CRITICAL ECOSYSTEM PARTNERSHIP FUND

Mediterranean Basin Hotspot

Update on Impact on Biodiversity of the Mediterranean Portfolio

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Nesting colony of Dalmatian pelican (*Pelecanus crispus*) on Lake Skadar (Montenegro and Albania)

During its 29th session, Donor Council members expressed interest in getting more information about the impact on biodiversity of the actions supported by CEPF in the Mediterranean Basin.

This report presents highlights of the impacts recorded to date. The results and impacts presented in this report should only be considered as provisional; more detailed information will be presented in the Final Assessment Report, due in the second half of 2017. The report is based on the monitoring data available for the 108 Mediterranean Basin projects that CEPF has supported over the last five years (54 small grants and 54 large grants). For several indicators, consolidation of the results can only happen at the end of projects. Currently, about 40 percent of the projects are still on-going or in the final reporting stage (with data not combined yet). The present report should therefore be considered preliminary.

The CEPF approach is based on four closely interrelated pillars:

- Biodiversity conservation
- Strengthening civil society
- Human well-being
- Enabling conditions

The impact of CEPF on each of these four pillars can be considered essential for long-term preservation of biodiversity. For instance, a strong conservation civil society; the development of economic models that deliver the co-benefits of conservation and improved livelihoods; and the mainstreaming of biodiversity conservation in national or local laws and regulations are crucial to conservation. As such, every CEPF project does have an impact on biodiversity, even if this impact can be more or less direct, more immediate or more long-term.

This report focuses primarily on the direct impact on biodiversity, organized around three important outcomes:

1) Species outcomes: how CEPF impacted conservation of specific species or taxa
2) Site outcomes: how CEPF helped preserve the most important sites for biodiversity
3) Landscape outcomes: how CEPF supported improved management of productive land for preservation of biodiversity

I. CEPF impact on conservation of endangered species in the Mediterranean Basin

1) Improving knowledge for species conservation

Conservation action needs a solid scientific basis to be efficient. Several CEPF grants have resulted in increased knowledge of the biology of species, or improved data about the range and occurrence of threatened species; both are indispensable to conservation planning and action. Monitoring of species has also been included in this section as a scientific management tool for conservation action.

a) Scientific research on species biology or ethology

For a limited number of species, CEPF has supported scientific research on biology and/or ethology, mostly as components of wider conservation projects.

Taxa	Scientific name	Common name	Grant ID	Results
Plants	*Vitis vinifera*	Wild Grape	35; 99	Locating wild grapevine, studying hybridizing with domestic vine. (Bosnia, Croatia)
Plants	*Iris sofarana, Iris bismarkiana*	Wild Iris	53257	Locating wild populations, research on ecology, ex-sit reproduction
Amphibian	*Proteus anguinus*	Olm	45	DNA sampling in underground water sources. Resulted in extension of the range of the species in Montenegro, with implication on conservation planning.
Mollusc	*Bythinella melovskii*	Bythinella melovskii	63830	Discovery and description of a new species of freshwater snail in Macedonia.
Reptiles	*Chiononia stangeri, Hemidactylus bouvieri razoensis, Tarentola gigas brancoensis, and Tarentola raziana*	Stanger's Skink, Cabo Verde Leaf-Toed Gecko, Giant Wall Gecko, Raso Gecko	61459	Monitoring of populations in Desertas Islands of Cabo Verde, study of the ecological requirements and threats.
Mammal	*Monachus monachus*	Monk Seal	165	Evaluation of the status of monk seal in Lebanon after discovery of a few animals on the coast of the country.
Aves	*Neophron percnopterus*	Egyptian Vulture	62721	Assessment of the Albanian population (10 couples) and threats for design of future conservation actions.

b) Assessment and monitoring of groups of species

CEPF has supported several projects for the assessment of a wide range of species, providing the information for further conservation planning and action. Such activities are described below.

The IUCN **"*Freshwater Biodiversity Assessment and Conservation Priorities for the Mediterranean Basin Hotspot*"** project, cofounded with the MAVA Foundation, has resulted in the comprehensive Red List assessment of fresh water species in the Basin, and the first-ever published list of Freshwater Key Biodiversity Areas in the region. In total 1,236 currently described species were assessed and mapped, of which just under one-third are found nowhere else on the planet (they are endemic to the region). However, almost one in five (19%) of these species, and over half (58%) of those endemic to the region, are threatened with extinction. Sadly six species, all fishes, are known to have become extinct, and an additional 18 species (seven fishes and 11 mollusks) are possibly extinct. Mollusks and fishes are particularly impacted, with 45% and 41% threatened, respectively. The study identified 167 Freshwater Key Biodiversity Areas in the Mediterranean Basin Hotspot, which have been used for strategy setting by the MAVA Foundation for the CEPF ecosystem profile, and form the basis for preliminary Natura2000 site identification in the Balkans countries.

At a more local level, Agro-Environmental & Economic Management-Center performed a rapid assessment of **freshwater biodiversity** in Skumbini River in Albania, from fish and insects to diatoms. They identified the presence of several restricted-range or threatened species of fish — including *Gobio gobio, Cobitis ohridana* and *Anguilla anguilla* (CR) — using those as indicators of water quality and as priority elements for conservation action. A similar exercise, done by a wide range of experts, was undertaken for Dojran Lake in Macedonia, leading to the identification of new species, new data on species occurrence and assessment of status of some species. Such data were used for defining the priority conservation action in the context of the Integrated River Basin Management Plan. The methodology for such rapid assessment has been endorsed by the Albanian government for use in other river basins.

In Bosnia and Herzegovina, the Society for Biological Research and Protection of Nature worked on **karst freshwater species**, with a project on identification and participatory conservation of threatened invertebrate and fish species — including an assessment of **dragonflies** of the Neretva river, used for Natura2000 preparatory actions. Within the same habitats, Centar za krš i speleologiju assessed the populations of **underground species** in 20 caves in the country and set up the first database of underground biodiversity in the region.

Université Saint Joseph and their partners have been working on the identification of **Important Plant Areas of Lebanon**, setting up the foundation for site-focused action for the preservation of endemic and threatened plants of the country. A similar exercise is currently underway for the **identification of Important Plant Areas of Cape Verde**, under the supervision of the IUCN Mediterranean Plant Specialist Group.

Several projects focused on monitoring **waterbirds**, including some, for instance, that provided annual or semi-annual census. Such activities were included as components of projects working on coastal wetlands and other important wetlands for migratory birds in Bosnia and Herzegovina, Montenegro, Albania, Lebanon, Libya, Tunisia, Algeria and Morocco. In particular, Tour du Valat is implementing a project for coordinating and standardizing waterbird monitoring methods in North Africa, working closely with local organizations.

In Bosnia, Centar za krš i speleologiju prepared the first **national assessment of bats**, resulting in the discovery of new, large colonies of *Rinolophus blasii* and *Nyctalus noctula* which, although classified as Least Concerned, play an important ecological role and are included in the Eurobat and Bern conventions. *R. blasii* has been extinct for 50 years in northern Italy and Slovenia, and the discovery of a large colony in Bosnia is of great importance for the conservation of the species at the regional level. The project provided the essential information for inclusion of provisions for bat conservation in two major windfarm projects in the country.

For the last four years Biosfera I in Cape Verde monitored the poorly understood **endemic reptiles** of the Desertas group of islands — Santa Lucia, Branco and Razo: *Chiononia stangeri (VU), Hemidactylus bouvieri razoensis (CR), Tarentola gigas brancoensis (EN) and Tarentola raziana (NT).* The study called for reclassification of *C. stangieri* and *T. raziana* to EN and proposes conservation action to be included in the management plan of the protected area, under preparation.

Projects in Tunisia and Cape Verde contributed to the monitoring of the **loggerhead sea turtle** *(Caretta caretta)* — for which Cape Verde is among the most important nesting site in the Atlantic Ocean (see below).

2) Species-focused conservation projects

Biosfera I in Cape Verde implemented, with the support of Sociedade Portuguesa para o Estudo das Aves, a program for the **long-term conservation of Razo lark** (*Alauda razae*), an endemic passerine bird, found only on Raso islet and among the most endangered birds in the world with a population of 200 to 500. The project includes preparatory action for the reintroduction of Razo lark on nearby Santa Lucia Island, where it became extinct about a century ago. The plan for eradication of feral cats from Santa Lucia was prepared under the CEPF grant, and its implementation will be supported by the MAVA Foundation and other donors, hopefully creating the conditions for the establishment of a much-needed second colony of this highly endangered bird and improving conditions for the four species of endemic reptiles present on the Desertas Islands.

In Morocco, Stichting Moroccan Primate Conservation (MPC) prepared a plan for restoring habitat connectivity in the cedar forests of the High Atlas as a condition for conservation of the **Barbary macaque** (*Macacus Sylvanus*, EN). Implementation is facing difficulties in this multi-functional habitat, but the information has been passed to the Moroccan Forests Authority (Haut Commissariat) for inclusion in the management plans of national forests.

In Tunisia, Association Marocaine pour l'Ecotourisme et la Protection de la Nature (AMEPN) has strengthened the Fishermen Federation for better control and management of leisure fishing activities, resulting in an important decrease in poaching and improvement of leisure fishing practices, setting the groundwork for the preservation of the **native Moroccan trouts**, *Salmo akairos* (VU) — first described in 2005 and endemic to Ifni Lake — and *Salmo trutta macrostigma.*

In Cape Verde and Tunisia, organizations worked to protect **loggerhead turtles** by designing protocols to reduce the impact of turtle-watching tourism, working with fishermen and local communities to reduce bycatch and poaching, monitoring and protecting the nesting sites and, in Tunisia, successfully eradicating rats from Grande and Petite Kuriat, where this introduced species was a major threat to young turtles. An exchange of experience between the organizations Notre Grand Bleu in Tunisia and Biosfera I in Cape Verde took place in 2016.

The projects on Lake Skadar, at the border between Montenegro and Albania, have resulted in globally improved management of the site. Some specific actions have already provided great results for the conservation of the **Dalmatian pelican** (*Pelecanus crispus,* VU). Globally, the population of this great bird, the "Giant of the Balkans," has decreased. The small colony of Lake Skadar, however, has seen its numbers increase. The incredible reproductive success that the bird has experienced in the last two years — and which has not been seen in the last 30 years, at least — is a result of the efforts by local and international organizations supported by CEPF. Through a collaborative approach between scientists, civil society, park authorities and local fishermen, nesting sites have become safer, with quick results: In

June 2014, the colony saw the success of 48 chicks for 70 adults and in 2016, 146 pelicans were recorded on the site.

In Lebanon, several rare **plants species** received increased protection through the creation of micro-reserves, among them: *Iris sofara* (site of Ehmej) and *Iris bismarckiana* (site of Samara), two iris species endemic to the Levant; and in Baskinta the carnivorous plant *Drosera rotundifolia* and the rare *Rhododendron ponticum var. brachycarpum,* a relict species from the tertiary era.

As illustrated by the last example, site-level conservation action has also benefitted many endangered species, virtually all the endangered species located in the priority KBAs and/or Protected Areas supported by CEPF. Examples include the Algerian nuthatch (*Sitta ledanti*, EN), endemic to Djebel Babor; Lebanese cedar (*Cedrus libani*, VU); Nubian ibex (*Capra nubiana*, VU); and Orhid trout (*Salmo letnica*, DD, endemic of Lake Orhid). These species are expected to benefit from improved management of the sites where they are found.

The achievements for site-based conservation action are highlighted in the following section.

II. CEPF impact on conservation of Key Biodiversity Areas in the Mediterranean Basin

The main focus of the CEPF strategy in the Mediterranean Basin is at site level, either through the improvement of management and support to the creation of protected areas, or through working with nature users and landowners for the promotion of sustainable, biodiversity-friendly practices. At the present time, and with the limitation that all monitoring data is not yet available, **CEPF has supported projects on 65 Key Biodiversity Areas, and monitored improved management of at least 46 of them — covering an estimated surface of 1,495,000 ha**.

1) Creation and expansion of protected areas

The creation of protected areas is a lengthy process everywhere in the world, and the Mediterranean region is no exception. The results in terms of creation and/or expansion of protected areas can therefore be considered excellent, with **six new protected areas and one expansion, covering 27,542 ha**. Furthermore, eight other sites are currently in the process of being declared and are expected to be gazetted in the coming months or years, for an estimated additional surface of 115,000 ha. Overall, it is therefore expected that CEPF will have helped the creation of about **140,000 ha of new protected areas** in the Mediterranean Basin under the first phase of implementation.

The list of the proclaimed protected areas is provided in the below table.

Country	Site Name	Surface in ha
Lebanon	Hima Al Fekha	5 913,0
Lebanon	Ehmej micro-reserve	52,6
Jordan	Tal ar Arbeen special conservation area	18,0
Jordan	Sweimeh Nature Park	18,0
Lebanon	Anjar micro-reserve	40,0
Lebanon	Qaytouli-Roum	300,0
Jordan	Mujib (expansion)	21,200
Total		**27,542**

The list of expected protected areas is provided in the below table.

Country	Site Name	Surface in ha
Morocco	Sidi Bou Areg No-Fish Zone	2,000
Tunisia	Kuriat Islands (Gulf of Gabès Marine Protected Area)	80,000
Algeria	Babor National Park	30,000
Montenegro	Porto Palermo	2,000
Montenegro	Ulcinj	1,500
Montenegro	Sasko Lake	600
Lebanon	Samada micro-reserve	15
Lebanon	Baskinta micro-reserve	16
Total		**116,131**

Note: Site names are not official, and number of ha is an estimate.

In addition to the number and size of protected areas, the development of new models for protection of important sites should also be noted.

The concept of micro-reserves has been used for the first time in Lebanon, based on agreements with local authorities on communal lands (Ehmej), or with the church (Sarada) or private landowners (Baskinta). Although small in size, these sites are of important biodiversity value and are well adapted to the preservation of micro-endemic or rare plants. A first micro-reserve (Ehmej) was officially created and recognized by the Lebanese Ministry for Environment in 2015, setting up a precedent for scaling up the approach in the newly identified Important Plant Areas.

Also in Lebanon, the Society for the Protection of Nature in Lebanon has adapted the traditional concept of Hima — a system of land and water management. This alternative, community-managed protected area concept could potentially be replicated in many other places in the Mediterranean Basin.

Qaytouli-Roum in Lebanon is the first "sustainable hunting area" set up in the country. The area is managed by local government with support from hunters and nature conservationists.

In the next few months, the Kuriat Islands Marine Protected Area in Tunisia is expected to become the first co-managed protected area in the country, closely involving a civil society organization (Notre Grand Bleu) with the everyday management of the site — a situation that would have been completely impossible only a couple of years ago.

These new models, all pushing for multi-stakeholder approaches, demonstrate how civil society can play a crucial role, alongside governmental authorities, in the management of protected areas in the region.

2) Improved management of Key Biodiversity Areas

Thus far, CEPF has supported actions in 65 sites in the Mediterranean Basin. For 46 of them, the actions have resulted in strengthened management or protection. In the remaining 19 sites, either activities have not yet demonstrated impact on the management of the site, or activities were limited in size and scope and were not expected to have a direct impact on site management (e.g., scientific study, awareness-raising activities, etc.).

Among the 46 Key Biodiversity Areas that have benefitted from CEPF support, 26 are — at least partially — under protection status. In such cases, CEPF asks the grantees to monitor the evolution of the management of the protected area using the METT (Management Effectiveness Tracking Tool) designed,

under the coordination of WWF, for the Global Environment Facility. The grantees are asked to complete the tracking tool with the park authorities. Initial METTs have been collected for 23 of the 26 protected areas[1]. At the end of 2016, nine "final" METTs have been collected, and therefore only an incomplete analysis can be presented at this stage.

With these limitations, preliminary findings show that:

- 7 protected areas (77%) have seen their METT score increase, one has seen its score stable and one has decreased.
- The average increase of the METT is 13 points, ranging from +2 to +24.
- In the case where the METT score decreased (Ifrane National Park), structural issues at the national level are at stake, but the (small-scale) activities supported by CEPF have had a positive impact on conservation.

Overall, the surface of KBAs under protection that have seen an improvement of the management is estimated at **1,114,000 ha**. The list of these KBAs is provided below.

Country	**KBA name** *(KBA under total or partial protection)*	**Surface in ha**	**Initial METT**	**Final METT**
Cape Verde	Ilheu Raso	700	28	52
Cape Verde	Santa Luzia Island	3 500	28	52
Bosnia and Herzegovina	Hutovo blato	7 411	39	41
Algeria	El Kala National Park	80 000	35	
Algeria	Parc National du Djurdjura	18 550	52	56
Morocco	Parc National de Toubkal	100 000	40	40
Morocco	Parc Naturel d'Ifrane	125 000	53	46
Tunisia	Ichkeul	12 600	54	
Lebanon	Al Chouf Cedars Nature Reserve	16 100	67	77
Jordan	Mujib	656 367	58	69
Albania	Lake Ohrid and surrounding area	1 000		
Albania	Lake Shkodra (Lake Skadar)	14 200	30	
Albania	Karavasta lagoon	22 230	41	
Albania	Lalzi bay	-	17	
Albania	Narte-Vjose Landscape park	19 738	29	
Albania	Karaburun-Sazan National Park	10 373	24	
Albania	Butrinti National Park	-	58	
Albania	Patoku lagoon	5 500	23	39
Albania	Kune Vain lagoon	4 983	27	
Albania	Velipoja and surrounding area	19 000	23	
Macedonia	Dojran Lake	1 596	26	
Macedonia	Ohrid Lake	1 000		
Macedonia	Jablanica Mountain	1 370	24	26
Montenegro	Lake Skadar	22 900		
Morocco	Parc National de Souss-Massa et Aglou			
Morocco	Parc National du Haut Atlas Oriental		36	

[1] Additional METTs have also been collected for newly created protected areas (see above), but the delay will not be sufficient under this phase to analyse changes between the beginning and end of the projects.

Total	**1,114,118**

CEPF has also supported many projects in non-protected areas within KBAs — either to prepare for future protection (see section 2.1) or, more often, to work with local communities to maintain or improve management practices resulting in better protection of biodiversity. This work has resulted in improved management of Key Biodiversity Areas — working on productive land or future protected areas — on a surface estimated at 348,000 ha. **Altogether, the estimated surface of Key Biodiversity Areas with improved management is estimated, at present time, at 1,495,000 ha**.

III. Improved management of biodiversity in productive landscapes

CEPF also tracks the impact of projects on strengthened management of biodiversity in productive landscape. Working in productive landscape is considered a key element for conservation, even more so in the Mediterranean Basin, where biodiversity has evolved alongside human land-use practices for several thousand years, to the extent that many of the most threatened terrestrial species are dependent on habitats which are maintained through continuing intervention for agriculture, seasonal grazing or harvesting of wild products. In the Mediterranean Basin, considering this interrelation between nature and human practices, many protected areas are also places where productive activities take place, sometimes even at a large scale. Therefore, it is important to note that the figures provided for "strengthened management of biodiversity in productive landscapes" should not be added to the ones for "strengthened management of Key Biodiversity Areas," as in most cases there is a large overlap.

CEPF has supported a wide range of activities related to sustainable use of natural resources and improved agricultural or fishing practices in 33 sites, among which 27 are situated inside or in the direct vicinity of KBAs. The activities vary substantially from one site to the other and so does the impact on biodiversity, for which no standard measurement can be applied. **Overall, the surface of productive land where changes in productive practices with positive impact on biodiversity have been noted is estimated at 1,110,000 ha**.

IV. Additional information, lessons learned and detailed information on projects

The following links are available to explore in further detail the CEPF portfolio in the Mediterranean Basin.

- CEPF MED StoryMap: this interactive map presents all CEPF projects on a GIS interface
- CEPF MED document page: useful to get all official documents (profile, annual portfolio overviews, assessments), as well as the MED newsletter, "MED Radar"
- CEPF Project Database: get a brief summary of projects by selecting "Mediterranean Basin", and refine your search with additional criteria if needed.

Annex: CEPF Investment in the Mediterranean Basin, Impacts at Site Level

The table below presents all sites that have benefitted from CEPF support. It includes the sites for which no improved management or impact has been recorded/measured as a result of CEPF support at present time.

Country	KBA name *(or site name for actions outside of KBAs)*	Protected Areas created or expanded (ha)	KBAs with strengthened management or protection (ha)	Production landscape with strengthened management for biodiversity (ha)
Albania	Lake Ohrid and surrounding area	-	1 000	1 000
Albania	Lake Shkodra (Lake Skadar)	-	14 200	14 200
Albania	Karavasta lagoon	-	22 230	22 230
Albania	Lalzi bay	-	-	-
Albania	Narte-Vjose Landscape park	-	19 738	19 738
Albania	Karaburun-Sazan National Park	-	10 373	10 373
Albania	Butrinti National Park	-	-	-
Albania	Porto Palermo	-	-	-
Albania	Drin river	-	-	20
Albania	Patoku lagoon	-	5 500	5 500
Albania	Kune Vain lagoon	-	4 983	4 983
Albania	Velipoja and surrounding area	-	19 000	19 000
Albania	Shkumbini river	-	-	3 000
Algeria	Djebel Babor	-	30 000	30 000
Algeria	El Kala National Park	-	80 000	40 000
Algeria	Parc National du Djurdjura	-	18 550	-
Algeria	Marais de la Macta	-	44 500	9 000
Algeria	Complexe de zones humides de la plaine de Guerbes-Sanhadja	-	-	-
Algeria	Edough National Park	-	-	-
Bosnia and Herzegovina	Hutovo blato	-	7 411	7 411
Bosnia and Herzegovina	Neretva River	-	2 514	-
Bosnia and Herzegovina	Trebizat River Tributary	-	-	-
Cape Verde	Beaches of Boavista Island	-	63 000	63 000

Cape Verde	Ilheu Raso	-	700	-
Cape Verde	Santa Luzia Island		3 500	
Croatia	Krka River and Visovac Lake	-	500	-
FYR Macedonia	Dojran Lake		1 596	-
FYR Macedonia	Ohrid Lake	-	1 000	-
FYR Macedonia	Jablanica Mountain	-	1 370	1 370
Jordan	Jordan River	18	18	18
Jordan	Sweimeh	18	18	
Jordan	Mujib	21 200	656 367	656 367
Lebanon	Al Chouf Cedars Nature Reserve	-	16 100	5 400
Lebanon	Upper Litani River			
Lebanon	Western Anti Lebanon Mountains	5 913	5 913	5 913
Lebanon	Baskinta	-	-	-
Lebanon	Ehmej	53	-	-
Lebanon	Sarada	-	-	-
Lebanon	Anjar	40	40	40
Lebanon	Qaytouli-Roum	300	300	300
Libya	Geziret al Elba - Ayn al Ghazalah Bay	-	-	-
Montenegro	Lake Skadar	-	22 900	22 900
Montenegro	Bojana delta	-	2 700	1 500
Montenegro	Moraca river	-	-	-
Montenegro	Buljarica	-	-	-
Morocco	Essaouira Dunes	-	-	-
Morocco	Parc National de Toubkal	-	100 000	1 375
Morocco	Parc Naturel d'Ifrane	-	125 000	
Morocco	Sebkha Bou Areg	-	74 155	74 155
Morocco	Bou Fekrane River	-		
Morocco	Oued Oumer Rbid	-	2 830	2 830
Morocco	Parc National de Souss-Massa and Aglou	-	-	-
Morocco	Parc National du Haut Atlas Oriental	-	-	-
Morocco	Moulouya River Basin	-	80	80
Tunisia	Ichkeul	-	12 600	-
Tunisia	Sidi Mechig Beaches	-	10 122	-
Tunisia	Gafsa	-	24 357	-
Tunisia	Lake Tunis (Lake Rades)	-	3 736	3 736
Tunisia	Nabeul Lagoons	-	69	-

Tunisia	Ras el Melan Dunes	-	800	800
Tunisia	Soliman	-	635	-
Tunisia	Lagune de Korba	-	377	-
Tunisia	Djebel Elhaouaria	-	1 357	1 357
Tunisia	Kuriat Island	-	80 000	80 000
Tunisia	Partie Ouest du Golfe de Tunis	-	3 000	3 000