#### **CEPF Final Project Completion Report**

Instructions to grantees: please complete all fields, and respond to all questions, below.

Organization Legal Name	Research Institute Tour du Valat
Project Title	Monitoring of waterbirds in North Africa for the conservation of wetland areas
CEPF GEM No.	62751
Date of Report	30/11/2016

#### **CEPF Hotspot:**

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

#### Grant Amount: 230 000 USD

**Project Dates:** 07/01/2013 to 10/30/2016 (the initial end date 06/30/2015; two amendments of the grant agreement)

# **1.** Implementation Partners for this Project (*list each partner and explain how they were involved in the project*)

This project was based in four countries in North Africa (Morocco, Algeria, Tunisia and Libya): in each country one NGO represented this project at the national level and was the national focal point for actions and activities of the project.

Below is the list of partners for this project for each country.

a. <u>Morocco</u>: The "Groupe de Recherche pour la Protection des Oiseaux au Maroc (GREPOM)", is an association founded in 1993. GREPOM works principally on the protection of birds and their habitats, making different actions: inventories, strategic plans for wetlands conservation, Ramsar site inventories; awareness-raising actions, promoting the touristic value of sites....This association conducts the nearly all the censuses of wintering waterbirds in Morocco. GREPOM has been a BirdLife affiliated association since 2015.

GREPOM involvement in the CEPF project concerns the ensuring of the coordination with other partners of the project (local NGOs, universities and administrations), field actions (ornithological monitoring), training and awareness-raising activities.

In Morocco, the GREPOM engaged four governmental partners in the project, associated to support groups:

- The High Commissioner of Water, Forest and desertification: this governmental entity was represented notably in the support group of Affenouir by four entities: the central administration, the General Direction of Water, Forest and Middle Atlas, the Hydrobiologic and fisheries center of Azrou and the National

Parc of Ifrane. In the Nador support group this governmental structure was represented by the Provincial Direction of Water and Forests of Nador.

- The Delegated Ministry of Environment
- The National Ministry of Education
- The Interior Ministry represented by the Nador Province and the Marchica Agency
- The Sea Fisheries Department
- b. <u>Algeria</u>: In Algeria the project was initially led by the "Association Biologie, Biodiveristé et Durabilité (BDD)" which is a local association involved in local and regional projects. BDD is an official association, legally authorized since May 2, 2006. Its members include biologists and ecologists from Batna Univeristy and it is involved in environment quality issues, nature protection and living conditions, embracing social, cultural and economic aspects in order to build a conservation policy integrated in the society. During the project, BBD was replaced by the "Association Nationale Algérienne d'Ornithologie (ANAO)", issued by BDD to work on national and international projects. ANAO was officially created in May 2014 and since then has been the official Algerian partner for this project.

BDD/ANAO involvement in the CEPF project concerns the ensuring of the coordination with other partners of the project (local NGOs, universities and administrations), field actions (ornithological monitoring), training and awareness actions.

In Algeria, the ANAO engaged four governmental partners in the project, associated to support groups:

- The General Direction of Forestry (DGF, Ministère de l'Agriculture)
- The Forestry Conservation of Wilayas of Mostaganem, Oran and Tizi Ouzou
- The Direction of the National Parc of the Djurdjura
- The popular municipal Assembly : Municipality of Boghni (Tizi Ouzou), Hassi Maamèche (Mostaganem)
- c. <u>Tunisia</u>: The association "Les Amis des Oiseaux (AAO)" is a national non-profit NGO and it is the Tunisian NGO associated with BirdLife. AAO has worked for more than 35 years on studies, monitoring and the protection of general biodiversity, wild birds and their habitats. AAO is involved in national actions and projects, but it is also engaged in bird habitat protection at an international level, through the involvement in international agreements and treaties.

The AAO involvement in the CEPF project concerns the ensuring of the coordination with other partners of the project (local NGOs, universities and administrations), field excursions (ornithological monitoring), training and awareness-raising activities.

In Tunisia, the AAO involved the General Direction of Forestry (DGF), the General Regional councils of forestry in Bizerte and in Gafsa, as members of the Agriculture

Ministry, and the National Agency for the Protection of Environment (ANPE), which is notably involved in the Ichkeul National Park site.

d. <u>Libya</u>: The Libyan Society for Birds (LSB) is a new non-profit national NGO, created in 2012 to study, monitor and safeguard birds in Libya. This association is composed of a group of passionate ornithologists, working on 1) the monitoring of land- and water-birds (resident and migrating), 2) studies on Libyan birds, and 3) awareness-raising actions focusing on bird conservation. It is also engaged in the implementation of a specialist library on Libyan bird documents and books. LSB is involved in international meeting on bird protection and on Libyan bird book publication.

LSB involvement in the CEPF concerns the ensuring of the coordination with other partners of the project (local NGOs, universities and administrations), field actions (ornithological monitoring), training and awareness actions.

In Libya, the Ministry of Water Resources was associated to support groups and to the project. On previous test-sites, in the eastern part of the country, the Tripoli University was also implicated.

#### **Conservation Impacts**

# 2. Describe how your project has contributed to the implementation of the CEPF investment strategy set out in the ecosystem profile

The "Monitoring of waterbirds in North Africa for the conservation of wetland areas" project responded to the third point of the CEPF strategic direction: "3. Improve the conservation and protection status of 44 priority key biodiversity areas".

Through this project, partners were able to promote and improve the management of protected areas by developing and implementing sustainable management plans for test sites. It also supported fund-raising for local activities that support test sites.

Each NGO has also raised awareness on wetlands as important sites for waterbirds and for local activities. When necessary, NGOs conducted monitoring to add to ecological information on some of these sites, so as to better comprehend the habitat quality for waterbirds and for social activities.

Some of the sites concerned by the project are protected areas for which conservation plans existed even before this project. However, the project has allowed partners to develop interesting knowledge on sites not monitored previously, in order to support current management plans. Monitoring has also improved the quality of existing management plans. In Tunisia, awareness-raising activities were able to include a wetland area next to test site, in the management plan of the National Park of Ichkeul, for awareness activities with public and scholars; moreover this area has been labeled as "green space".

Biological indicators based on waterbirds censuses in these test sites could also be suitable for other North African wetlands, giving clues for adaptive management of this biological component.

### 3. Summarize the overall results/impact of your project

The Mediterranean region is extremely rich in biodiversity. Among the most remarkable ecosystems, wetlands are home to a great diversity of species. This ecosystem is also among the most threatened in the world, mainly due to the recent and continued growth of human populations and the joint development of irrigated agriculture, urbanization, industry, transport infrastructure and tourism.

Waterbirds (ducks, geese, herons, gulls, terns, etc.) are an important component of the Mediterranean wetlands. Their diversity, abundance and migration habits are important for many of our cultural values and human social practices. These species are since long time subject of monitoring, helping to evaluate the value and health of wetlands ecosystems. Monitoring of waterbirds is indeed a simple and effective tool, not only to determine the relative importance of wetlands for waterbird and trends of these populations, but also to establish conservation priorities.

Waterbirds are also an excellent way to raise awareness and mobilize civil society for their conservation and beyond, ecosystems on which they depend. By improving skills and awareness of private site managers, civil society and the authorities responsible for the management of sites and national public policies on wetlands, it may be possible to achieve a better management and conservation of these key biodiversity sites, now seriously threatened.

This project aimed to strengthen the capacity of local stakeholders by sensitizing them to waterbird monitoring and wetland management in eight test-sites in order to improve conservation of these sites. The main objectives of this project were:

1) To strengthen the waterbird monitoring activities on test-sites by implementing new monitoring programs or by strengthening existing programs and by involving all stakeholders (site manager, environmental NGOs, agricultural development group, cooperatives, administration, etc.).

2) To use results of such monitoring to manage and conserve target waterbird species and their habitats, thanks to using ornithological indicators.

3) To reinforce the regional cooperation in terms of waterbird and wetland conservation in whole North Africa, in particular through the development of South-South collaborations.

To achieve these objectives, actions had been undertaken, four at scale of each test site (actions 1 to 4) and three at scale of North America (actions 5 to 7):

Action 1: Creation of "Support Group" for site management and conservation involving all local stakeholders (site manager, NGOs, administration, universities).

Action 2: Capacity building of these stakeholders through training in waterbird identification and monitoring and raising awareness about the state of conservation of wetland sites.

Action 3: Joint activities of monitoring of waterbird population and wetland area with different stakeholders to improve knowledge of test-sites (abundance and spatial distribution of breeding, migrating and wintering waterbirds, conservation status).

Action 4: Support for fund-raising for the implementation of management actions on test-sites.

Action 5: Promotion of ornithological data in management indicators.

Action 6: Organization of regional workshop on wetland management in North Africa and project results

Action 7: Creation of an awareness document on the importance of waterbird monitoring to protect key biodiversity areas.

Height test-sites were selected from priority Key Biodiversity Areas designated in the CEPF "Biodiversity Hotspot Mediterranean" ecosystem profile.



Figure 1. Location of the 8 sites-test (from : googleearth)

For each country there was a NGO, partner of the project, who developed the project on two test sites.

Country	Geo-location of sites-test	Corridors*	Test-Sites	Characteristics	Surface
		Key Biodiversity			area
		Area*			(in ha)

					1 1
	Laguno de Nador	tlas Moutain	Aguelmam	Ramsar site	800
	A REAL COMMENT	N°819 Parc	Afennourir	Shallow karst mountain	
		National		lake surrounded by a	
	A Contraction of the second se	d'lfrane		large lawn	
	The second second in				
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	in the state	ranie et Molouya	Nador lagoon	Ramsar site, IBA, SIBE	14 000
Morocco		N°795 Sebkha		Mediterranean lagoon	
	A A	Bou Areg			
	Lagune de Nador (Lagune de Nador Allo)				
	Memcen				
	Nifeomale *				
	the second second				
	Lagune de Nador (Lagune de Nador				
	* NAMES				

Algeria	Marais de la Macta           Marais de la Macta	-	Marais de la Macta	Ramsar site coastal marshes and saltpans	43 025
	Umercles (Tizi Ouzou Bozzi guere) (Lac Goulimim Lac Soulimim Lac Goulimim Lac Goulimim	Mountains, plateaus and wetlands of Algerian Tell and Tunisia N° 45 Parc National du Djurdjura	Goulmim lake	Mountain lake	17
Tunisia	are National Se Honkey) (Parc National de Henkey) Gouvern antide Brene Couvernorait de Panae Couvernorait de Panae			Biosphere reserve, UNESCO World Heritage site, Ramsar site and IBA Garaet (freshwater to brackish lake) supplied by 6 freshwater wadis	12 600

			and communicating with the sea by the river Tinja and Bizerte Lagoon.	
			During the project the support group worked on a site near the Parc in order to see birds and study wetlands easier. This site (Manzel Bourguiba site) has been declared as "Communal Green Space" in 2015, also thanks to activities developed on the site for this project	6.5
	Vetlands of Iunisia and Libya N°1416 Gafsa	Garaet Sidi Mansour	Ramsar site and IBA Garaet (freshwater to brackish lake), this vacuum draws water from wadis emanating from Djebel Orbata at north and Djebel Hachichina at south	2 426
Libya	≿yrenaican Peninsula I° 730	Mallaha	Wetland and coastal marshes in Tripoli city	66

Traposition of programmers	Peninsula N° 730	Ancient treatement station	10

For each test site there was a support group, established by the NGO, associating different stakeholders of the site. During the project at least 12 people were involved in each support group, for a total of more than 100 people. These individuals were made more aware of wetland ecology issues: their important role not only for waterbirds but also the importance of their healthy condition for social and economic activities. Some of these people are independent in monitoring waterbirds and use this data linked to other ecological aspects, to understand the status of a wetland area. All of them have been involved in developing management plans for sites.

Many more people were made aware of some aspects of the ecology of waterbirds or of wetlands during awareness-raising activities.

A movie has been made to raise awareness about the project (<u>http://www.medwaterbirds.net/page.php?id=35</u>): it shows the interest of the project with interviews of people involved in the project. This movie will be presented and used at different local events in each country by NGOs, and also on web sites, to raise public interest and knowledge.

For each test site, where waterbirds were an important parameter, indicators based on ornithological data concerning waterbird censuses, have been developed to be used as a parameter to study for management activities. Biological indicators developed for these sites are divided into two categories: one category is specific for the site and its bird composition; the other category is more general for North African wetland areas and their ecological parameters. Libyan sites are very small and waterbird communities are limited but there are some interesting species nesting and wintering in these sites. We have proposed to realize in the future a long term monitoring plan, to study the evolution of species and habitats. One of the sites was not interesting for waterbirds because of its geographical position: this was the Lake Goulmim (Algeria) site, where no indicators could be produced based on ornithological data.

For other sites, biological indicators are issued from ornithological and ecological parameters of the site (see also attached documents for more details):

Algeria: a. The Macta site: - Indicator on the total number of waterbirds

- Indica	ator on the number	er of species	meeti	ng the 1%	thre	shold of
their	biogeographical	population	size.	Indicator	on	species
specia	alized in freshwate	er marshes				

- Indicator on species specialized in salt marshes
- Tunisia: a. the Ichkeul site: Indicator on the total number of waterbirds
  - Indicator on the number of species meeting the 1% threshold of their biogeographical population size.
  - Indicator on species dependent on freshwater marshes.
  - Indicator on species specialized in brackish lagoons and mudflats
  - Indicator "foraging strategy" of waterbirds



Example of two indicators based on bird counts and could be used for the management of Ichkeul Lake: (a) number of birds specialized in freshwater marshes and (b) specialized in brackish water and mudflats. There are different wetland ecosystems found in the lake which hold different species communities. If we look at the total number of waterbirds, most of the trend is driven by freshwater birds which dominate the community. If brackish water species are studied separately, it can provide information on the status of the saltmarshes and mudflats which are also present on the northern shore of the lake. Here, we can see that the bird carrying capacity of the freshwater part has increased on average (with some fluctuations due to varying rainfall) as did the carrying capacity of the salty habitats. b. the Sidi Mansour site: this is a particular site with intermittence of salt and fresh water and with intervals of wet and dry periods. Here it is important to study the evolution of both waterbird and steppe bird communities.

Morocco: a. the Nador lagoon site: - Indicator on the shallow marshes (water levels)

- Indicator on the "marine" ecosystem
- Indicator on fish eating birds (demonstrating the organic pollution which is threatening the lagoon).
- b. The Afennourir site : Indicator on the total number of species
  - Indicator on the number of waterbird species of conservation value (1% of their biogeographical population)
  - Indicator on grazing species to monitor the productivity of wet grasslands surrounding the lake

### Planned Long-term Impacts - 3+ years (as stated in the approved proposal)

### List each long-term impact from Grant Writer proposal

The planned Long-term impact approved on the proposal was "Improve the management and the conservation of wetlands in North Africa."

### 4. Actual progress toward long-term impacts at completion

Ornithological data have been integrated to improve the management plans on sites concerned by a management plan. Sites not managed before, have gained better knowledge of ecological issues to protect areas for waterbird wintering or breeding and migratory needs. Stakeholders of some of these test sites have also agreed on the importance of including other ecological aspects and monitoring, in order to have a complete vision of the habitat.

What was achieved on some sites can be reproduced on other sites in North Africa, notably in terms of the involvement of stakeholders and elected representatives, who are involved in management decisions for natural sites.

Biological indicators, based on ornithological data, could also be used on other sites in North Africa as a basic indicator of wetland status.

In conclusion on most of these test sites, this project has improved the quality of management and conservation and was able to improve the comprehension of waterbird ecology and the management of wetland sites, which could be reproduced at other North African sites to improve the general management and conservation of wetlands.

# 5. Actual progress toward short-term impacts at completion

The project was based on two test sites in four North African countries: Morocco, Algeria, Tunisia and Libya. In each country, our local technical partner was an NGO working on environmental projects.

For each country, the short-term impacts of the project were: 1. To strengthen the capacity building of stakeholders for test site management and create better synergies between them; 2. To implement ornithological monitoring on test sites; 3. To adjust indicators for wetlands management based on ornithological data; 4. To improve management and conservation on test sites (implementation or modification of management plans).

The general short term impacts are:

• the involvement of more than 100 persons in support groups over in all countries: 22 persons in Tunisia, 38-40 in Morocco, 38 in Libya and 27 persons in Algeria.

- The implementation of waterbird monitorings on more than 14000 ha in Morocco, more than 43 000 ha in Algeria, more than 15 000 ha in Tunisia and near 2500 ha in Libya.
- The implementation of other ecological monitoring on four of these test-sites, in order to improve knowledge on these sites and develop a management plan considering these news parameters.

The implementation of actions is different according to the country:

#### Morocco:

1. Stakeholders from both test sites were involved in the development of capacity building. The Afennouir site is a well monitored National Park, for which data on waterbirds have just been added to produce a full compilation of ecological data that enhances their knowledge about this site so they can better manage existing problems. The Park was associated with the support group in Afennouir. The Nador site has been less investigated, and all new monitoring that produces different ecological data is very important to develop knowledge about the site and actions to preserve the natural habitat as well as possible for species and human activities (like fishing). The following stakeholders were associated with this site: the "High Commissioner for Water, Forests", the Environment Department, the Scientific Institute, the Association of Science and Life Teachers, local elected officials, and fishing associations. For this site, it was very important to associate local elected representatives, because they are very important for the implementation of long-term actions. In the support group of Nador, local authorities were represented by: the Regional Unit, the Association of Teachers in Environment and Development Sustainable, the Forum of Urban planning and Environment, the Association for the Environment and for the sustainable development, the group of fisheries and the Association CECODEL. In the support group of Ifrane the loxcal authority was represented by the Association of Aïf Mouline for the Environment Protection and the Association Afennouir for the Environment and Tourism. Thirty-eight persons were involved in the support groups; the area monitored on the Nador site was of 14 0000 ha and around 800 ha on the Afennouir site. Thirty-two field excursions were carried out on the Nador site: 20 for associations and 12 for high official persons. Two field excursions were carried out by the support group of Afennouir because of the long snowy period on this site.

2. On both sites, ornithological monitoring has been implemented: in the Afennouir site, this monitoring has been linked to other monitoring; in the Nador site, this is one of the few monitoring programs implemented and three people are involved in it on a long term basis.

3. Ornithological data has been included in the management plan of the Afennouir site, and these data will be used in the first management plan for the Nador site in coordination with the support group.

4. The Afennouir site is a National Park with a good management plan and a good conservation system. The ornithological data have been added to provide complete

information concerning the site. For the Nador site, better comprehension of the ecological system and issues was required, especially regarding birds, to conduct awareness-raising actions for local elected representatives and preserve the habitat.

### Algeria:

- 1. Stakeholders from both sites participated in support groups: one for each test site. On the Djurdjura site, the support group included six people from local associations, one person from the Forest Department, one local elected official, one person working at the National Park, and four local volunteers from ANAO. On the Macta site, the support group included ten people from two different local associations, one person from the Forest department, one local elected official and three volunteers from ANAO, one of whom is also a local villager. Each support group trained 12 to 18 persons, monitoring 10 hectares on a site and 20 ha on the second one. Each support group made field excursions 10 to 15 times for waterbird monitorings and other ecological studies.
- 2. Ornithological monitoring was established on both sites with support groups: ornithological training was provided at the beginning of the project by an expert from each support group, during field trips and in workshops.
- 3. Ornithological data have been included in the management plan of the Djurdjura Park. These data have been an important component used for the next Macta site management plan, where other biotic and abiotic parameters had also been studied in order to develop global knowledge of the ecological aspects of this site.
- 4. The Lake Aguolmim site in the Djurdjura National Park is a protected area with a management plan. For this site, it was not necessary to formulate a better management plan, but ornithological data resulting from monitoring of wintering birds will be included in the general reflections about how to preserve the wetland area. A better understanding of the Macta ecosystem is required. Ornithological data have been completed by data on other ecological parameters so we now have a global vision for proposing a management plan and studying biological indicators.

#### <u>Tunisia</u>:

1. Stakeholders have been contacted on both sites and are involved in both support groups. For the Ichkeul National Park, the support group included environmental associations, the General Direction of Forestry, hunting and fishing associations, ranchers and inhabitants of the site as well as university students and teachers. On the Sebkhet Sidi Mansour site, the support group included two environmental associations working on the site, the General Direction of Forestry, hunters, ranchers and farmers of the site, the Ministry of the Environment and a science faculty next to the site. A total of 22 persons were actively involved in support groups even if other persons participated

in some of the meetings. The support group of the Ichkeul Park, covered an area of 7 hectares and made more than 6 field excursions. The support group of Sebkhet Sidi Mansour site monitored an area of 1000 ha on the unique field excursion on site.

- Ornithological monitoring has been established on both sites with support groups: ornithological training sessions were provided during the project by ornithological experts from each support group, during field excursions or in workshops.
- 3. Ornithological data have been included in the Ichkeul Park management plan. The local environmental association (ATSE) has been integrated back into this site for awareness-raising activities and to propose touristic alternatives. On the Sidi Mansour site, ornithological data are important, but it is important to include monitoring on other ecological parameters before finalizing the management plan.
- 4. The integration of ornithological data for the Ickheul site has resulted in the establishment of the nearby wetland area for awareness-raising activities and school trips. In this way, the Park can have stronger protection, limit activities in its perimeter, and displace tourism to this other wetland area. The Sebket Sidi Mansour site is a complicated site, with a complicated hydrological system and not a regular quantity of water over time: this area can be dry for many years before receiving water from rivers or from rain. One side of this semi-deserted habitat is cultivated during the dry period. Waterbird monitoring should not be the priority here and other ecological parameters must be studied to obtain more information about the site, including parameters on the pollution of the land and of the water, and the resiliency of the site for farming.

#### Libya:

1. At the beginning of the project, the two test sites were located in the western part of Libya and actions started there, notably the implementation of a support group for each site. Because of security reasons, it was very difficult for these groups to have field training. In 2015, it was proposed to change test sites, choosing sites in a secure area, and two support groups were created on these new sites. These new sites are located in Tripoli city: one of them is a treatment site and the other one is a military area, connected to the military airport. Support groups were created on both site involving notably, students and volunteers from the area. On the treatment site, employees also participated in training and meetings; on the other site, military personnel were invited to meetings and were informed of all the actions that took place. Each support group included twelve people, students, NGO volunteers and local inhabitants. Since 2015, each support group visited the test-site monthly for a total of 35 field excursions for each site: the treatment site was visited more by some of the participants of the group, because during the nesting period, support groups were interested in study the reproduction success of breeding populations. The total area covered by the monitoring was of 15 hectares: 5 hectares on the Al Mallaha site and 10 ha on the treatment site.

- 2. Ornithological monitoring has been implemented on both sites and not only monitoring of wintering birds, but also monitoring of breeding. People involved in monitoring are very interested in these activities and want to continue even after the end of the project.
- **3.** Ornithological data have been used to write reports on management suggestions, which will be addressed to managers of the site in order to consider the importance of the ornithological parameters in their activities or the usefulness of sites. Site managers have manifested their interest and will to include these suggestions in their "use" of the site.
- 4. Neither of these two sites has a management plan, but the stakeholders involved in the project activities have raised the consciousness of owners. They appear to be interested in including suggestions from the ornithological studies for preserving the site and species linked to these habitats.
- 5. Fund-raising raised by local associations will also support or affect local communities, because there is an increase in knowledge and awareness-raising activities on ecological aspects of waterbirds and wetlands.

# 6. Describe the success or challenges of the project toward achieving its short-term and longterm impacts

In North African countries it is very difficult to have meetings with all the stakeholders of a site, around the table, speaking about environmental problems. For all the countries, except for Libya, it was important to have a person representing a governmental organization, but also people working on the site. The challenge was not only to focus discussion on a central theme, with so many different people, with different environmental knowledge and comprehension, but also to find common and practical date for everybody.

# 7. Were there any unexpected impacts (positive or negative)?

Unexpected results are notably in Libya, because they had to do the same work twice: initial test sites were replaced by two new test sites because of security reasons. The promptness of the activities assessment for the new test sites was very positive. Moreover, in Libyan society it is difficult to involve women in field activities, because it is not common and not well accepted. The LSB has succeeded in developing activities involving five young women. This is a socially positive impact that was not expected. Moreover, on one of the recent sites, the treatment site, employees were positively interested in the project and they got involved in training. They were not initially focused on the project, but they are really interested in also being involved in future bird monitoring.

# Project Components and Products/Deliverables

**Component 1 (as stated in the approved proposal)** *List each component and product/deliverable from Grant Writer* 

For each NGO, components and	product/deliverables were the same:

Component 1:Products / Deliverables 1:Implementation of a monitoring program on waterbirds by the NGO for wetlands conservation in the1.1 Support groups will be set up for each test site involved in management actions there1.2-Stakeholders will be trained to identify and monitoring to identify and monitoring	and
program on waterbirds by the NGOinvolved in management actions therefor wetlands conservation in the1.2-Stakeholders will be trained to identify and model	
for wetlands conservation in the 1.2 -Stakeholders will be trained to identify and mo	
	nitor
country waterbirds	
- Important data on bird populations wil	be
communicated to stakeholders to sup	port
management and conservation activities	
- Stakeholders will learn to use waterbird da	a as
management indicators	
<ul> <li>A new list of activities in management plans</li> </ul>	will
be drafted for test sites	
- New ecological parameters will be studie	d if
necessary for species protection	
1.3 - Waterbird and site conservation status monit	oring
(for wintering, breeding and migratory birds) w	ll be
conducted by an ornithologist, with the involve	nent
of stakeholders	
- A synthesis of monitoring with manager	
suggestions will be drafted and proposed	l to
stakeholders	
- A discussion on the implementation of activiti	
be done on each site will be conducted	with
stakeholders	1.
1.4 – Site managers or the support groups, interest	ea in
submitting funding application, will be identified	
<ul> <li>Funding applications will be prepared and se different financial donors.</li> </ul>	ιτ το
	for
<ol> <li>1.5 - Involvement in testing ornithological indicator wetlands management on test sites (sharing data</li> </ol>	
- Involvement in regional meetings	/
- Involvement in the development of an aware	necc
document or product on the CEPF project	11533
Component 2.     Products / Deliverables     2:	
Support from TdV to the NGO for 2.1 – Support groups will be defined on each test site	and
the project implementation in the involved in site management	3.10
country 2.2. – Site managers or support groups, interested	d in
funding applications, will be ident	
- Funding applications will be completed and ser	
different financial donors	

As the general coordinator of the project, the Tour du Valat must deliver different components and products:

Component TdV 1	Products / Deliverables TdV 1:
Implementation of a waterbird monitoring program for wetland conservation in North Africa	<ul> <li>1.1 - Ornithological indicators , usable at the local scale (species bio-indicators for habitats, for threats and for other variables; diversity and abundance of the population; patrimonial importance of the population) will be identified;</li> <li>These indicators must be suitable for North African countries and tested with ornithological data on the same region;</li> <li>These indicators will be valuable for stakeholders as decision management tools</li> <li>1.2 - Launch meeting of the project in the summer of 2013 with all the NGOs concerned by the implementation of the project in each country and in the regional coordination: meetings with different partners in order to coordinate the regional correspondence of actions - a first meeting in the spring of 2014 with all the NGOs, in charge of implementing the project in their country: presentation of management indicators, training in using these indicators, workshop on their use at test sites.</li> <li>Second Regional meeting with all the NGOs in charge of implementing the project in their country: skills exchange on technical skills and experience, state of the project 1.3 – Recruitment of an outside consultant to draft a synthesis of existing awareness documents on wetlands protection</li> <li>Awareness-raising document production concerning CEPF project results.</li> </ul>
Component TdV 2	Products / Deliverables TdV 2:
Monitoring of cross-subsidies by the TdV	2.1 - All four partners will work on the implementation of activities, respecting CEPF good practices with TdV support.
	CEPF: will ensure the finalization of all the activities and of the financial monitoring of partners.

### 8. Describe the results from Component 1 and each product/deliverable

#### Component 1:

#### For GREPOM (Morocco):

1.1: Support groups have been established in both test sites: the Nador lagoon site and the Afennouir site.

1.2: Stakeholders are trained on the identification and censuses of waterbirds in both sites. Important data are shared with stakeholders for management plans and conservation activities. In the Afennouir site, stakeholders are able to integrate this data for site management and conservations activities because the site is inside a National Park with a management plan and other systematic monitoring. Ornithological data has been integrated in the management plan of the National Afennouir Park to elaborate new activities concerning waterbirds conservation. On this site, other parameters are already studied by the Parc for many years. In the Nador site, stakeholders have been trained in using this data for management plans. Ornithological data has been included in a general discussion principally concerning elected people for management activities for the site. Given the difficulties of gathering all the stakeholders and also the socio-ecological complexity of the lagoon, no other parameters were studied during the project.

1.3: An ornithologist was involved in monitoring activities on each site and a large group of stakeholders were involved in waterbird monitoring: three people in the Nador site and four in the Afennouir site. A synthesis with suggestions for management is being finalized for the Nador site but it was not requested by the Afennouir site managers. Discussions have begun in the Nador site for the implementation of activities, and waterbird monitoring will be continued by volunteers in this site. Waterbird monitoring activities will also be continued in in the Afennouir site and the Park agrees to use this data in the management plan.

1.4: Groups interested in submitting projects for funding applications have been identified, but the application have not been sent to financial donors yet. A project on the environment education will be submitted to the CEPF (small grants), written by a local association and supported by the GREPOM. Two other projects are progressing by local associations of the Nador support group. The support group of Nador is supported by the Marchica Agency which is

funded by the government (500 000 \$): conservation activities have been adjusted thank to training sessions.

1.5: Ornithological indicators were proposed late in the project and they will be integrated in wetland management for the Afennouir site. They will be used in the next management reflection for the Nador lagoon, for a conservation program is under development. GREPOM had been



involved in each yearly regional meeting. GREPOM also participated in the movie production: the awareness document chosen by partners to show the CEPF project and results. Interviews were made with volunteers who had been involved in the project on each test site. Images or

movies of sites were taken to complete the overview and problematic of sites (pollution, urban sprawl,...).

#### For ANAO (Algeria):

1.1: Support groups were established in both test sites: the Macta site and the Lac Aguelmim site, based in the National Park of Djurdjura.

1.2: Stakeholders were trained on the identification and census of waterbirds in both sites. Important data was shared



with stakeholders and used in management plans. The Lac Aguelmim site does not have a great diversity of birds, so field trainings took place in a little wetland area nearby this test site. The waterbird monitoring were useful to complete overall knowledge of the site and stakeholders could integrate this data in the management plan. Ornithological data was included in the management plan to elaborate new activities concerning waterbirds conservation. This site is well studied for years, because is inside the National Park and other monitoring activities exist. For the Macta site, ornithological data were useful for general discussions with stakeholders. The discussion incorporated the data along with other ecological parameters including pollution and water levels. This information is critical in order to manage threats and site management.

1.3: Two ornithologists were involved in waterbird monitoring activities along with local stakeholders from both sites. A total of twelve people participated at Lake Goulmim and fifteen people at the Macta site. A synthesis with suggestions for management is being finalized for the

Macta site but it was not requested for Lake Goulmim. Discussions were undertaken for the implementation of other activities for Macta site. Monitoring activities will continue in both sites after the end of the funded project. Management activities will take place in the Goulmim site and a management plan is in progress of being developed for the Macta site, including suggestions based on waterbird data but also on other ecological



parameters studied during the project to increase knowledge and understanding on this site.

1.4: Both support groups have identified possible future activities and are interested in submitting projects for funding applications, but no applications have been sent to financial donors.

1.5: Ornithological indicators were proposed late in the project. Given the small bird population in Lake Goulmim site, indicators are not based on waterbirds counts. Indicators based on ornithological data are used in the reflection for the management of the Macta site, but there is currently no conservation program. The ANAO were involved in each yearly regional meeting. The ANAO also collaborated in the movie production: the awareness document chosen by partners to show the CEPF project and results. Interviews were made with volunteers involved in the project on each test site. Images of sites were taken to show the habitats and problematic of sites (ecology aspects, environment,...).

#### For LSB (Libya):

- 1.1 Support groups were established in both test sites: the Malahal site and a water treatment site.
- 1.2 Stakeholders were involved in trainings about waterbird identification and the census of waterbirds at both sites. Managers were also involved in actions at both sites. At the water treatment site, the support group involved not only volunteers



and students, but also employees of the site. Data was shared with managers but these sites are not officially protected areas and they have not a management plan. The data will not be used for management plan, but suggestions issued from this data will be integrated in site use at both sites.

1.3: One or two ornithologists were involved in waterbird monitoring at both test sites and stakeholders were also involved in this activity. A total of twelve people participated in both sites. A synthesis with suggestions for management is being finalized for both sites and it will be sent to managers of sites, after validation by all the stakeholders.



1. 1.4: LSB helped eight NGOs to submit projects for funding: six NGOs successfully obtained funding. Five projects submitted to the IUCN were successfully accepted: one of the projects funded is going to work on the wise use or sustainability of medicinal plants; the second one will be about the enhancing capacity of staff on the protected area of the project; the third one is on the edition of an awareness-raising book on biodiversity and environment education for students; the fourth one is restoration of forestry and an archeological site and the last one is on the knowledge and use of *Arbutus pavarii*. The global amount of budget raised for these projects is around

140 000\$. Another project will be funded by the CEPF and will allow studying and developing integrated coastal zone management and biodiversity conservation.

1.5: Ornithological indicators were proposed late in the project and they will be used as suggestions for management at both sites. The LSB was involved in each yearly regional meeting. Due to visa problems, the team was unable to attend the Moroccan meeting, but they participated in a skype conference. The LSB has also participated in the production of a movie: the awareness document chosen by partners to show the CEPF project and results. Interviews were conducted with volunteers who had been involved in the project at each test site. Images of sites were made to show the environment and problematic or interest of both sites.

#### For AAO (Tunisia):

- 1.1 Support groups were established in each test site: the Sidi Mansour site and the Ichkeul site.
- 1.2 Stakeholders were trained on waterbird identification and monitoring. The support group from the Sidi Mansour site opted to to provide field training in a nearby wetland due to the drought in these last years. All important data were communicated to stakeholders, who were also trained to use them as



management indicators. At the Ichkeul site, data on waterbird monitoring was added to general knowledge of the site and included in the management activities. Moreover, in order to facilitate the monitoring training on this site, field activities were provided in a wetland area close to the Lake of the Park. This area probably will be included in the future management plan of the Park in order to make awareness-raising activities and reduce the

touristic pressure on Ichkeul Lake. For the Sidi Mansour site, a management plan will be formulated after more knowledge is gathered on the ecological aspects of the site.

1.3 Two ornithologists were involved in waterbird monitoring activities on both test sites. A synthesis with suggestions for management will be finalized for both sites and it will be sent to managers. The



Ichkeul Park will include these suggestions in the management plan of the Park. The suggestions will also be integrated into the next management plan of Sidi Mansour, once more ecological parameters are known.

- 1.4 Both local associations will submit projects on local water resources and they have established a plan for the project. One NGO also submitted a local project for seven sites for a 25 000 USD grant for a two year project.
- 1.5 Ornithological indicators were proposed late in the project and have been used in the reflection for management in both sites. AAO was involved in each yearly regional meeting. AAO also participated in the production of a movie; the awareness document chosen by partners to show the CEPF project and results. Interviews were conducted with volunteers who were involved in the project on both test sites.

# 9. Repeat point 8 above for each Component in your approved proposal <u>Component 2</u>:

During the project the TdV staff provided information on funding opportunities to the project leaders in each site. A listing of sites and potential donors was elaborated and shared with the teams. During the project meetings, the teams identified potential new projects that could enforce or promote their current activities (the ANAO identified the need to implement aerial counts of migrating birds and the lack of field equipment, the LSB identified more structural needs with importance placed on administrative trainings and project management, Grepom highlighted the need to continue training volunteer birders for winter counts and field work). The four teams (ANAO, Grepom, AAO and LSB) adapted different strategies to train local NGOs on project proposal development. ANAO and LSB both held local workshops with local NGO to jointly prepare project proposals together as a learn by doing experience. The AAO worked directly with their local partners to make more formal training sessions.

#### Component TdV1:

1.1 - Tour du Valat worked on the development of a few indicators based on waterbird counts. All CEPF sites, but one (Djurjura, Algeria), show an interesting diversity and numbers of waterbirds, some of which have been monitored for decades. Not all species have the same conservation value in each site. We therefore suggested indicators focused on species that could serve as conservation targets for site managers and stakeholders. We also tried to explore the indicative value of each waterbird species in order to produce indicators that would demonstrate the ecological state of wetland sites. For each site and if it was possible, considering the quality and quantity of waterbirds data, one or more indicators was proposed. For each test site, indicators based on waterbird counts were also based on the ecological parameters of the site. In order to make possible the replication of these indicator-based analyses to other wetlands in North Africa, we designed and filled a database for all waterbird species recorded in winter in North African countries. In this database, one can find indications on the conservation status and ecological / functional traits of

interest for each species. Indicators have been enhanced with national NGOs partners and will be delivered and enhanced to stakeholders as tools for management decisions. 1.2 The kickoff meeting was held in Arles (France) in the summer of 2013, with all the NGOs concerned by the implementation of the project. This meeting allowed us to coordinate regional activities in each country. The next meeting was held in Morocco in 2014. All of the implementing NGOs were present. This was the moment to discuss about the project progress and also to meet the new project leader. During this period stakeholders were detected for each test site and support groups were set up in each country. The Libyan partner could not join the meeting due to visa problems. A skype conference gave the possibility discuss about the progress and problems of each activity. The Libyan partner manifested his fear in continuing activities at both test sites because of security problems for field activities. A workshop gave the possibility to train on data management and on the needs of sites in order to develop biological indicators. Ornithological data for all of the sites were insufficient to develop indicators before or during this meeting. A second regional meeting was held in 2015 in Tunisia, after the agreement of a temporal extension of the project. The extension was necessary given the significant delay in the development of some activities in certain countries and the necessity to change test sites in Libya for security reasons. This second regional meeting lasted one day. The objectives were to provide an overview on technical and financial progress, to choose and define the awareness-raising document for the project, to work together on indicators and to explore different funding opportunities. Many activities were just started at this time in most of the countries, but the meeting gave the possibility to share with other partners the difficulties and experiences on the project. It was also a good opportunity for the new regional coordinator to meet each national partner and to renew the motivation, after a period of time without regional coordination (because of the voluntary departure of two previous coordinators). Each regional meeting also gave the opportunity to the participants to exchange with the other countries involved in the project, and to visit the sites and meet people involved in the project. A third and last meeting took place in Algeria to discuss the results and problems occurred during the project.

1.3 An external consultant was recruited to make an awareness-raising movie about the CEPF project. Each partner was responsible for making images and local movies with people involved in the project and interviewed them about their experience. The consultant gathered images and added comments and a general overview on the CEPF institution and about the project developed in each of the four North African countries.

#### Component TdV2

The TdV verified the good implementation of activities implemented by each NGO, in respect of CEPF good practices.

# **10.** If you did not complete any component or deliverable, how did this affect the overall impact of the project?

All the components have been completed but some deliverables, depending on the country or to the test site, are different or incomplete. For many sites it was difficult to finalize a management plan or management suggestions, because of the necessity to develop a better knowledge of other ecological parameters. Support groups, established during this project period, were involved and will continue to be involved in activities in the sites and will carrying on waterbird monitoring to develop a management plan. This is the situation for the Nador site, the Macta site, and the Sidi Mansour site. None of these sites were previously monitored before this project and they are not protected areas. The ecological parameters on these sites were previously unknown.

Another incomplete deliverable is the "Recruitment of an outside consultant to edit a synthesis of existing awareness-raising documents on wetlands protection". The partners unanimously agreed that it was more beneficial to develop a movie as an awareness-raising document about the project, associating an external professional movie-maker. This didn't affect the overall impact of the project because this information was managed by the Tour du Valat, which is involved in the study on the loss and the degradation of Mediterranean wetlands and of their natural resources, and on how to restore them. For each site, the existing bibliography was checked by the partners in order to include them in their report of suggestions for the management of the sites.

# 11. Please describe and submit any tools, products, or methodologies that resulted from this project or contributed to the results

A final product of the project is a movie about the CEPF project, including a general introduction about the CEPF and a specific part for each country with interviews from local volunteers involved in the project for each test-site (<u>http://www.medwaterbirds.net/page.php?id=35</u>).

The methodology of using support groups in each project site allowed us to involve all kinds of stakeholders from the site on management activities. This was useful to produce a long term adhesion to the project and for activity implementation.

A database for all winter waterbird counts in North Africa was also built. For each species, a diversity of functional traits was informed according to literature and world databases. This database was revised in the particular case of North African wetlands.

#### **Benefits to Communities**

#### 9. Please describe the communities that have benefited from CEPF support

Please report on the size and characteristics of communities and the benefits that they have received, as a result of CEPF investment. Please provide information for all communities that have benefited **from project start to project completion**.

	Community Characteristics											Natu	re of So	cioecor	nomic Be	enefit				
								Si	ize of Co	ommuni	ty				٩			ŝe	g in	
Community Name	Subsistence economy	Small landowners	Indigenous/ ethnic peoples	Pastoralists / nomadic peoples	Recent migrants	Urban communities	Other*	50-250 people	251-500 people	501-1,000 people	Over 1,001 people	Increased access to clean water	Increased food security	Increased access to energy	Increased access to public services (e.g. health care, education)	Increased resilience to climate change	Improved land tenure	Improved recognition of traditional knowledge	Improved representation and decision-making governance forums/structures	Improved access to ecosystem services

\*If you marked "Other" to describe the community characteristic, please explain:

### Lessons Learned

### 10. Describe any lessons learned related to organizational development and capacity building.

An important point that we learned from this project is that the creation of support groups is a long process, but it seems to be a successful way to ensure the implementation of actions on sites. One other difficult point was ensuring the participation of all the partners in the meetings. In order to obtain high participation, we were required to organize meetings on the weekends, to compensate for other professional activities. The coordination of regional meetings also requires a lot of time due to visa procedures and coordination from a long distance.

# **11.** Describe any lessons learned related to project Design Process (aspects of the project design that contributed to its success/shortcomings)

The success of the project design has been ensured by the choice of the NGO partners. The NGO with a strong influence and well known by the public is more efficient in involving stakeholders in the project.

In Morocco and Algeria, it was absolutely necessary to involve Governmental Organizations in the activities, particularly in support groups, to raise awareness to wetlands sites and to ensure the site protection, limiting the urbanization or the bad consequences to related activities (including pollution).

# **12.** Describe any lesson learned related to project Implementation (*aspects of the project execution that contributed to its success/shortcomings*)

Involving stakeholders takes time to implement actions, but it ensures the feasibility of the project in the long term.

# 13. Describe any other lessons learned relevant to the conservation community

Site managers need answers to simple questions that can guide them in the management and conservation of their site:

- What is the conservation status of habitats present on my site?
- Is my site providing all the services expected?
- How do some pressures impact my site and its biodiversity?
- Are my conservation goals met?
- Are the conservation actions efficient?

To answer these questions, site managers need to implement monitoring activities that can be sometimes very costly and time-consuming. Birds and especially waterbirds have been the bestmonitored biodiversity component for decades or more, notably because they are very attractive and relatively easy to observe and count. Moreover, they themselves are important conservation targets.

Birds also provide indications on their environment because they show a diversity of adaptations and specializations (=functional traits) and they react rapidly to environmental changes.

That is why we worked on the development of only a few indicators based on waterbird counts.

### Sustainability / Replication

#### 14. Summarize the success or challenges in ensuring the project will be sustained or replicated

The project proposal previewed that support groups would have to be involved even after the end of this funded project. All the support groups involved at least one, or more often, more people who are able to monitor birds and to use these data for management suggestions. Most of the support groups will continue activities in the future, because they are now passionate about these activities (like in Libya, Tunisia and Algeria) and most of them have submitted projects in order to find funds to continue. The future activities will include one or two aspects from this project plus a study of some additional ecological aspects or the development of a specific species monitoring plan.

Moreover the development of indicators, based on waterbird counts, is replicable in most of the North African wetland sites. Secondly, it facilitates the implementation of monitoring on test sites studies for this project.

The movie about the project has aims to incite interest and to raise awareness on this project and to develop the desire to make the same project in other sites. It will be shown at national, local or regional meetings and events and it will be also shown on NGOs' websites.

# **15.** Summarize any unplanned activities that are likely to result in increased sustainability or replicability

This project has largely contributed to strengthening the capacity building of birdwatchers and ornithologists in each partner country in order to contribute to a better monitoring of wintering waterbirds in the Mediterranean region. This should reinforce the Regional Mediterranean network of waterbird censuses which itself contributes to a world-wide program led by Wetlands International. The Mediterranean network aims to improve the capacity throughout the Mediterranean Region, so results issued by this project, as well as experiences, could be replicated in other countries with the similar problems.

# **Safeguards**

16. If not listed as a separate Project Component and described above, summarize the implementation of any required action related to social and environmental safeguards that your project may have triggered

# **Additional Funding**

17. Provide details of any additional funding that supported this project and any funding secured for the project, organization, or the region, as a result of CEPF investment

Donor	Type of Funding*	Amount	Notes
Tour du Valat	A	20 000 \$	Initial contribution of time of Leader project (July
			2013-December 2014)
Fondation MAVA	В	45 000 \$	Structure costs and running costs concerning the period of the temporal extension of the project (July 2013-December 2014)
Tour du Valat	A	61 800 \$	Structure costs and running costs concerning the period of the temporal extension of the project (2015-2016)
Tour du Valat	А	5 400 \$	Administrative coordination (30 days project)
Ministère français de l'écologie	В	105 000 \$	This contribution was limited to July 2013- December 2014, and concerns the salary of the Project leader based at the Tour du Valat
Ministère français	В	30 000 \$	As a consequence of the temporal extension of the
de l'écologie			project, I include this budget which concerns 2016
ANAO	A	10 000 \$	Contribution on expenses of the regional meeting
LSB	А	5 000 \$	Contribution of time of staff members
Environment General Authority and Tripoli University (for CEPF)	В	600 \$	Contribution to the Wordy Migratory Bird Day
UNEP-PAM- CAR/ASP (for AAO)	В	20 000 €	Contribution to the organization of the II <sup>nd</sup> Symposium for Seabirds
BirdLife Inter- national & Fondation MAVA (for AAO)	В	52 910 €	Capacity development for flyway conservation in the Mediterranean
CEPF (for AAO)	В	363 005 \$	Project on the development of eco-touristic solutions for the conservation of biodiversity
Vogel-bescher- ming Nederland (for AAO)	В	30 000 €	National Field Guide for Tunisia
TDV (for AAO)	В	23 150 €	Support to International Waterbird counts and trainings
IUCN-Med & CEPF (for AAO)	В	4 850 €	Promotion of key sites for biodiversity with the involvement of civil society
BirdLife Inter- national & AEWA	В	500€	Celebration of the Wordy Day of Migratory Birds

(For AAO)			
Société Romande	В	2 500 CHF	RE-edition of the Waterbird Guide for North Africa
pour la Protection			
des Oiseaux (for			
AAO)			
BirdLife Inter-	В	48 250 €	Capacity development for flyway conservation in
national (for AAO)			the Mediterranean - Phase II
CEPF (for GREPOM)	В	20 000 \$	Project on the White-Headed Duck
TdV and	В	6 000 \$	Support for International Waterbird censuses
Neitherland			
BirdLife (VBN) (for			
GREPOM)			

\* Categorize the type of funding as:

- A Project Co-Financing (other donors or your organization contribute to the direct costs of this project)
- *B* Grantee and Partner Leveraging (other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF funded project)
- *C Regional/Portfolio Leveraging (other donors make large investments in a region because of CEPF investment* or successes related to this project)

#### **Additional Comments/Recommendations**

# 18. Use this space to provide any further comments or recommendations in relation to your project or CEPF

The Tour du Valat coordinates the Mediterranean network for waterbird censuses, since 2012 on a budget initially given by the French Ministry of Environment and the MAVA Foundation.

The project funded by the CEPF concerned new actions of the network, strengthening local activities, particularly for wetland management. This project contributed to improve regional network collaboration, to reinforce the capacity building of observers on sites and to strengthen the data management.

This project thus participated to increase number of observers able to contribute to wintering waterbird censuses, and to reinforce the Mediterranean network for waterbird (<u>www.medwaterbirds.org</u>). Trained persons during this project will be active counters in the future, supporting the monitoring of waterbird populations in the Mediterranean wetlands, and helping the general quality and quantity of data on these population trends. Data will be included in the international data-base used to study waterbird population trends, which is an important parameter used in international agreements (AEWA, Ramsar, ...) to ensure the protection of species.

#### **Information Sharing and CEPF Policy**

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned, and results. Final project completion reports are made available on our Web site, www.cepf.net, and publicized in our newsletter and other communications.

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