544	Turkey		Bati Mentese Mountains
1545	Turkey		Bodrum Penisula
1546	Turkey		Boz Mountains
1547	Turkey		Buyuk Menderes Delta
1548	Turkey		Cesme Western Foreland
1549	Turkey		Cicek Islets
1550	Turkey		Dilek Penisula
1551	Turkey		Doganbey Coasts
1552	Turkey		Elbeyli
1553	Turkey		Foca Peninsula
1554	Turkey		Gediz Delta
1555	Turkey		Gorduk Creek
1556	Turkey		Gulluk Bay
1557	Turkey		Honaz Mountain
1558	Turkey		Isikli Lake
1559	Turkey		Karaburun ve Ildir Strait Islands
1560	Turkey		Karamik Marshes
1561	Turkey		Kucuk Menderes Delta
1562	Turkey		Marmara Lake
1563	Turkey		Murat Mountain
1564	Turkey		Nif Mountain
1565	Turkey		Northern Coasts of Gokova
1566	Turkey		Spil Mountain
1567	Turkey		Yamanlar Mountain

Appendix 2. Key Biodiversity Areas and Other Regionally Priority Conservation Areas in the Mediterranean Basin Hotspot



Appendix 3. Irreplaceable Key Biodiversity Areas

no	Key Biodiversity Area Name	Country name
1	Lake Prespa National Park	Albania, FYROM
2	El Abiod-Sidi-Cheikh	Algeria
3	Ilhéu Raso*	Cape Verde
4	Imotzki Lake	Croatia
5	Krka River and Visovac lake*	Croatia
6	Upper Litani river*	Lebanon
7	Zeta stream	Montenegro
8	Essaouira Dunes*	Morocco
9	Fes and surrounding area*	Morocco
10	Quwayq river	Syria
11	Ahır Mountain	Turkey
12	Akdağ - Çivril	Turkey
13	Akdağ - Denizli	Turkey
14	Akseki and İbradı Forests*	Turkey
15	Aladağlar	Turkey
16	Amanos Mountains*	Turkey
17	Andırın	Turkey
18	Antalya Plain*	Turkey
19	Aydıncık ve Ovacık Coast*	Turkey
20	Baba Mountain	Turkey
21	Berit Mountain	Turkey
22	Beydağları*	Turkey
23	Beyşehir Lake*	Turkey
24	Binboğa Mountains*	Turkey
25	Bismil Plain	Turkey
26	Bolkar Mountains*	Turkey
27	Boz Mountains	Turkey
28	Ceylanpınar	Turkey
29	Cikola River	Turkey
30	Cizre and Silopi	Turkey
31	Çığlıkara Forests and Avlan Lake	Turkey
32	Dalaman Plain*	Turkey
33	Datça and Bozburun Peninsulas	Turkey
34	Dedegöl Mountains	Turkey
35	Dilek Penisula	Turkey
36	Dojran Lake	Turkey
37	Eastern Boncuk Mountains	Turkey
38	Eğirdir Lake	Turkey
39	Ermenek River Valley*	Turkey
40	Feke	Turkey
41	Fethiye	Turkey
42	Gevne Valley and Gökbel Highland	Turkey
43	Geyik Mountains*	Turkey
44	Girdev Lake ve Akdağlar	Turkey
45	Gökdere	Turkey
46	Göksu River Valley*	Turkey
47	Gölgeli Mountains	Turkey

no	Key Biodiversity Area Name	Country name
48	Güllük Mountain	Turkey
49	Gülnar	Turkey
50	Harran Ruins	Turkey
51	Kargı River Valley	Turkey
52	Kaş-Kalkan Coasts	Turkey
53	Kaz Mountains	Turkey
54	Kıbrısçık	Turkey
55	Kızıldağ	Turkey
56	Kızılot	Turkey
57	Köprüçay Valley*	Turkey
58	Köyceğiz Lake*	Turkey
59	Kuş Lake / Manyas Lake	Turkey
60	Küçük Menderes Delta	Turkey
61	Küpeli Mountain	Turkey
62	Mardin Mountains	Turkey
63	Marmara Lake	Turkey
64	Murat Mountain	Turkey
65	Nif Mountain	Turkey
66	Patara	Turkey
67	Salda Lake	Turkey
68	Sandras Mountain*	Turkey
69	Southern Euphrates Valley ve Birecik Steppes*	Turkey
70	Tahtalı Mountains*	Turkey
71	Taşeli Plateau	Turkey
72	Uludağ	Turkey

** The priority key biodiversity areas*

Appendix 4. Access to water resources in Mediterranean Basin Countries

Albania: Water resources of Albania are abundant, almost in all the regions of the country, with an uneven seasonal distribution. The available quantity of surface water, and to a less extent of groundwater also, strongly decreases during the months of summer. Thus, only about 6-9 percent of the annual runoff is observed during the dry season (July-September). The water resources are mainly used for energy production, irrigation, industry, drinking water (Banja M. 2004)

Algeria: Algeria's principal environmental problem is the encroachment of the desert onto the fertile northern section of the country. Soil erosion from overgrazing adds to the effect. The small amount of water available in Algeria is threatened by regular droughts. The problem is further complicated by a lack of sewage control and pollutants from the oil industry, as well as other industrial effluents. The Mediterranean Sea has also been contaminated by the oil industry, fertilizer runoff, and soil erosion (Encyclopaedia of the nations - www.nationsencyclopedia.com). Environmental problems include water shortages and pollution.

Bosnia and Herzegovina: limited data available

Croatia: Croatia is among the most water rich countries in Europe, with an average annual surface water discharge of about 5,900 m^3 per inhabitant. Municipal wastewater, agriculture and industry are the main sources of water pollution, although industrial decline has resulted in reduced discharges. The rivers of the central lowlands of Croatia, draining into the Danube River, have a high discharge and relatively good water quality, although Zagreb's urban area does cause pollution of the Sava River. The rivers of the coastal strip of karstic highlands, discharging into the Adriatic Sea – notably the Neretva and the Zrmanja – have smaller discharges but are generally of excellent quality as there are few settlements and industries in the mountains. Both types of rivers are used for electricity generation (Encyclopaedia of the nations - www.nationsencyclopedia.com).

Cyprus: Water shortages are a perennial and serious problem; a few desalination plants have been added to existing plants over the last year and are now on line. After 10 years of drought, the country received substantial rainfall from 2001-2004. Since then, rainfall has been well below average, making water rationing a necessity (The World Factbook 2008).

Egypt: The River Nile is the main source of water for Egypt, which represents 97 percent of all renewable water resources in Egypt. Egypt's non-conventional water resources include agricultural drainage, sea water desalination, brackish water desalination, municipal wastewater reuse and rain harvesting. The sector of water supply and sanitation in Egypt faces several problems, the biggest of which is the rapid population growth, which put Egypt on the list of the most water scarce countries in 2005 (Abdel-Gawad 2008).

France: Water supply and sanitation in France is universal and of good quality. Despite the scale of the resources available in France, there are chronic imbalances between withdrawals and the resources that are actually available in certain basins. Major river linears are regularly dry in the summer and the level of certain tables may fall significantly. These chronic situations are different from any difficulties that may have been encountered during exceptionally dry years (www.eau-international-france.fr).

Greece: Greece is generously endowed with freshwater resources. Some 85-90 percent of freshwater resources are in the form of surface water and 10-15 percent are groundwater. Mean annual precipitation is about 700 mm, of which nearly half is lost to

evaporation. However, freshwater resources are unevenly distributed throughout the country, and as such a reliance on infrastructure has been seen and continues to spark controversy across the country. Intensity of water use is 12 percent, slightly above the OECD average. Around 87 percent of total freshwater withdrawals are used for agriculture. Main water quality problems - although not severe – include eutrophication of lakes, high nutrient concentrations in water bodies and salt-water intrusion in groundwater (WWF 2003).

Israel: Water is an important issue in Israel, an arid country, with the desert occupying more than 50 percent of its land area. Israel obtains roughly 40 percent of its water from the Sea of Galilee and the Coastal Aquifer. Another 30 percent comes from the Western and north-eastern Aquifers of the Mountain Aquifer system. These two aquifers straddle the Green Line that separates Israel from the West Bank.

However, there is a current cumulative deficit in Israel's renewable water resources that amounts to approximately 2 billion cubic meters, an amount equal to the annual consumption of the State. The deficit has also lead to the qualitative deterioration of potable aquifer water resources that have, in part, become either of brackish quality or otherwise become polluted.

Italy: The availability of water in Italy is quite high (980 m^3/year per person) but its distribution along the Italian peninsula is very uneven: abundant in the North and scarce in the South and on the main islands. The major water problems are related to the agricultural sector, which is responsible for 46 percent of the total water consumption and often has a strong negative impact on its quality. Especially in the North, flood-control infrastructure has heavily modified the main water courses (WWF 2003).

Jordan: A dry, desert nation, Jordan has a severe water problem. Even though water consumption is relatively low (177 m^3/year per person), water abstraction surpasses the total renewable water resources. Water shortages remain a critical issue in Jordan.

Lebanon: Whilst Lebanon actually has an abundance of rainfall and underground water, for years it has struggled to distribute this water and prevent it becoming contaminated in the earth. Water shortages remain a critical issue in Lebanon

Libya: limited data available

Malta: Malta is classified as water scarce country and has the lowest water resource per capita of the Mediterranean Basin countries. In order to satisfy the increasing demand of fresh water, the groundwater is over pumped. The problems related to this are: the decrease of the groundwater level, supply problems, and the use of sea-water as complementary resource. The impacts on the environment are severe such as: soil degradation, erosion and increase in sedimentation, poorer infiltration of water, reduction of aquifer recharge, loss of wetland communities, increased concentration of pollutants and salt in groundwater.

Montenegro: Montenegro as a whole belongs to the group of countries that are rich in water of good quality and for which improving the water supply of rural areas is a key task. There are serious problems with the water distribution system. Compared with the resources available, water consumption levels are too high, especially during the summer when water resources are limited. This water shortage is exacerbated by the poor condition of the water distribution network, which loses about half of the drinking water before it reaches the consumers (WWF 2003).

Morocco: Morocco faces a serious challenge in terms of water resources management over the near- and medium-terms, both in terms of quantity and quality. The quality of superficial and groundwater resources are currently affected by a) pollution from rejected domestic and industrial wastewater, b) Leakage of fertilizers and phytosanitary products and c) soils erosion and transport of sediments.

Portugal: The present state of water resources in Portugal is highly influenced by the fast economic growth experienced by the country in the past few decades and by the dominant Mediterranean climate, which is characterised by a concentration of rainfall in winter time. Despite the seasonal rainfall, freshwater availability poses no major problem in Portugal. Surface water guarantees about 92.5 percent of freshwater resources and the remaining 7.5 percent are groundwater resources. About 87 percent of total freshwater withdrawals are used for irrigation, 8 percent for household consumption and 5 percent for industrial consumption. There are some water quality problems often due to illegal wastewater discharges and to undersized water treatment systems. As for water quantity, the Government ensures the satisfaction of water demand mainly through the construction of large hydraulic infrastructures (WWF 2003).

Slovenia: limited data available

Spain: water shortages are a serious problem in Spain. Climate experts warn that the country is suffering badly from the impact of climate change and that the Sahara is slowly creeping north - into the Spanish mainland. In 2008, Spain experienced its worst drought for 40 years (BBC Online).

Syria: Water is a scarce resource in Syria as it is throughout the semi-arid countries of the Middle East. The largest water consuming sector in Syria is agriculture. High population growth rates, accelerated urbanisation and the related economic development have increased the pressure on the water resources and led, as in other countries, to a continuous process of degradation of water resources.

Tunisia: Tunisia has achieved the highest access rates to water supply and sanitation services among the **MENA** countries through sound infrastructure policy. 96 percent of urban dwellers and 52 percent of the rural population already have access to improved sanitation. By the end of 2006, the access to safe drinking water became close to universal (approaching 100 percent in urban areas and 90 percent in rural areas; World Health Organization; UNICEF 2006). Tunisia is a water stressed country with per capita renewable water availability of 486 m^3 - well below the average of 1,200 m^3/capita for the Middle East and North Africa Region (MENA) region (Shetty 2004).

Turkey: Turkey is not a rich country in terms of existing water potential. The availability of water per capita in Turkey is only about one fifth of that of the water rich countries of North America and Western Europe (http://www.wateryear2003.org). Turkey is a water stressed country according to annual volume of water available per capita. The annual exploitable amount of water has recently been approximately 1,500 m^3 per capita (http://www.dsi.gov.tr/english/topraksue.htm).

Cape Verde: A very dry, desertic island-nation, Cape Verde has a severe water problem. Even though water consumption is extremely low (39 m^3/year per person), water shortages remain a critical issue. Repeated droughts during the second half of the 20th century caused significant hardship and prompted heavy emigration.

Appendix 5. Summarized Governmental Stakeholders Responsible for Species and Site Protection in the Mediterranean Basin Countries, by Sub-region

Country / Territory	Level	Protected Areas	Species conservation	Comments
Israel	National	National Nature and Parks Protection Authority of the Ministry of Environmental Protection		Responsible for nature, heritage and landscape conservation.
Jordan	National	Ministry of Environment		Preserve and improve the environment and the natural resources, attain sustainable development and prepare and develop environmental regulations and strategies.
Lebanon	National	Ministry of Environment		Environmental conservation and preservation of natural resources. Legislations and national strategies. Focal point for various conventions and agreements.
Palestinian territories	National	Ministry of Environmental Affairs		To safeguard and protect the environment, control and limit the degradation of natural resources, combat desertification, prevent further pollution, enhance environmental awareness and ensure environmentally sustainable development
Syria	National	Ministry of Local Administration and Environment		Protect the environment, control and limit the degradation of natural resources, enhance environmental awareness and ensure environmentally sustainable development and focal area for main conventions and agreements.
Turkey	National	General Directorate of Nature Conservation and National Parks, and Environmental Protection Agency for Special Areas (Ministry of Environment and Forestry)		
Algeria	National	Direction Générale des Forêts (Ministère de l'Agriculture et du Développement Rural)	Agence Nationale de la Conservation de la Nature	
Egypt	National	The Nature Conservation Sector under Egyptian Environmental Affairs Agency (Minister of State for Environmental Affairs)		The Nature Conservation Sector (NCS) is the executive department for parks development and conservation.
Libya	National	Environment General Authority (EGA)		Management and conservation of the Environment, Sustainable development, Nature conservation, etc.; waterbird census, sea turtle conservation, etc. With branches in the main cities: Tripoli (main branch); Benghazi…
Morocco	National	Direction de la Lutte contre la Désertification et de la Protection de la Nature (Le Haut Commissariat aux Eaux et Forêts et à la Lutte contre la Désertification)		

Country / Territory	Level	Protected Areas	Species conservation	Comments
Tunisia	National	Ministère de l'Agriculture et des Ressources Hydrauliques - Direction Générale des Forêts		Management and conservation of natural habitats, protected sites forests, wetlands, game, biodiversity international conventions, etc. It includes the Agence Nationale de Protection de l'Environnement (ANPE) competent in management of national parks and the Agence de Protection et de l'Aménagement du Littoral for the protection and management of coastal areas and islands.
	National	Ministère de l'Environnement et du Développement Durable - Direction Générale de l'Environnement et de la Qualité de Vie		Biodiversity conservation strategy, sustainable development, wise use of natural resources, CBD, etc.
Cape Verde	National	Direccao General do Ambiente (Ministério do Ambiente, do Desenvolvimento Rural e dos Recursos Marinhos)		
Azores	Regional	Secretaria Regional do Ambiente e do Mar (Gobierno Regional dos Açores)		
Madeira	Regional	Direccao Regional do Ambiente (Gobierno Regional da Madeira)		
Canary Islands	Regional	Vice-Consejería de Medio Ambiente (Gobierno de Canarias)		
Albania	National	Agency of Environment and Forestry (Ministry of Environment, Forest and Water Administration)		Quite active in biodiversity since 2006 as the Vice-Ministry of Environment and his advisors are conservationist, formerly leaders of ASPBM.
Bosnia and Herzegovina	National	Ministry of Foreign Trade and Economic Relations of B&H		
	Regional	Minister of Environment and Tourism of Federation of B&H		
	Regional	Ministry of Planning, Construction and Ecology		It is not very active in nature / biodiversity conservation
	Cantons	Institutes for Protection of Natural, Cultural and Historical Heritage		Some Cantons are active in biodiversity conservation (such as Herzegovina-Neretva)
Croatia	National	Nature Protection Directorate (Ministry of Culture)		Biological Diversity, Protected Areas, Sustainable Management of Natural Resources, Strategic Planning in Nature Protection and European Integration.
	National	State Institute for Nature Protection (Ministry of Culture)		It has a Dpt. of Protected Areas, another for Wild and Domesticated Taxa and Habitats. It participates in several international projects (LIFE on the Sava River, Phare on Natura 2000, Interreg III Green Belt, Emerald Network) and also undertake the red list, protected site designation, Natura 2000, etc.

Country / Territory	Level	Protected Areas	Species conservation	Comments
	National	Croatian Environmental Agency, Ministry of Environmental Protection, Physical Planning and Construction		To collect, integrate, and process environmental data (including Biodiversity Information System, protected species and sites).
	Counties	Public Institution for the Management of the Protected Areas		Management of protected areas at a regional/local level
FYR Macedonia	National	Department of Environment (Ministry of Environment and Physical Planning)		No public agencies or institutes exist in the field of nature protection in Macedonia
Slovenia	National	Institute of the Republic of Slovenia for Nature Conservation (Ministry of the Environment and Spatial Planning)		It carries out the public service of nature conservation, both on species and habitats.
	National	Environmental Agency of the Republic of Slovenia (Ministry of the Environment and Spatial Planning)		Compilation and analysis of information on environmental issues (catalogues, atlas, indicators, etc.).
Montenegro	National	Agency of Environmental Protection (Ministry of Spatial Planning and Environment)		Competences on nature protection, national parks designation and management and environmental monitoring.
Cyprus	National	Ministry of Agriculture, Natural Resources and Environment		
France	National	Direction de l'eau et de la biodiversité (Ministère de l'Écologie, de l'Énergie, du Développement durable et de la Mer - MEEDDM)		Nature protection is centralized, with delegations in the Regions.
	National	Conservatoire du Littoral (CdL)		Management of coastal ecosystems, depending on the Ministry of Ecology, Energy, Sustainable Development and Land Management.
	National	Agence des aires marines protégées		Marine protected areas
	National	Parcs Nationaux de France		Protected areas
	National	Fédération des Parcs naturels régionaux de France		
	National	Office National des Forêts		Management of public forests
	National		Office National de la Chasse et de la Faune Sauvage	Responsible for wildlife, its habitats and hunting, under the shared administration of the Ministry of Ecology, Energy, Sustainable Development and Land Management and the Ministry of Agriculture and Fishing.
Greece	National	Ministry of Rural Development and Food	Environment, Physical Planning and Public Works	

Country / Territory	Level	Protected Areas	Species conservation	Comments
Italy	National	Ministero dell'Ambiente e della Tutela del Territorio e del Mare		
	National		Istituto Superiore per la Protezione e la Ricerca Ambientale	Former Istituto Nacionale de la Fauna Selvatica, acts under the Ministry for the Environment and the Protection of Land and Sea
Portugal	National	Instituto da Conservaçao da Natureza e da Biodiversidade (Ministério do Ambiente, do Ordenamento do Território e do Desenvolvimento Regional)		The governmental structure is centralized except for Madeira and Azores that have autonomous governments.
	Regional	Secretaria Regional do Ambiente e Recursos Naturais (Governo Regional da Madeira)		
	Regional	Secretaria Regional do Ambiente e do Mar (Gobierno Regional dos Açores)		
Malta	National	Environment Protection Directorate (Malta Environment and Planning Authority)		
Spain	National	Ministry of Environment, and Rural and Marine Environments.		Few competences on protected species and protected sites.
	National	Organismo Autónomo de Parques Nacionales		Depending on the Ministry of Environment is responsible for the National Parks Management (currently being moved to regional governments).
	Regional			17 Autonomous Regions and two Autonomous Cities (Ceuta and Melilla) have all competences on protected species and sites; with different governmental structures some of them with Public companies responsible for the management of protected sites.
	Local			In some Autonomous Regions, there is a lower level that have some competences in protected sites and species protection, such is the case of the archipelagos of the Canaries and the Balearics, where every island has a Cabildo or Consell Insular, respectively, that is receiving more competences on biodiversity.

Appendix 6. UNDP, UNEP and WB GEF Funding for Biodiversity Conservation in the Mediterranean Basin Hotspot*

Donor	Project	Recipient	Location	Funding	Period
GEF (WB)	Biodiversity Strategy, Action Plan and National Report	Ministry of Agriculture; Committee for Environmental Protection	Albania	96,000 US$	1999
GEF (WB)	Participation in the Clearing House Mechanism of the CBD	Ministry of Agriculture; Committee for Environmental Protection	Albania	14,000 US$	1999
GEF (WB)	Assessment of Capacity Building Needs to Address the Priorities of the BSAP - Phase II	Ministry of Environment (MoE) - Directorate of Nature Protection	Albania	324,000 US$	2005-2006
GEF (WB)	Butrint National Park: Biodiversity and Global Heritage Conservation	Butrint National Park Board (BNPB)	Albania	975,000 US$	2006-2007
GEF (UNDP)	Biodiversity EA Preparation of National Biodiversity Strategy and Action Plan, National Reports and Establishment of a National Clearing House Mechanism	Federal Ministry of Physical Planning and Environment	B&H	287,904 US$	2004
GEF (WB)	Forest and Mountain Protected Areas Project	Federation of Bosnia and Herzegovina: Ministry of Agriculture, Water Management and Forestry, Sarajevo; Republika Srpska: Ministry of Agriculture, Forestry and Water Management, Banja Luka	B&H	3,400,000 US$	2008
GEF (UNDP)	Mainstreaming Karst Peatlands Conservation Concerns into Key Economic Sectors	Cantonal Government	B&H	1,000,000 US$	2008
GEF (WB)	Biodiversity Strategy, Action Plan and National Report	Directorate for the Protection of Cultural and Natural Heritage	Croatia	102,000 US$	1997-1999
GEF (WB)	Kopacki Rit Wetlands Management Project	KRMA	Croatia	750,000 US$	2003
GEF (WB)	Karst Ecosystem Conservation Project	Ministry of Environmental Protection and Physical Planning	Croatia	5,300,000 US$	2002-2007
GEF (UNDP)	Conservation and Sustainable Use of Biodiversity in the Dalmatian Coast through Greening Coastal Development	Ministry of Environmental Protection, Physical Planning and Construction	Croatia	7,309,500 US$	2007
GEF (WB)	National Strategy and Action Plan of Biological and Landscape Diversity, National Report, Clearing House Mechanism, and Assessment of Capacity Building Needs	Ministry of Environment and Physical Planning	FYR Macedonia	336,500 US$	2005

Donor	Project	Recipient	Location	Funding	Period
GEF (UNDP)	Strengthening the Ecological, Institutional and Financial Sustainability of Macedonia's National Protected Areas System	Ministry of Environment and Physical Planning	FYR Macedonia	1,000,000 US$	2007
GEF (UNDP)	Strengthening the Sustainability of the Protected Areas System of the Republic of Montenegro	Ministry of Tourism and Environmental Protection	Montenegro	1,000,000 US$	2009
GEF (WB)	El Kala National Park and Wetlands Complex Management	National Conservation Agency; Ministry of Agriculture; El Tarf Wilaya	Algeria	9,319,950 US$	1999
GEF (UNDP)	National Biodiversity Strategy, Action Plan and Report to the CBD	Ministry of Interior and Environment-Algeria	Algeria	230,500 US$	2004
GEF (UNDP)	Participation in the Clearing House Mechanism of the CBD	Ministry of Interior and Environment-Algeria	Algeria	14,000 US$	1998
GEF (UNDP)	Biodiversity Conservation and Sustainable Natural Resource Management	CNOA-RIOD	Algeria	750,000 US$	2007
GEF (UNDP)	Assessment of Capacity Building Needs and Country Specific Priorities in Biological Diversity	Ministry of Environment	Algeria	100,000 US$	2004
GEF (UNDP)	Conservation and Sustainable Use of Globally Significant Biodiversity in the Tassili and Ahaggar National Parks	UNOPS	Algeria	3,720,620 US$	2007
GEF (UNDP)	Participatory Management of Plant Genetic Resources in Oases of the Maghreb	Food and Agricultural Organisation of the United Nations; International Plant Genetic Resources Institute Ministry of Agriculture in countries	Algeria, Morocco and Tunisia	3,078,764 US$	2005
GEF (UNDP)	National Biodiversity Strategy, Action Plan and First National Report to the CBD	Egyptian Environmental Affairs Agency (EEAA)	Egypt	288,000 US$	2005
GEF (UNDP)	Clearing House Mechanism Enabling Activity	Egyptian Environmental Affairs Agency (EEAA)	Egypt	14,000 US$	2005
GEF (UNDP)	Conservation and Sustainable Use of Medicinal Plants in Arid and Semi-arid Ecosystems	Egyptian Environmental Affairs Agency (EEAA)	Egypt	4,287,000 US$	2004
GEF (UNDP)	Assessment of Capacity Building Needs in Country Specific Priorities in Biodiversity Management and Conservation in Egype	Nature Conservation Sector (NCS) Egyptian Environmental Affairs Agency (EEAA)	Egypt	148,000 US$	2007
GEF (UNDP)	Strengthening Protected Area Financing and Management Systems	National Conservation Sector	Egypt	3,714,000 US$	2009

Donor	Project	Recipient	Location	Funding	Period
GEF (UNDP)	Conservation of Wetland and Coastal Ecosystems in the Mediterranean Region	UNOPS	Albania, Egypt, Lebanon, Morocco, Palestine and Tunisia	13,435,445 US$	2006
GEF (UNDP)	Mainstreaming Conservation of Migratory Soaring Birds into Key Productive Sectors along the Rift Valley/Red Sea Flyway	BirdLife International	Djibouti, Egypt, Eritrea, Ethiopia, Jordan, Lebanon, Palestinian Authority, Saudi Arabia, Sudan, Syria, Yemen	10,243,243 US$	2008
GEF (UNEP)	National Biodiversity Strategy, and Action Plan and First National Report to the CBD	Ministry of the Environment	Morocco	191,200 US$	2005
GEF (WB)	Protected Areas Management	Forest and Soil Conservation Dept.	Morocco	10,350,000 US$	2008
GEF (UNEP)	Strengthening the Clearing House Mechanism Focal Point for the Participation in the Pilot Phase of the CHM of the CBD	Ministry of the Environment	Morocco	14,000 US$	2005
GEF (UNDP)	Transhumance for Biodiversity Conservation in the Southern High Atlas	Ministry of Agriculture, Rural Development and Maritime Fisheries	Morocco	4,369,400 US$	2000
GEF (IFAD)	A Circular Economy Approach to Agro-Biodiversity Conservation in the Souss Massa Draa region of Morocco	Ministry of Agriculture, Rural Development and Maritime Fisheries	Morocco	2,647,272 US$	2009
GEF (UNEP)	Biodiversity Country Studies-Phase I	National Biodiversity Institutions, National Scientific Organizations	Egypt, Jordan, Lebanon, Morocco, Syria, Tunisia and more out of the Mediterranean	5,000,000 US$	1995
GEF (WB)	Biodiversity Strategy, Action Plan and National Report	Ministry of Environment and Land Use Planning	Tunisia	89,000 US$	2009
GEF (WB)	Protected Areas Management	General Directorate of Forestry (DGF), Ministry of Agriculture	Tunisia	5,380,000 US$	2002
GEF (WB)	Gulf of Gabes Marine and Coastal Resources Protection	Ministry of Agriculture, Environment and Water Resources	Tunisia	6,410,000 US$	2005
GEF (UNEP)	Assessment of Capacity-building Needs for Biodiversity and Participation in the Establishment of a Clearing House Mechanism (CHM)	Ministry of Agriculture, Environment & Hydraulic Resources	Tunisia	186,900 US$	2005

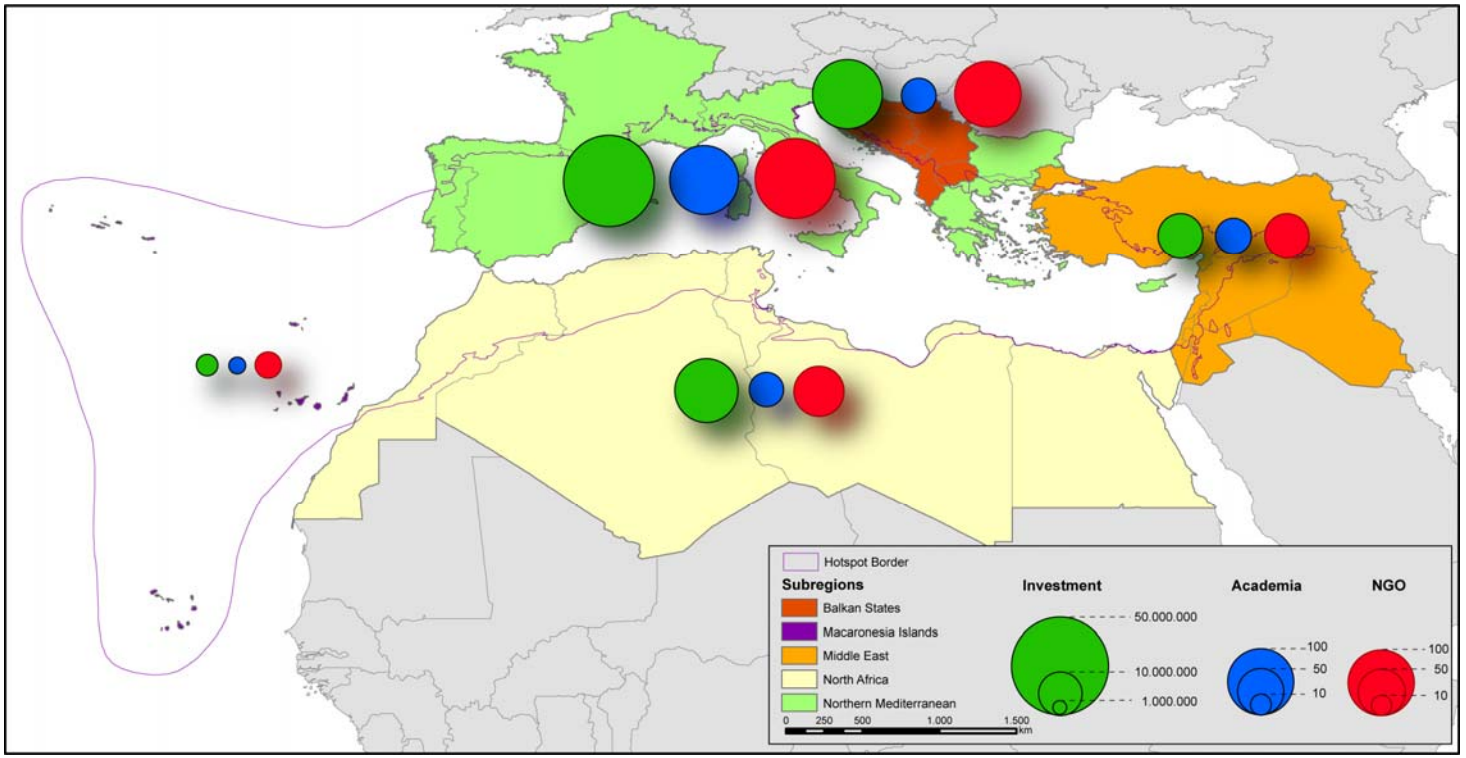
Donor	Project	Recipient	Location	Funding	Period
GEF (UNDP)	Conservation of the Dana and Azraq Protected Areas	Government of Jordan	Jordan	6,300,000 US$	1997
GEF (UNDP)	Final Consolidation and Conservation of Azraq Wetlands and Dana Wildlands by RSCN to Address New Pressures	Royal Society for Conservation of Nature	Jordan	1,949,000 US$	1997
GEF (UNDP)	Assessment of Capacity Building Needs and Country/Authority Specific Priorities in Biodiversity	General Corporation for Environment Protection (GCEP)	Jordan	87,500 US$	1997
GEF (UNDP)	Conservation and Sustainable Use of Biodiversity in Dibeen Nature Reserve	Royal Society for Conservation of Nature	Jordan	1,000,000 US$	2003
GEF (WB)	Conservation of Medicinal and Herbal Plants	National Center for Agricultural Research and Technology Transfer	Jordan	5,350,000 US$	2003
GEF (WB)	Integrated Ecosystem and Natural Resource Management in the Jordan Rift Valley	Royal Society for Conservation of Nature	Jordan	6,500,000 US$	2007
GEF (UNDP)	Biodiversity Strategy and Action Plan (BSAP) and Report to the CBD	Government of Jordan	Jordan and Palestine	350,000 US$	1997
GEF (UNDP)	Clearing House Mechanism Enabling Activity	Government of Jordan	Jordan and Palestine	12,500 US$	1998
GEF (UNDP)	Conservation and Sustainable Use of Dryland Agro-Biodiversity of the Fertile Crescent	The International Center for Agri. Research in the Dry Areas	Jordan, Lebanon and Syria	8,232,000 US$	1999
GEF (UNDP)	Strengthening of National Capacity and Grassroots In-Situ Conservation for Sustainable Biodiversity Protection	Ministry of Environment	Lebanon	2,529,000 US$	2004
GEF (UNDP)	Biodiversity Strategy and Action Plan and Report to the CBD	Ministry of Environment	Lebanon	145,000 US$	1997
GEF (UNDP)	Clearing House Mechanism Enabling Activity	Ministry of Environment	Lebanon	9,500 US$	1998
GEF (UNDP)	Assessment of Capacity Building Needs and Country Specific Priorities in Biodiversity	Ministry of Environment	Lebanon	100,000 US$	2001
GEF (UNDP)	Integrated Management of Cedar Forests in Lebanon in Cooperation with other Mediterranean Countries	Ministry of Environment	Lebanon	555,500 US$	2007
GEF (UNDP)	Mainstreaming Biodiversity Management into Medicinal and Aromatic Plants Production	Lebanese Agriculture Research Institute	Lebanon	980,000 US$	2008
GEF (UNDP)	Biodiversity Strategy and Action Plan and Report to the CBD	National Unit for Biodiversity, General Commission for Environmental Affairs	Syria	194,000 US$	1998

Donor	Project	Recipient	Location	Funding	Period
GEF (UNDP)	Additional Enabling Activity Support for Participation in the Clearing House Mechanism of the CBD	National Unit for Biodiversity, General Commission for Environmental Affairs	Syria	14,000 US$	2000
GEF (UNDP)	Assessment of Capacity-building Needs and Country-specific Priorities in Biodiversity	National Unit for Biodiversity, General Commission for Environmental Affairs	Syria	120,000 US$	2001
GEF (UNDP)	Biodiversity Conservation and Protected Area Management	Ministry of State for Environmental Affairs Ministry of Agriculture and Agrarian Reform	Syria	3,485,850 US$	2005
GEF (WB)	In-Situ Conservation of Genetic Biodiversity	General Directorate for Agricultural Research of the Min. of Ag. and Rural Affairs	Turkey	5,100,000 US$	1998
GEF (WB)	Biodiversity and Natural Resources Management Project	Ministry of Forestry	Turkey	8,550,000 US$	2008
GEF (UNEP)	Consultation for National Reporting, Participation in the National Clearing House Mechanism and Further Development of the National Biodiversity Strategy and Action Plan (NBSAP)	General Directorate of Nature Protection & Natural Parks, Department of Nature Conservation, Ministry of Environment & Forestry	Turkey	365,300 US$	2007
GEF (UNDP)	Strengthening Protected Area Network of Turkey - Catalyzing Sustainability of Marine and Coastal Protected Areas	Ministry of Environment	Turkey	2,400,000 US$	2009
GEF (UNDP)	Enhancing Coverage and Management Effectiveness of the Subsystem of Forest Protected Areas in Turkey's National System of Protected Areas	Ministry of Environment	Turkey	996,500 US$	2008
GEF (UNEP)	Enhancing Conservation of the Critical Network of Sites of Wetlands Required by Migratory Waterbirds on the African/Eurasian Flyways.	UNOPS	Turkey and other countries out of the Mediterranean Basin Hotspot	6,350,000 US$	2006
GEF (UNDP)	National Biodiversity Strategy, Action Plan and Country Report to the COP	Executive Secretariat for the Environment	Cape Verde	208,151 US$	2004
GEF (UNDP)	Clearing House Mechanism Enabling Activity	Executive Secretariat for the Environment	Cape Verde	14,000 US$	1998
GEF (UNDP)	Elaboration of the Second National Communication on Biodiversity for the	Executive Secretariat for the Environment	Cape Verde	20,000 US$	2004

Donor	Project	Recipient	Location	Funding	Period
	Conference of Parties in 2001				
GEF (UNDP)	Integrated Participatory Ecosystem Management In and Around Protected Areas, Phase I	General Direction of Environment, Ministry of Agriculture and Fisheries	Cape Verde	3,932,100 US$	2003
GEF (UNDP)	SPWA-BD Consolidation of Cape Verde's Protected Areas System	General Direction of Environment, Ministry of Agriculture and Fisheries	Cape Verde	3,387,000 US$	2008
GEF (WB)	Biodiversity Strategies, Action Plan, and National Report	Ministry of Environment & Physical Planning	Slovenia	89,000 US$	2001

* The list compiled above does not include investments made from the International Waters Program. While recognizing that this program has funded importrant initiatives in the Mediterranean, the list above aims to map investments made specifically for biodiversity purposes.

Appendix 7. Comparison of Current Investment in Biodiversity Conservation (multilateral, bilateral and private), Environmental NGOs and Academia Involved in Biodiversity Conservation among the Sub-regions of the Mediterranean Basin Hotspot (*conservation investment funds for Canary Islands, Azores and Madeira are included in Northern Mediterranean sub-region*)



Appendix 8. Protocol on Integrated Coastal Zone Management in the Mediterranean

PROTOCOL ON INTEGRATED COASTAL ZONE MANAGEMENT IN THE MEDITERRANEAN

The Contracting Parties to the present Protocol,

Being Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, adopted at Barcelona on 16 February 1976, and amended on 10 June 1995,

Desirous of implementing the obligations set out in Article 4, paragraphs 3(e) and 5, of the said Convention,

Considering that the coastal zones of the Mediterranean Sea are the common natural and cultural heritage of the peoples of the Mediterranean and that they should be preserved and used judiciously for the benefit of present and future generations,

Concerned at the increase in anthropic pressure on the coastal zones of the Mediterranean Sea which is threatening their fragile nature and *desirous* of halting and reversing the process of coastal zone degradation and of significantly reducing the loss of biodiversity of coastal ecosystems,

Worried by the risks threatening coastal zones due to climate change, which is likely to result, *inter alia*, in a rise in sea level, and *aware* of the need to adopt sustainable measures to reduce the negative impact of natural phenomena,

Convinced that, as an irreplaceable ecological, economic and social resource, the planning and management of coastal zones with a view to their preservation and sustainable development requires a specific integrated approach at the level of the Mediterranean basin as a whole and of its coastal States, taking into account their diversity and in particular the specific needs of islands related to geomorphological characteristics.

Taking into account the United Nations Convention on the Law of the Sea, done at Montego Bay on 10 December 1982, the Convention on Wetlands of International Importance especially as Waterfowl Habitat, done at Ramsar on 2 February 1971, and the Convention on Biological Diversity, done at Rio de Janeiro on 5 June 1992, to which many Mediterranean coastal States and the European Community are Parties,

Concerned in particular to act in cooperation for the development of appropriate and integrated plans for coastal zone management pursuant to Article 4, paragraph 1(e), of the United Nations Framework Convention on Climate Change, done at New York on 9 May 1992,

Drawing on existing experience with integrated coastal zone management and the work of various organizations, including the European institutions,

Based upon the recommendations and work of the Mediterranean Commission on Sustainable Development and the recommendations of the Meetings of the Contracting Parties held in Tunis in 1997, Monaco in 2001, Catania in 2003, and Portoroz in 2005, and the Mediterranean Strategy for Sustainable Development adopted in Portoroz in 2005,

Resolved to strengthen at the Mediterranean level the efforts made by coastal States to ensure integrated coastal zone management,

Determined to stimulate national, regional and local initiatives through coordinated promotional action, cooperation and partnership with the various actors concerned with a view to promoting efficient governance for the purpose of integrated coastal zone management,

Desirous of ensuring that coherence is achieved with regard to integrated coastal zone management in the application of the Convention and its Protocols,

Have agreed as follows:

PART I

GENERAL PROVISIONS

Article 1

GENERAL OBLIGATIONS

In conformity with the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols, the Parties shall establish a common framework for the integrated management of the Mediterranean coastal zone and shall take the necessary measures to strengthen regional co-operation for this purpose.

Article 2

DEFINITIONS

For the purposes of this Protocol:

(a) “Parties” means the Contracting Parties to this Protocol.

(b) “Convention” means the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, done at Barcelona on 16 February 1976, as amended on 10 June 1995.

(c) “Organization” means the body referred to in Article 17 of the Convention.

(d) “Centre” means the Priority Actions Programme Regional Activity Centre.

(e) “Coastal zone” means the geomorphologic area either side of the seashore in which the interaction between the marine and land parts occurs in the form of complex ecological and resource systems made up of biotic and abiotic components coexisting and interacting with human communities and relevant socio-economic activities.

(f) “Integrated coastal zone management” means a dynamic process for the sustainable management and use of coastal zones, taking into account at the same time the

fragility of coastal ecosystems and landscapes, the diversity of activities and uses, their interactions, the maritime orientation of certain activities and uses and their impact on both the marine and land parts.

Article 3

GEOGRAPHICAL COVERAGE

1. The area to which the Protocol applies shall be the Mediterranean Sea area as defined in Article 1 of the Convention. The area is also defined by:

(a) the seaward limit of the coastal zone, which shall be the external limit of the territorial sea of Parties; and

(b) the landward limit of the coastal zone, which shall be the limit of the competent coastal units as defined by the Parties.

2. If, within the limits of its sovereignty, a Party establishes limits different from those envisaged in paragraph 1 of this Article, it shall communicate a declaration to the Depositary at the time of the deposit of its instrument of ratification, acceptance, approval of, or accession to this Protocol, or at any other subsequent time, in so far as:

(a) the seaward limit is less than the external limit of the territorial sea;

(b) the landward limit is different, either more or less, from the limits of the territory of coastal units as defined above , in order to apply, *inter alia*, the ecosystem approach and economic and social criteria and to consider the specific needs of islands related to geomorphological characteristics and to take into account the negative effects of climate change.

3. Each Party shall adopt or promote at the appropriate institutional level adequate actions to inform populations and any relevant actor of the geographical coverage of the present Protocol.

Article 4

PRESERVATION OF RIGHTS

1. Nothing in this Protocol nor any act adopted on the basis of this Protoco shall prejudice the rights, the present and future claims or legal views of any Party relating to the Law of the Sea, in particular the nature and the extent of marine areas, the delimitation of marine areas between States with opposite or adjacent coasts, the right and modalities of passage through straits used for international navigation and the right of innocent passage in territorial seas, as well as the nature and extent of the jurisdiction of the coastal State, the flag State or the port State.

2. No act or activity undertaken on the basis of this Protocol shall constitute grounds for claiming, contending or disputing any claim to national sovereignty or jurisdiction.

3. The provisions of this Protocol shall be without prejudice to stricter provisions respecting the protection and management of the coastal zone contained in other existing or future national or international instruments or programmes.

4. Nothing in this Protocol shall prejudice national security and defence activities and facilities; however, each Party agrees that such activities and facilities should be operated or established, so far as is reasonable and practicable, in a manner consistent with this Protocol.

Article 5

OBJECTIVES OF INTEGRATED COASTAL ZONE MANAGEMENT

The objectives of integrated coastal zone management are to:

(a) facilitate, through the rational planning of activities, the sustainable development of coastal zones by ensuring that the environment and landscapes are taken into account in harmony with economic, social and cultural development;

(b) preserve coastal zones for the benefit of current and future generations;

(c) ensure the sustainable use of natural resources, particularly with regard to water use;

(d) ensure preservation of the integrity of coastal ecosystems, landscapes and geomorphology;

(e) prevent and/or reduce the effects of natural hazards and in particular of climate change, which can be induced by natural or human activities;

(f) achieve coherence between public and private initiatives and between all decisions by the public authorities, at the national, regional and local levels, which affect the use of the coastal zone.

Article 6

GENERAL PRINCIPLES OF INTEGRATED COASTAL ZONE MANAGEMENT

In implementing this Protocol, the Parties shall be guided by the following principles of integrated coastal zone management:

(a) The biological wealth and the natural dynamics and functioning of the intertidal area and the complementary and interdependent nature of the marine part and the land part forming a single entity shall be taken particularly into account.

(b) All elements relating to hydrological, geomorphological, climatic, ecological, socio-economic and cultural systems shall be taken into account in an integrated manner, so as not to exceed the carrying capacity of the coastal zone and to prevent the negative effects of natural disasters and of development.

(c) The ecosystems approach to coastal planning and management shall be applied so as to ensure the sustainable development of coastal zones.

(d) Appropriate governance allowing adequate and timely participation in a transparent decision-making process by local populations and stakeholders in civil society concerned with coastal zones shall be ensured.

(e) Cross-sectorally organized institutional coordination of the various administrative services and regional and local authorities competent in coastal zones shall be required.

(f) The formulation of land use strategies, plans and programmes covering urban development and socio-economic activities, as well as other relevant sectoral policies, shall be required.

(g) The multiplicity and diversity of activities in coastal zones shall be taken into account, and priority shall be given, where necessary, to public services and activities requiring, in terms of use and location, the immediate proximity of the sea.

(h) The allocation of uses throughout the entire coastal zone should be balanced, and unnecessary concentration and urban sprawl should be avoided.

(i) Preliminary assessments shall be made of the risks associated with the various human activities and infrastructure so as to prevent and reduce their negative impact on coastal zones.

(j) Damage to the coastal environment shall be prevented and, where it occurs, appropriate restoration shall be effected.

Article 7

COORDINATION

1. For the purposes of integrated coastal zone management, the Parties shall:

(a) ensure institutional coordination, where necessary through appropriate bodies or mechanisms, in order to avoid sectoral approaches and facilitate comprehensive approaches;

(b) organize appropriate coordination between the various authorities competent for both the marine and the land parts of coastal zones in the different administrative services, at the national, regional and local levels;

(c) organize close coordination between national authorities and regional and local bodies in the field of coastal strategies, plans and programmes and in relation to the various authorizations for activities that may be achieved through joint consultative bodies or joint decision-making procedures.

2. Competent national, regional and local coastal zone authorities shall, insofar as practicable, work together to strengthen the coherence and effectiveness of the coastal strategies, plans and programmes established.

PART II

ELEMENTS OF INTEGRATED COASTAL ZONE MANAGEMENT

Article 8

PROTECTION AND SUSTAINABLE USE OF THE COASTAL ZONE

1. In conformity with the objectives and principles set out in Articles 5 and 6 of this Protocol, the Parties shall endeavour to ensure the sustainable use and management of coastal zones in order to preserve the coastal natural habitats, landscapes, natural resources and ecosystems, in compliance with international and regional legal instruments.

2. For this purpose, the Parties:

(a) Shall establish in coastal zones, as from the highest winter waterline, a zone where construction is not allowed. Taking into account, *inter alia*, the areas directly and negatively affected by climate change and natural risks, this zone may not be less than 100 meters in width, subject to the provisions of subparagraph (b) below. Stricter national measures determining this width shall continue to apply.

(b) May adapt, in a manner consistent with the objectives and principles of this Protocol, the provisions mentioned above :

1) for projects of public interest;

2) in areas having particular geographical or other local constraints, especially related to population density or social needs, where individual housing, urbanisation or development are provided for by national legal instruments.

(c) Shall notify to the Organization their national legal instruments providing for the above adaptations.

3. The Parties shall also endeavour to ensure that their national legal instruments include criteria for sustainable use of the coastal zone. Such criteria, taking into account specific local conditions, shall include, *inter alia*, the following:

(a) identifying and delimiting, outside protected areas, open areas in which urban development and other activities are restricted or, where necessary, prohibited;

(b) limiting the linear extension of urban development and the creation of new transport infrastructure along the coast;

(c) ensuring that environmental concerns are integrated into the rules for the management and use of the public maritime domain;

(d) providing for freedom of access by the public to the sea and along the shore;

(e) restricting or, where necessary, prohibiting the movement and parking of land vehicles, as well as the movement and anchoring of marine vessels, in fragile natural areas on land or at sea, including beaches and dunes.

Article 9

ECONOMIC ACTIVITIES

1. In conformity with the objectives and principles set forth in Articles 5 and 6 of this Protocol, and taking into account the relevant provisions of the Barcelona Convention and its Protocols, the Parties shall:

(a) accord specific attention to economic activities that require immediate proximity to the sea;

(b) ensure that the various economic activities minimize the use of natural resources and take into account the needs of future generations;

(c) ensure respect for integrated water resources management and environmentally sound waste management;

(d) ensure that the coastal and maritime economy is adapted to the fragile nature of coastal zones and that resources of the sea are protected from pollution;

(e) define indicators of the development of economic activities to ensure sustainable use of coastal zones and reduce pressures that exceed their carrying capacity;

(f) promote codes of good practice among public authorities, economic actors and non-governmental organizations.

2. In addition, with regard to the following economic activities, the Parties agree:

(a) Agriculture and industry,to guarantee a high level of protection of the environment in the location and operation of agricultural and industrial activities so as to preserve coastal ecosystems and landscapes and prevent pollution of the sea, water, air and soil;

(b) Fishing,

  (i) to take into account the need to protect fishing areas in development projects;

  (ii) to ensure that fishing practices are compatible with sustainable use of natural marine resources;

(c) Aquaculture,

(i) to take into account the need to protect aquaculture and shellfish areas in development projects;

(ii) to regulate aquaculture by controlling the use of inputs and waste treatment;

(d) Tourism, sporting and recreational activities,

(i) to encourage sustainable coastal tourism that preserves coastal ecosystems, natural resources, cultural heritage and landscapes;

(ii) to promote specific forms of coastal tourism, including cultural, rural and ecotourism, while respecting the traditions of local populations;

(iii) to regulate or, where necessary, prohibit the practice of various sporting and recreational activities, including recreational fishing and shellfish extraction;

(e) Utilization of specific natural resources,

(i) to subject to prior authorization the excavation and extraction of minerals, including the use of seawater in desalination plants and stone exploitation;

(ii) to regulate the extraction of sand, including on the seabed and river sediments or prohibit it where it is likely to adversely affect the equilibrium of coastal ecosystems;

(iii) to monitor coastal aquifers and dynamic areas of contact or interface between fresh and salt water, which may be adversely affected by the extraction of underground water or by discharges into the natural environment;

(f) Infrastructure, energy facilities, ports and maritime works and structures, to subject such infrastructure, facilities, works and structures to authorization so that their negative impact on coastal ecosystems, landscapes and geomorphology is minimized or, where appropriate, compensated by non-financial measures;

(g) Maritime activities, to conduct maritime activities in such a manner as to ensure the preservation of coastal ecosystems in conformity with the rules, standards and procedures of the relevant international conventions.

Article 10

SPECIFIC COASTAL ECOSYSTEMS

The Parties shall take measures to protect the characteristics of certain specific coastal ecosystems, as follows :

1. Wetlands and estuaries

In addition to the creation of protected areas and with a view to preventing the disappearance of wetlands and estuaries, the Parties shall:

(a) take into account in national coastal strategies and coastal plans and programmes and when issuing authorizations, the environmental, economic and social function of wetlands and estuaries;

(b) take the necessary measures to regulate or, if necessary, prohibit activities that may have adverse effects on wetlands and estuaries;

(c) undertake, to the extent possible, the restoration of degraded coastal wetlands with a view to reactivating their positive role in coastal environmental processes.

2. Marine habitats

The Parties, recognizing the need to protect marine areas hosting habitats and species of high conservation value, irrespective of their classification as protected areas, shall:

(a) adopt measures to ensure the protection and conservation, through legislation, planning and management of marine and coastal areas, in particular of those hosting habitats and species of high conservation value;

(b) undertake to promote regional and international cooperation for the implementation of common programmes on the protection of marine habitats.

3. Coastal forests and woods

The Parties shall adopt measures intended to preserve or develop coastal forests and woods located, in particular, outside specially protected areas.

4. Dunes

The Parties undertake to preserve and, where possible, rehabilitate in a sustainable manner dunes and bars.

Article 11

COASTAL LANDSCAPES

1. The Parties, recognizing the specific aesthetic, natural and cultural value of coastal landscapes, irrespective of their classification as protected areas, shall adopt measures to ensure the protection of coastal landscapes through legislation, planning and management.

2. The Parties undertake to promote regional and international cooperation in the field of landscape protection, and in particular, the implementation, where appropriate, of joint actions for transboundary coastal landscapes.

Article 12

ISLANDS

The Parties undertake to accord special protection to islands, including small islands, and for this purpose to:

(a) promote environmentally friendly activities in such areas and take special measures to ensure the participation of the inhabitants in the protection of coastal ecosystems based on their local customs and knowledge;

(b) take into account the specific characteristics of the island environment and the necessity to ensure interaction among islands in national coastal strategies, plans and programmes and management instruments, particularly in the fields of transport, tourism, fishing, waste and water.

Article 13

CULTURAL HERITAGE

1. The Parties shall adopt, individually or collectively, all appropriate measures to preserve and protect the cultural, in particular archaeological and historical, heritage of coastal zones**,** including the underwater cultural heritage, in conformity with the applicable national and international instruments.

2. The Parties shall ensure that the preservation in situ of the cultural heritage of coastal zones is considered as the first option before any intervention directed at this heritage.

3. The Parties shall ensure in particular that elements of the underwater cultural heritage of coastal zones removed from the marine environment are conserved and managed in a manner safeguarding their long-term preservation and are not traded, sold, bought or bartered as commercial goods.

Article 14

PARTICIPATION

1. With a view to ensuring efficient governance throughout the process of the integrated management of coastal zones, the Parties shall take the necessary measures to ensure the appropriate involvement in the phases of the formulation and implementation of coastal and marine strategies, plans and programmes or projects, as well as the issuing of the various authorizations, of the various stakeholders, including:

- the territorial communities and public entities concerned;

- economic operators;

- non-governmental organizations;

- social actors;

- the public concerned.

Such participation shall involve *inter alia* consultative bodies, inquiries or public hearings, and may extend to partnerships.

2. With a view to ensuring such participation, the Parties shall provide information in an adequate, timely and effective manner.

3. Mediation or conciliation procedures and a right of administrative or legal recourse should be available to any stakeholder challenging decisions, acts or omissions, subject to the participation provisions established by the Parties with respect to plans, programmes or projects concerning the coastal zone.

Article 15

AWARENESS-RAISING, TRAINING, EDUCATION AND RESEARCH

1. The Parties undertake to carry out, at the national, regional or local level, awareness-raising activities on integrated coastal zone management and to develop educational programmes, training and public education on this subject.

2. The Parties shall organize, directly, multilaterally or bilaterally, or with the assistance of the Organization, the Centre or the international organizations concerned, educational programmes, training and public education on integrated management of coastal zones with a view to ensuring their sustainable development.

3. The Parties shall provide for interdisciplinary scientific research on integrated coastal zone management and on the interaction between activities and their impacts on coastal zones. To this end, they should establish or support specialized research centres. The purpose of this research is, in particular, to further knowledge of integrated coastal zone management, to contribute to public information and to facilitate public and private decision-making.

PART III

INSTRUMENTS FOR INTEGRATED COASTAL ZONE MANAGEMENT

Article 16

MONITORING AND OBSERVATION MECHANISMS AND NETWORKS

1. The Parties shall use and strengthen existing appropriate mechanisms for monitoring and observation, or create new ones if necessary. They shall also prepare and regularly update national inventories of coastal zones which should cover, to the extent possible, information on resources and activities, as well as on institutions, legislation and planning that may influence coastal zones.

2. In order to promote exchange of scientific experience, data and good practices, the Parties shall participate, at the appropriate administrative and scientific level, in a Mediterranean coastal zone network, in cooperation with the Organization.

3. With a view to facilitating the regular observation of the state and evolution of coastal zones, the Parties shall set out an agreed reference format and process to collect appropriate data in national inventories.

4. The Parties shall take all necessary means to ensure public access to the information derived from monitoring and observation mechanisms and networks.

Article 17

MEDITERRANEAN STRATEGY FOR INTEGRATED COASTAL ZONE MANAGEMENT

The Parties undertake to cooperate for the promotion of sustainable development and integrated management of coastal zones, taking into account the Mediterranean Strategy for Sustainable Development and complementing it where necessary. To this end, the Parties shall define, with the assistance of the Centre, a common regional framework for integrated coastal zone management in the Mediterranean to be implemented by means of appropriate regional action plans and other operational instruments, as well as through their national strategies.

Article 18

NATIONAL COASTAL STRATEGIES, PLANS AND PROGRAMMES

1. Each Party shall further strengthen or formulate a national strategy for integrated coastal zone management and coastal implementation plans and programmes consistent with the common regional framework and in conformity with the integrated management objectives and principles of this Protocol and shall inform the Organization about the coordination mechanism in place for this strategy.

2. The national strategy, based on an analysis of the existing situation, shall set objectives, determine priorities with an indication of the reasons, identify coastal ecosystems needing management, as well as all relevant actors and processes, enumerate the measures to be taken and their cost as well as the institutional instruments and legal and financial means available, and set an implementation schedule.

3. Coastal plans and programmes, which may be self-standing or integrated in other plans and programmes, shall specify the orientations of the national strategy and implement it at an appropriate territorial level, determining, *inter alia*and where appropriate, the carrying capacities and conditions for the allocation and use of the respective marine and land parts of coastal zones.

4. The Parties shall define appropriate indicators in order to evaluate the effectiveness of integrated coastal zone management strategies, plans and programmes, as well as the progress of implementation of the Protocol.

Article 19

ENVIRONMENTAL ASSESSMENT

1. Taking into account the fragility of coastal zones, the Parties shall ensure that the process and related studies of environmental impact assessment for public and private projects likely to have significant environmental effects on the coastal zones, and in particular on their ecosystems, take into consideration the specific sensitivity of the environment and the inter-relationships between the marine and terrestrial parts of the coastal zone.

2. In accordance with the same criteria, the Parties shall formulate, as appropriate, a strategic environmental assessment of plans and programmes affecting the coastal zone.

3. The environmental assessments should take into consideration the cumulative impacts on the coastal zones, paying due attention, *inter alia,* to their carrying capacities.

Article 20

LAND POLICY

1. For the purpose of promoting integrated coastal zone management, reducing economic pressures, maintaining open areas and allowing public access to the sea and along the shore, Parties shall adopt appropriate land policy instruments and measures, including the process of planning.

2. To this end, and in order to ensure the sustainable management of public and private land of the coastal zones, Parties may *inter alia* adopt mechanisms for the acquisition, cession, donation or transfer of land to the public domain and institute easements on properties.

Article 21

ECONOMIC, FINANCIAL AND FISCAL INSTRUMENTS

For the implementation of national coastal strategies and coastal plans and programmes, Parties may take appropriate measures to adopt relevant economic, financial and/or fiscal instruments intended to support local, regional and national initiatives for the integrated management of coastal zones.

Part IV

RISKS AFFECTING THE COASTAL ZONE

Article 22

NATURAL HAZARDS

Within the framework of national strategies for integrated coastal zone management, the Parties shall develop policies for the prevention of natural hazards. To this end, they shall undertake vulnerability and hazard assessments of coastal zones and take prevention, mitigation and adaptation measures to address the effects of natural disasters, in particular of climate change.

Article 23

COASTAL EROSION

1. In conformity with the objectives and principles set out in Articles 5 and 6 of this Protocol, the Parties, with a view to preventing and mitigating the negative impact of coastal erosion more effectively, undertake to adopt the necessary measures to maintain or restore the natural capacity of the coast to adapt to changes, including those caused by the rise in sea levels.

2. The Parties, when considering new activities and works located in the coastal zone including marine structures and coastal defence works, shall take particular account of their negative effects on coastal erosion and the direct and indirect costs that may result. In respect of existing activities and structures, the Parties should adopt measures to minimize their effects on coastal erosion.

3. The Parties shall endeavour to anticipate the impacts of coastal erosion through the integrated management of activities, including adoption of special measures for coastal sediments and coastal works.

4. The Parties undertake to share scientific data that may improve knowledge on the state, development and impacts of coastal erosion.

Article 24

RESPONSE TO NATURAL DISASTERS

1. The Parties undertake to promote international cooperation to respond to natural disasters**,** and to take all necessary measures to address in a timely manner their effects.

2. The Parties undertake to coordinate use of the equipment for detection, warning and communication at their disposal, making use of existing mechanisms and initiatives, to ensure the transmission as rapidly as possible of urgent information concerning major natural disasters. The Parties shall notify the Organization which national authorities are competent to issue and receive such information in the context of relevant international mechanisms.

3. The Parties undertake to promote mutual cooperation and cooperation among national, regional and local authorities, non-governmental organizations and other competent organizations for the provision on an urgent basis of humanitarian assistance in response to natural disasters affecting the coastal zones of the Mediterranean Sea.

PART V

INTERNATIONAL COOPERATION

Article 25

TRAINING AND RESEARCH

1. The Parties undertake, directly or with the assistance of the Organization or the competent international organizations, to cooperate in the training of scientific, technical and

administrative personnel in the field of integrated coastal zone management, particularly with a view to:

(a) identifying and strengthening capacities;

(b) developing scientific and technical research;

(c) promoting centres specialized in integrated coastal zone management;

(d) promoting training programmes for local professionals.

2. The Parties undertake, directly or with the assistance of the Organization or the competent international organizations, to promote scientific and technical research into integrated coastal zone management, particularly through the exchange of scientific and technical information and the coordination of their research programmes on themes of common interest.

Article 26

SCIENTIFIC AND TECHNICAL ASSISTANCE

For the purposes of integrated coastal zone management, the Parties undertake, directly or with the assistance of the Organization or the competent international organizations to cooperate for the provision of scientific and technical assistance, including access to environmentally sound technologies and their transfer, and other possible forms of assistance, to Parties requiring such assistance.

Article 27

EXCHANGE OF INFORMATION AND ACTIVITIES OF COMMON INTEREST

1. The Parties undertake, directly or with the assistance of the Organization or the competent international organizations, to cooperate in the exchange of information on the use of the best environmental practices.

2. With the support of the Organization, the Parties shall in particular:

(a) define coastal management indicators, taking into account existing ones, and cooperate in the use of such indicators;

(b) establish and maintain up-to-date assessments of the use and management of coastal zones;

(c) carry out activities of common interest, such as demonstration projects of integrated coastal zone management.

Article 28

TRANSBOUNDARY COOPERATION

The Parties shall endeavour, directly or with the assistance of the Organization or the competent international organizations, bilaterally or multilaterally, to coordinate, where appropriate, their national coastal strategies, plans and programmes related to contiguous coastal zones. Relevant domestic administrative bodies shall be associated with such coordination.

Article 29

TRANSBOUNDARY ENVIRONMENTAL ASSESSMENT

1. Within the framework of this Protocol, the Parties shall, before authorizing or approving plans, programmes and projects that are likely to have a significant adverse effect on the coastal zones of other Parties, cooperate by means of notification, exchange of information and consultation in assessing the environmental impacts of such plans, programmes and projects, taking into account Article 19 of this Protocol and Article 4, paragraph 3 (d) of the Convention.

2. To this end, the Parties undertake to cooperate in the formulation and adoption of appropriate guidelines for the determination of procedures for notification, exchange of information and consultation at all stages of the process.

3. The Parties may, where appropriate, enter into bilateral or multilateral agreements for the effective implementation of this Article.

PART VI

INSTITUTIONAL PROVISIONS

Article 30

FOCAL POINTS

Each Party shall designate a Focal Point to serve as liaison with the Centre on the technical and scientific aspects of the implementation of this Protocol and to disseminate information at the national, regional and local level.

The Focal Points shall meet periodically to carry out the functions deriving from this Protocol.

Article 31

REPORTS

The Parties shall submit to the ordinary Meetings of the Contracting Parties, reports on the implementation of this Protocol, in such form and at such intervals as these Meetings may determine, including the measures taken, their effectiveness and the problems encountered in their implementation.

Article 32

INSTITUTIONAL COORDINATION

1. The Organization shall be responsible for coordinating the implementation of this Protocol. For this purpose, it shall receive the support of the Centre, to which it may entrust the following functions:

(a) to assist the Parties to define a common regional framework for integrated coastal zone management in the Mediterranean pursuant to Article 17;

(b) to prepare a regular report on the state and development of integrated coastal zone management in the Mediterranean Sea with a view to facilitating implementation of the Protocol;

(c) to exchange information and carry out activities of common interest pursuant to Article 27;

(d) upon request, to assist the Parties:

- to participate in a Mediterranean coastal zone network pursuant to Article 16;

- to prepare and implement their national strategies for integrated coastal zone management pursuant to Article 18;

- to cooperate in training activities and in scientific and technical research programmes pursuant to Article 25;

- to coordinate, when appropriate, the management of transboundary coastal zones pursuant to Article 28;

(e) to organize the meetings of the Focal Points pursuant to Article 30;

(f) to carry out any other function assigned to it by the Parties.

2. For the purposes of implementing this Protocol, the Parties, the Organization and the Centre may jointly establish cooperation with nongovernmental organizations the activities of which are related to the Protocol.

Article 33

MEETINGS OF THE PARTIES

1. The ordinary meetings of the Parties to this Protocol shall be held in conjunction with the ordinary meetings of the Contracting Parties to the Convention held pursuant to Article 18 of the Convention. The Parties may also hold extraordinary meetings in conformity with that Article.

2. The functions of the meetings of the Parties to this Protocol shall be:

(a) to keep under review the implementation of this Protocol;

(b) to ensure that this Protocol is implemented in coordination and synergy with the other Protocols;

(c) to oversee the work of the Organization and of the Centre relating to the implementation of this Protocol and providing policy guidance for their activities;

(d) to consider the efficiency of the measures adopted for integrated coastal zone management and the need for other measures, in particular in the form of annexes or amendments to this Protocol;

(e) to make recommendations to the Parties on the measures to be adopted for the implementation of this Protocol;

(f) to examine the proposals made by the Meetings of Focal Points pursuant to Article 30 of this Protocol;

(g) to consider reports transmitted by the Parties and making appropriate recommendations pursuant to Article 26 of the Convention**;**

(h) to examine any other relevant information submitted through the Centre;

(i) to examine any other matter relevant to this Protocol, as appropriate.

PART VII

FINAL PROVISIONS

Article 34

RELATIONSHIP WITH THE CONVENTION

1. The provisions of the Convention relating to any Protocol shall apply with respect to this Protocol.

2. The rules of procedure and the financial rules adopted pursuant to Article 24 of the Convention shall apply with respect to this Protocol, unless the Parties to this Protocol agree otherwise.

Article 35

RELATIONS WITH THIRD PARTIES

1. The Parties shall invite, where appropriate, States that are not Parties to this Protocol and international organizations to cooperate in the implementation of this Protocol.

2. The Parties undertake to adopt appropriate measures, consistent with international law, to ensure that no one engages in any activity contrary to the principles and objectives of this Protocol.

Article 36

SIGNATURE

This Protocol shall be open for signature at Madrid, Spain, from 21 January 2008 to 20 January 2009 by any Contracting Party to the Convention.

Article 37

RATIFICATION, ACCEPTANCE OR APPROVAL

This Protocol shall be subject to ratification, acceptance or approval. Instruments of ratification, acceptance or approval shall be deposited with the Government of Spain, which will assume the functions of Depositary.

Article 38

ACCESSION

As from 21 January 2008 this Protocol shall be open for accession by any Party to the Convention.

Article 39

ENTRY INTO FORCE

This Protocol shall enter into force on the thirtieth day (30) following the deposit of at least six (6) instruments of ratification, acceptance, approval or accession.

Article 40

AUTHENTIC TEXTS

The original of this Protocol, of which the Arabic, English, French and Spanish texts are equally authentic, shall be deposited with the Depositary.

IN WITNESS WHEREOF the undersigned, being duly authorized thereto, have signed this Protocol.

DONE AT MADRID, SPAIN, this twenty-first day of January two thousand and eight.