



# GEF-6 PROJECT IDENTIFICATION FORM (PIF)

TYPE OF TRUST FUND: MEDIUM-SIZED PROJECT

TYPE OF TRUST FUND: GEF TRUST FUND

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## PART I: PROJECT INFORMATION

Project Title:	Effective Management of Wadi El-Rayan and Qarun Protected Areas		
Country(ies):	Egypt	GEF Project ID: <sup>1</sup>	9671
GEF Agency(ies):	UNEP	GEF Agency Project ID:	01475
Other Executing Partner(s):	Egyptian Environment Affairs Agency (EEAA)	Submission Date:	June 14, 2017
GEF Focal Area(s):	Biodiversity	Project Duration (Months)	36
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>		Corporate Program: SGP <input type="checkbox"/>
Name of Parent Program:		Agency Fee (\$)	125,386

## A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES<sup>2</sup>

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
BD-1, Program 1: Improving Financial Sustainability and Effective Management of the National Ecological Infrastructure	GEFTF	1,319,864	9,000,000
<b>Total Project Cost</b>		<b>1,319,864</b>	<b>9,000,000</b>

## B. INDICATIVE PROJECT DESCRIPTION SUMMARY

**Project Objective:** To improve the management effectiveness of the Wadi El-Rayan and Lake Qarun protected areas through community involvement and capacity building

Project Components	Financing Type <sup>3</sup>	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
<b>Component 1:</b> Strengthen management capacities of targeted PAs for the conservation of threatened and important species and their habitats	TA	<p>1.1: Improved management effectiveness (strengthened PA management tools, processes and capacities) demonstrated at two targeted PAs (Wadi El-Rayan and Lake Qarun)</p> <p><i>Indicators:</i></p> <ul style="list-style-type: none"> <li>Increase in % of management effectiveness scores (as measured in the GEF BD1 METT) for Wadi El-Rayan and Qarun protected areas, covering a total of 314,400 hectares<sup>4</sup>.</li> <li>Stable or increased populations of threatened species and stable or increase in habitat size of Important Bird Area (IBA) trigger species in targeted PAs: <ul style="list-style-type: none"> <li>Wadi El-Rayan PA: Population<sup>5</sup> of Dorcas gazelle (<i>Gazella dorcas</i>), IUCN Red List Category Vulnerable</li> <li>Qaroun PA: Habitat size of Slender-billed Gull (<i>Larus genei</i>), IBA trigger species, and Egyptian Eared Grebe (<i>Podiceps nigricollis</i>). IBA trigger species [baseline and targets to be established during PPG]</li> </ul> </li> </ul>	<p>1.1.1: PA management frameworks of Wadi El-Rayan and Qaroun PAs developed, including participatory approaches</p> <p>1.1.2 Field monitoring programs within Wadi El-Rayan and Qaroun PAs to assess the conservation status of key ecosystems and threatened and important species developed and implemented</p>	GEFTF	699,877	4,100,000
<b>Component 2:</b> Establish		2.1: Participatory approaches to PA management have strengthened PA management and reduced	1.1.3: Programmes for community participatory		500,000	4,000,000

<sup>1</sup> Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

<sup>2</sup> When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

<sup>3</sup> Financing type can be either investment or technical assistance.

<sup>4</sup> Total area of the two targeted protected areas

<sup>5</sup> See Annex 2 section "Information on status and threats to Gazelles". Previous accurate survey estimate over 200 individual in Wadi El-Rayan

effective community participation in PA management and conservation / management of natural resources	unsustainable resource uses in areas within and adjacent to two targeted PAs (Wadi El-Rayan and Qaroun)	planning and involvement in PA Management developed and implemented at targeted PA sites			
	<ul style="list-style-type: none"> <li>Increase in condition measured by Ecosystem Health Index (EHI – index to be developed during project implementation) of critical biodiversity habitat (at least 117,000 hectares within target PAs) as a result of improved management focused on the conservation of targeted species</li> <li>Increase in number of community members around the targeted PAs that are attending PA management meetings and participating in decision-making [baseline and targets to be established during PPG]</li> </ul>	1.1.4: Controls and monitoring programmes to conserve ecosystem services and reduce overharvesting by local communities within Wadi El-Rayan and Qaroun PAs developed and implemented			
Subtotal				1,199,877	8,100,000
Project Management Cost (PMC) <sup>6</sup>			GEFTF	119,987	900,000
<b>Total GEF Project Financing</b>				<b>1,319,864</b>	<b>9,000,000</b>

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: NA

### C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Recipient Government	Egyptian Environmental Affairs Agency (EEAA)	In kind	2,000,000
Government	Egyptian Environmental Affairs Agency (EEAA)	Cash	1,200,000
GEF Agency	United Nations Environment Programme (UNEP)	In kind	300,000
International NGOs	International Union for the Conservation of Nature (IUCN) – Regional office for West Asia (IUCN/ROWA)	Cash	500,000
International NGOs	International Union for the Conservation of Nature (IUCN) – Regional office for West Asia (IUCN/ROWA)	In kind	1,000,000
Donor Agency	Italian Development Cooperation	In kind	2,500,000
Others	Centre for Environment and Development for the Arab Region and Europe (CEDARE)	In kind	1,500,000
<b>Total Co-financing</b>			<b>9,000,000</b>

### D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS <sup>a)</sup>

GEF Agency	Trust Fund	Country / Regional / Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee <sup>a)</sup> (b)	Total (c)=a+b
UNEP	GEFTF	Egypt	Biodiversity	N/A	1,319,864	125,386	1,445,250
<b>Total GEF Resources</b>					<b>1,319,864</b>	<b>125,386</b>	<b>1,445,250</b>

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

### E. PROJECT PREPARATION GRANT (PPG)<sup>7</sup>

Is Project Preparation Grant requested? Yes  No  If no, skip item E.

### PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS\*

<b>Project Preparation Grant amount requested: \$50,000</b>					<b>PPG Agency Fee: \$4,750</b>	
GEF	Trust	Country /	Focal Area	Programming of	(in \$)	

<sup>6</sup> For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

<sup>7</sup> PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

Agency	Fund	Regional / Global		Funds	PPG (a)	Agency Fee <sup>8</sup> (b)	Total c = a + b
UNEP	GEFTF	Egypt	Biodiversity	N/A	50,000	4,750	54,750
<b>Total PPG Amount</b>					<b>50,000</b>	<b>4,750</b>	<b>54,750</b>

## F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS<sup>9</sup>

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	314,400 hectares <sup>10</sup>

## PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe:

### 1.1) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed

Despite being consistently arid or semi-arid, Egypt's varied eco-zones are home to an extensive diversity of terrestrial habitats, fauna, flora and microorganisms, and although the country has comparatively low species numbers and few endemics, its biodiversity is exceptionally diverse in composition and has high global significance. Egypt's high biodiversity is due partly to its location at the juncture of four bio-geographical regions, namely the Irano-Turanian, Mediterranean, Saharo-Sindian and Afrotropical regions, and to its diversity of landscapes and topographic features, ranging from the rugged mountains of South Sinai and the Eastern Desert (up to 2,641 m) to the Qattara Depression (134 m below mean sea level), to flat featureless gravel plains and complex hilly country. Egypt's protected area network has grown over the last three decades to include 30 protected areas covering 14,680 km<sup>2</sup>, or approximately 14.6% of the country's terrestrial environment, as well as 1.7% of the country's marine environment. However, despite the progress achieved to date, coverage does not meet the CBD 2020 Aichi Target 11 that protected areas should cover "at least 17% of terrestrial and inland water areas and 10% of coastal and marine areas".

### Description of targeted PA sites

#### Wadi El-Rayan Protected Area (WRPA)

Wadi El Rayan was declared a Protected Area in 1989. Located in the south-western part of the Fayoum depression, the WRPA encompasses 175,901 ha, including 11,434 ha of lakes, 1,583 ha of wetlands, 160,949 ha of desert, and the Al-Oyoun oasis that covers 1,935 ha. The WRPA is classified IUCN category II and VI and has been designated as a Ramsar site, Important Bird Area and Key Biodiversity Area<sup>11</sup>. In 2005, the Wadi El-Hitan (the Valley of the Whales) area (20,105 ha) located within the WRPA was designated by UNESCO as the first natural World Heritage Site in Egypt; the valley contains 40 million year old whale skeletons and is considered the most significant site in the world to demonstrate the evolution of whales from land to ocean animals. The WRPA is comprised of two man-made wetlands formed by the flooding of a desert depression. The WRPA's diverse natural landscapes, including the only waterfalls in all of Egypt as well as various oases, sandy beaches, rock formations, and other areas of natural beauty, are a popular attraction for national and international visitors for sightseeing, camping, and bird watching, with over 150,000 visitors coming to the WRPA annually. The area also has historical significance as a major crossroad that was used for many centuries by travelers between the Nile Valley and the oases of the Western Desert, and the remains of human settlements from the Egyptian and Roman-Greek eras are found in the area. In 1973, excess agricultural drainage water began to be channelled into the area in order to slow-down the rise of the water tables in the Fayoum main depression and Qarun lake, and as a result, two lakes were formed in the lower portion of the Wadi El Rayan depression. These lakes, which cover an area of about 4,800 ha and 4,590 ha, are high in salinity but support fish stocks and significant shoreline vegetation. To the west of the lakes, the WRPA is characterized by a sandy depression that supports three natural springs and extensive desert scrub vegetation; a limestone escarpment surrounds this depression on all sides except the

<sup>8</sup> PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

<sup>9</sup> Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period.

<sup>10</sup> Total area of the two targeted protected areas

<sup>11</sup> This protected area is identified as an Important Bird Area (IBA) (Key Biodiversity Area for Birds) by the Integrated Biodiversity Assessment Tool (IBAT - <https://www.ibat-alliance.org>) based on the presence of significant congregations of one or more bird species at certain times in their lifecycle or seasonal migration.

east, where it is closed off by a series of high longitudinal dunes. The vegetation is dominated by shrubs of *Alhagi*, *Nitraria*, *Calligonum* and *Tamarix*. This part of the WRPA is an excellent and rare example of an undeveloped Saharan oasis.

The WRPA has been identified as an Important Bird Area and a Key Biodiversity Area (see Annex 1) and includes notable biological diversity (see Annex 2). The lakes and springs play a critical role in the life cycles of a remarkable diversity of species, including 29 fish species, 164 bird species, 24 mammal species, 14 reptile species and 38 plant species. Birds are the most visible wildlife in the protected area and can be seen in the lakes, desert and farmlands. Bird watching is possible throughout the year, but the greatest numbers and diversity of birds occur in winter when the lakes are teeming with migrant water birds. The lakes of Wadi El Rayan are important wintering grounds for water birds, and the area provides a resting-place for migratory bird species including migratory Lanner and Peregrine Falcons, and is a significant breeding ground for water birds. Overall, about 164 species of birds have been identified in the WRPA, including ducks, eagles, falcons, hornbills, macaws, swans, parakeets, herons, storks, and many birds of prey. The PA represents the most important habitat for the Ferruginous Duck (*Aythya nyroca*) and Pallid Harrier (*Circus macrourus*), both of which are “Near Threatened”. In addition they have been colonized by some resident species, such as purple gallinule (*Porphyrio porphyrio*). The WRPA provides habitat for a number of Sahara–Sindian biome restricted species, of which at least four are known or are expected to breed in the area: Sooty Falcon (*Falco concolor*), Pharaoh Eagle-Owl (*Bubo ascalaphus*), Mourning Wheatear (*Oenanthe lugens*), and Greater Hoopoe-Lark (*Alaemon alaudipes*). A total of 29 fish species have been recorded in the Wadi El Rayan lakes. Tilapias are represented by four major species -- *Tilapia zillii*, *Oreochromis aureus*, *Oreochromis niloticus* and *Sarothodon galailus*; and mullet fish by six species -- *Mugil cephalus*, *Liza ramada*, *Liza sliens*, *Liza aurata*, *Chelon labrousus* and *Liza craniate*. Other species, such as Nile Perch (*Lates niloticus*), Grass-carp, Silver-carp, Seabass, Claris, Bagrus spp. and other species, are present in smaller numbers. Several threatened mammals resident in the WRPA are now very rare or endangered, including the Fennec Fox (*Vulpes zerda*, LC), Ruppell’s Sand Fox *Vulpes rueppelli* (DD) and the Four-Toed Jerboa (*Allactaga tetradactyla*, VU), all of which are scarce due to illegal hunting. The Flower’s shrew (*Crocidura floweri*), an endemic species to Egypt, occurs in the WRPA. Of particular importance is the population of the Dorcas gazelle (*Gazella dorcas*, VU) in the WRPA. The presence of this species is believed to contribute to the maintenance of ecological systems; unlike most other herbivorous species, gazelles are known to be browsers not grazers, which allows the vegetation cover of desert ecosystems to survive and persist and also provides a means for the dispersal of plant seeds (Osborn and Helmy 1980, Alqamy 2002, Alqamy and Din 2006).

The natural resources and ecosystem services of the WRPA support the livelihood activities of many local communities, such as fish farming, fishing in the Rayan Lakes, agriculture in the land reclamation area, and tourism. Fishing and agriculture are the major sources of livelihood for local residents, and the annual fish catch has been increasing markedly. An estimated 1,724 persons fish from boats in the upper and lower Rayan lakes, while another 253 fish from the shore. About 129 individuals work in fish farming in an area of about 550 ha (1300 feddans). Approximately 12,240 individuals are employed in agricultural production in an area of around 1,900 ha (4,575 feddans), producing olives, guava, grapes, palm dates and various vegetables on a small scale. In addition, around 50 individuals work in salt extraction, a few dozen in tourism related operations, and there is a population of about 30 monks in a Coptic monastery located in the core zone of the protected area.

### **Qarun Protected Area**

Lake Qarun Protected Area (134,042 ha) occupies the lowest part of the Fayum Depression, at 43m below sea level, and consists of the lake itself (23,000 ha) and surrounding landscapes (111,000 ha). The PA is classified IUCN category Ia and has been designated as a Ramsar site, Important Bird Area and Key Biodiversity Area<sup>12</sup>. Lake Qarun, the third largest lake in the country and the only existing natural lake of any size in Middle Egypt, is a wetland of international importance for wintering waterbirds. Lake Qarun is slightly more saline than saltwater; it was once fed by a channel branching from the Nile River but now receives agricultural drainage water through a number of canals. A small island, Gezert El Qarn El Zahbi (Qarn Island), is located in the middle of Lake Qarun covering an area of about 1.5 km<sup>2</sup>, and is an important site for nesting birds. The surrounding desert contains spectacular geologic formations, important fossil deposits, and cultural heritage sites that include Neolithic sites and Roman cities and temples. Lake Qarun was declared as a protected area in order to conserve the biological, archaeological and geological diversity of the area. Lake Qarun is a highly important area for scientific research into the fossil history of life on earth. The Gebel Qatrani area within the PA provides by far the most complete view of endemic African fauna before the significant faunal interchanges of the Miocene resulted in a major influx of other groups. The most significant fossil group of Qatrani is the mammals, which is unlike any other known mammalian fauna, living or extinct. The mammal community consisted of a mixture of endemic groups that have now become extinct or greatly reduced in diversity, plus some important immigrant groups from Eurasia. Of the 28 orders of placental mammals known to exist today globally, 12 are found

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<sup>12</sup> This protected area is a Ramsar site, and has been identified as an Important Bird Area (IBA) (Key Biodiversity Area for Birds) by the Integrated Biodiversity Assessment Tool (IBAT - <https://www.ibat-alliance.org>) based on the presence of significant congregations of one or more bird species at certain times in their lifecycle or seasonal migration.

in Gebel Qatrani. As with the mammals, the reptile fossils in the PA also include many taxa unknown in Africa today. The Gebel Qatrani area is also rich in fossil plants, including angiosperms, pteridophytes and algae, over 40 species of monocots, dicots and pteridophytes, and over 160 species of algae. Together, the rich, highly diversified, and well-preserved palaeoflora and paleofauna make the Lake Qarun PA one of the most important fossiliferous areas yet discovered in the world.

Lake Qarun has been identified as an Important Bird Area and a Key Biodiversity Area (see Annex 1) and includes notable biological diversity (see Annex 2), including about 80 species of birds including ducks, eagles, falcons, hornbills, macaws, swans and parakeets. Lakeshore vegetation and swampy margins along the southern shoreline of the Lake are probably the most valuable habitats in the PA and the most threatened due to intensive human impacts. Mudflats and very shallow waters are particularly important for wintering waders and flamingos (*Phaenicopterus ruber*). The agricultural landscape along the southern shores of Lake Qarun, although largely man-made, does support considerable biodiversity, including many microhabitats that represent relicts of the original wet savannah-like habitat that once existed in the region and even today support many wetland and grassland species. Lake Qarun is considered to be a globally important bird area (IBA) on account of its importance for wintering and breeding Waterbirds. In the winter, Lake Qarun holds large numbers of waterfowl; Great Crested and Black-necked Grebes (*Podiceps cristatus* and *P. nigricollis*, respectively) are particularly abundant. According to BirdLife International (2011), the site is known to hold more than 1% (1000 breeding pairs) of the biogeographic population in Europe / North Africa of the Slender-billed Gull and just above 1% of the Egyptian Eared Grebe (*Podiceps nigricollis*, LC). Other important waterbirds include Shoveler (*Anas clypeata*, LC), Slender-billed Gull (*Larus genei*, LC), Little Tern (*Sterna albifrons*, LC), Eurasian Teal (*Anas crecca*), Tufted Duck (*Aythya fuligula*) and Eurasian Coot (*Fulica atra*). At least ten species of waterbirds are known to breed in the area, the most prominent of which are Cattle Egret (*Bubulcus ibis*), Spur-winged Lapwing (*Vanellus spinosus*), Kentish Plover (*Charadrius alexandrinus*), Little Tern (*Sterna albifrons*) and Slender-billed Gull (*Larus genei*). Species inhabiting agricultural landscapes on the southern shores of Lake Qarun include the Little Green Bee Eater (*Merops orientalis*, LC), Common Bulbul (*Pycnonotus barbatus*, LC), Crested Lark *Galerida cristata* (LC), Senegal Thick-knee (*Burhinus senegalensis*, LC) and Senegal Coucal (*Centropus senegalensis*). Desert and semi desert habitats support fewer species but include the Hoopoe Lark (*Alaemon alaudipes*, LC), Brown-necked Raven (*Corvus ruficollis*, LC) and small numbers of Egyptian Nightjar (*Caprimulgus aegyptius*, LC). Several land mammals found in the PA are now very rare, including the Dorcas gazelle (*Gazella dorcas*, VU), the Ruppell's Sand fox (*Vulpes rueppelli*, LC), and the Fennec fox (*Vulpes zerda*, LC). The PA harbours rare reptiles including the Egyptian Cobra, red-spotted and coral snake, as well as 15 species of fish. The Fayoum Depression harbours several relict species not documented elsewhere in Egypt, such as the Egg-eating Snake (*Dasypeltis scabra*) and the Cape Wolf Snake (*Lycophidion capense*); and the occurrence of an endemic bird (*Sylvia melanocephala norrisae*), a subspecies of Sardinian Warbler. These cases indicate a special biogeographical history of the Fayoum Depression and attest to its relative isolation for extended periods of time.

The southern shore of Lake Qarun is heavily used for traditional agriculture and more recently for fish farming and is also the site of several tourist resorts. Around 20,000 persons live in areas within or adjacent to the PA, the majority of whom are engaged in agricultural production, including fruit trees, olives, maize, wheat, onions, tomatoes, etc. Several commercial fisheries exist in Lake Qarun, including Egyptian sole (*Solea aegyptiaca*), Redbelly tilapia (*Tilapia zillii*), six species of mullet, and three species of shrimp. The overall catch increased from 703 tons in 1995 to 3400 tons in 2009, employing approximately 4,000 fishermen. During the 1970s, the government began to explore options for salt extraction that could reduce the salinity levels in Lake Qarun while also providing economic benefits to the area. In 1984, the Egyptian Salts and Minerals Company (EMISAL) constructed four ponds and a plant on the southern shore of the lake in order to extract salts from the lake water, with a designed capacity of 100,000 tons per year of high quality anhydrous sodium sulfate. Lake Qarun is easily accessed from Cairo along several well-paved highways, and various forms of tourism exist in the PA, including ecotourism, desert safaris, adventure tourism and cultural tourism. Tourism activities in the lake include such things as desert safaris, water sports, fishing, bicycling and walking trips, horse and donkey rides, guided tours to the famous fossil areas and antiquities, camping in the desert and working with local craftsmen. Hotels and holiday resorts are found along the southern shore of Lake Qarun, and tourism services such as restaurants, cafeterias and hotels provide employment opportunities for many residents of the area. The northern shore of Lake Qarun has been recently designated as an "ecotourism development area".

### **Selection of PA Sites**

**Wadi El-Rayan Protected Area:** The WRPA has been selected for its importance as a site that harbours globally significant biodiversity, which has been recognized by its designation as a Ramsar site, KBA and IBA, as well as for the historical and cultural significance of the site. In addition, the designation of the Wadi El-Hitan as a World Heritage Site in 2005 means that the WRPA has received increased financing from the Government of Egypt for conservation-related activities. The Government of Egypt's budget for WRPA in 2015 was \$15 per km<sup>2</sup>, giving it the 10<sup>th</sup> highest funding level among the 30 protected areas in Egypt. In recent years, WRPA has been supported in two phases by an Italian-funded programme to increase management capacity and develop ecotourism and educational resources, with total financial inputs of approximately US\$1.1 million. As a



result of these and other investments, the WRPA has a comprehensive management plan (although it is now out of date), an operating plan that specifies key management actions, monitoring and patrolling programmes, staff trained in PA management functions, and a sizeable staff by Egyptian standards (now exceeding 45). Despite these advances, the increasing resource uses in the PA, including more than 90 intensive (cement) fish ponds, 30 extensive (sludge) fish ponds, 3 cage culture operations, an operating oil field, small scale salt mining, tourism cafeterias, private tour boat owners, two land reclamation villages and a Coptic Monastery, and the proximity of villages located around the periphery of the protected area resulting in frequent unapproved intrusions (e.g., building, cattle grazing, dumping, etc.), require greater inputs in terms of staff patrols, liaison, awareness and routine management, including routine patrolling and monitoring of resources.

*Lake Qarun Protected Area:* The Lake Qarun PA has been selected for its importance as a site that harbours globally significant biodiversity, which has been recognized by its designation as a Ramsar site, KBA and IBA, as well as for the immense scientific importance of the fossils found at the site. In addition, Lake Qarun contains Gebel Qatrani, which is on the tentative list to be declared as a World Heritage Site and has become a popular destination for visitors from Cairo, which means that it is more likely to be able to generate funds (a visitor fee system will be established for Qarun PA, based on modalities already applied in WRPA) and to receive financing from the Government of Egypt for conservation-related activities. At present, the PA infrastructure is limited to a headquarters/administrative office building located in the village of Shakshouk and a mix of paved and unpaved roads. Although the Lake Qarun PA has put significant emphasis and resources on field monitoring and patrolling, such that not only rangers and community guards but in fact all Qarun PA staff (including senior staff, drivers, etc.) are required to participate in patrols, the PA's current resources remain insufficient to address key threats including visitor damage, illegal hunting and illegal / improper fossil collection, mining activities and tourism development, which continue to threaten the natural and cultural attractions of the PA. However, targeted support for improved PA management, monitoring and patrolling at this site has the strong potential to protect the natural and cultural attractions of the site and thereby enable the PA to sustain appreciation and use of the area by visitors that can provide substantial benefits including increased public support and direct and indirect economic benefits to conservation as well as local communities.

The two selected sites are in close proximity and in many aspects similar management actions will be needed, resulting in cost savings through economies of scales. Lessons learnt in one protected area will be very much appropriate for other. In both sites, there is a need for increased community involvement in protected areas and the management of the two sites is open for new innovative management arrangements with communities ensuring the conservation of biodiversity is seen as an important livelihood contributor by the communities. The two sites are experiencing threats as described later, many of which are current e.g. infrastructure development and increased access, which demand an increase in protected area management and a different approach in doing so.

### *Threats affecting the two target sites*

*Illegal wildlife trade / poaching* is a significant threat to biodiversity in both PAs. The El Fayoum region has traditionally been a popular site for European hunting parties visiting Egypt in winter and although there have been recent attempts to control and regulate hunting, evidence indicates that there are many violations, both by foreign hunting parties and by locals who kill many protected species and cause much disturbance to both wintering and breeding birds. Local fauna are used for commercial, semi-commercial and subsistence purposes through both formal and informal markets, including mammals for wild meat and recreational hunting, birds for food and the pet trade, and amphibians for traditional medicine and food. In the WRPA, illegal hunting and especially falcon-catching are very evident, and the recently established tarmac road encircling the two lakes has made the area more accessible, drastically increasing the opportunities for illegal hunting and habitat destruction. Illegal hunting has greatly reduced the populations of the Dorcas gazelle (*Gazella dorcas*) and the Slender horned gazelle (*Gazella leptoceros*) in Egypt to the northern region of the western desert (Ryder 1987, Saleh 2001, El Alqamy and El Din 2006), including the two PAs targeted by this project, which are now priority areas for restoration and reintroduction of these species. A 2006 survey estimated the population sizes of the Dorcas gazelle and Slender-horned gazelle in this region at over 200 and 40 individuals respectively (Gazelle monitoring report by Wadi Al-Rayan team 2006); however illegal drilling, constructing and land reclamation during the 2011 uprising in Egypt resulted in extensive habitat destruction, in particular in Wadi Al-Rayan, and a 2012 survey revealed a sharp decline in the population size of the gazelles. Despite this, in early 2017, new observations provided some optimism that these gazelle species could still be conserved in their desert habitats, particularly as previous studies have demonstrated that the gazelles are able to proliferate even in the presence of human activities if effective hunting controls are in place (Yom-Tov and Ilani 1987, Ryder 1987).

*Unsustainable use of natural resources and human-wildlife conflict* threaten a number of species in the two PA sites. For example, in the summer of 1998, some 3,000 fledgling Slender-billed gulls (*Larus genei*) were found dead on El Qarn island in the Lake Qarun PA. Despite statements by Ministry of Agriculture experts that starvation and parasites caused the mass death, it is almost certain, because of the scale and suddenness of the incident, that the birds were poisoned, probably by local fish-

farmers. More generally, fishermen use inappropriate techniques to increase their catch, resulting in the killing of under-sized fish and in the deaths of large numbers of non-target species. In the WRPA, tourism visitation has caused significant disturbance to wildlife in some areas, notably the oases, as well as damage to cultural and historical sites. In addition, the unauthorized collection of fossil specimens reduces the scientific and cultural value of the area.

***Development and habitat transformation:*** Unregulated tourism development is destroying important habitat for waterbirds, particularly mudflats and saltmarshes, and will lead to increased disturbance to birds. In 2011, plans were announced<sup>13</sup> to build a 650 acre tourism development on the northern shore of Lake Qarun, which has the potential to negatively impact birds and their habitats in the Lake Qarun protected area. The opening of a new asphalt road running north of the lake and linking it to the Cairo-Fayoum highway is expected to further boost tourism development in the area. The government is also considering a land-reclamation project that would increase the area under cultivation within the WRPA by 6,300 ha (15,000 feddan), and a new salt extraction plant was recently proposed along the northeastern coast of Lake Qaroun. Oil production poses another threats; the Qarun Petroleum Company is now operating close to the Lake Qarun PA, while the Edison International Company has received permission to explore for oil in an area to the north of the WRPA. The spread of fish farms along the shoreline of Lake Qarun is destroying natural habitat and causing increased disturbance to wintering waterbirds. Finally, although efforts have been made to stop basalt extraction in the Lake Qarun PA, active quarries are still present within the PA boundaries and threaten some of the most valuable natural and cultural heritage sites in the PA.

***Declining Water Levels / and Increased Salinity:*** The rate of water inflow (agricultural and wastewater drainage water) into the Wadi El-Rayan lake system is less than the total rate of water use and evaporation, and this places the future of the lake system in jeopardy. In the second lake, salinity levels increased from 2.4% in 1984-1985 to 14.3% in 2010, which threatens biodiversity and fish stocks and is likely to diminish the area's ability to support populations of waterbirds. The declining water levels and water quality are also a threat to the economic values (fishing, agriculture, tourism) supporting local communities within and outside of the WRPA. At Lake Qarun, the main source of water into the lake is drainage from irrigated land through two major drains: El Batts and El Wadi. With the intensification of cultivation and irrigation since the early part of this century, salinity levels increased from 30.9% in 1971 to 42.8% in 1999–2000 (Mashal, 1973; Anonymous, 1997; Ali, 2003). As at the WRPA, this increase of salinity presents a serious threat to biodiversity and populations of plankton, fish and birds; swamp and marsh vegetation is now restricted to the vicinity of drain outlets, on the eastern and southern shores of the lake, and Nilotic aquatic fauna has mostly disappeared, being replaced by many marine species that have been introduced from the Mediterranean to restock the ecologically modified lake.

***Pollution and Declining Water Quality:*** Although Lake Qarun was designated as a protected area in 1989, the lake continues to suffer from a serious water pollution problem due to uncontrolled solid and liquid domestic and industrial waste disposal practices, in addition to agrochemical contamination and lack of sustainable wastewater management. Wastewater flows from fish farms directly into the lake and increases organic matter and nutrient levels, and communities adjacent to the lake have inadequate sewage disposal systems, which along with untreated agricultural runoff, is causing pollution in the protected area. As a result, Lake Qarun has elevated concentrations of phosphorous and nitrogen that have produced algal blooms, and high levels of Total Organic Carbon (TOC) in sediment that have led to decreased benthic abundance and biomass, in addition to oxygen depletion and accumulation of potentially toxic reduced chemicals that affect the animal and plant life in the lake. Furthermore, the presence of high trace metals levels in water and sediment has led to the accumulation of metal in fish stocks. In the WRPA, the growth of fish farming on the shorelines of the lakes is causing similar water pollution problems. In terrestrial ecosystems, increased development, the encroachment of human presence in areas surrounding the PAs, and the projected increase in tourism activities are likely to lead to increased solid waste problems if adequate procedures for waste disposal are not put into place.

### ***Barriers***

The long-term solution to the threats described above is to improve the management effectiveness of protected areas through community involvement and capacity building of both PA management authorities and local communities. However, two major barriers exist to implementing this approach to protected area management, as described in the table below:

<b><i>Lack of sufficient management capacities in targeted PAs to conserve threatened and important species and their habitats:</i></b>
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The two targeted protected areas are not managed based on planning tools (management plans and business plans) that clearly define a long-range vision and clear objectives, and as a result, the sites have failed to recognize or balance resource use and development with conservation of critical habitat and species. A further key management challenge is the need to coordinate the plans and activities of a
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<sup>13</sup> <http://www.birdlife.org/africa/news/%E2%80%9Cporto-fayoum%E2%80%9D-tourism-development-planned-lake-qarun-important-bird-area-and-proposed>

variety of agencies and authorities that operate inside these two PAs, including the Ministry of Agriculture and Land Reclamation, Ministry of Petroleum, Ministry of Oceans/Fisheries, Ministry of Irrigation, Ministry of Tourism, Ministry of Defence, Ministry of Interior, as well as tourism and environmental police. In addition, while one of the protected areas does have an out-dated management plan, the mandate and operational rules of the protected areas constrain them from addressing broader needs associated with threatened and important species conservation, for example addressing pressures that come from beyond the boundaries of the PA sites and involve a wider range of management of natural resources. PA staff do not have sufficient capacities to implement control and enforcement measures for the increasing number of visitors at both sites, or to plan for, monitor and mitigate the potential negative impacts of tourism, agriculture, fishing and other economic activities at the sites. Both the WRPA and Lake Qarun PA also have inadequate infrastructure to manage visitors (signage, demarcation, visitor/interpretation facilities) or to deal with their potential impacts (i.e. ranger outposts, restroom and waste facilities, etc.). A lack of information about the habitat and populations of key species, such as the gazelles, prevents PA managers from establishing suitable management targets. There is also a need to develop standardized criteria for monitoring system across the PA estate, in order for management to extract information for decision-making at different levels of the management hierarchy.

Lack of stakeholder participation in the management of the two targeted PAs:

Currently, PA management of the two PAs is considered as the exclusive responsibility of the PA management authorities and as a result there is limited coordination between the PA Management Units (PAMUs) and the local communities and the sectors that have an impact on the effective management of the PAs. There is a need to establish the necessary platforms for coordination and linkages with other sectors. Further, there is a need to expand the management of the PAs outside of the area of PAs, as many of the habitats and other services provided and necessary for effective species conservation is located outside the PAs. Local communities have expressed a low degree of awareness about the protected areas and the benefits they bring to their communities, in part due to a lack of outreach materials from the PAs to engage with local-level stakeholders (communities, tourism businesses, etc.), which limits support for the actions of PA managers and creates a missed opportunity for resolving conflicts and encouraging community participation in PA management. The lack of community participation itself is a key barrier, as it reduces community cooperation in preventing hunting impacts (particularly by outside parties), and in organizing community efforts to balance development and conservation objectives and to limit development impacts within the PAs (particularly infrastructure development and uncontrolled agricultural and fishing practices that threaten to degrade the aquatic environments and resources on which many residents depend).

## **1.2) The baseline scenario or any associated baseline projects**

The Egyptian Environmental Affairs Agency (EEAA) will contribute USD 3.2 million to support the management of the two protected areas during the period of the proposed project, including USD 2 million of in-kind contributions based on the use of existing infrastructure within the PAs and the NCS itself as well as the use of vehicles, equipment, laboratories, training center, etc., and another USD 1.2 million in cash through its annual allocated budget for conservation and monitoring of biodiversity within PAs. In addition, EEAA will work to revise two key laws that provide the enabling environment for biodiversity management in the country. Law 102/1983 (PA Law) provides the legislative framework for establishing and managing protected areas in Egypt. PAs are designated by Prime Minister's Decrees upon recommendations of the Egyptian Environment Affairs Agency (EEAA), which proposes boundary maps and is entrusted with the management and supervision of such protected areas. The EEAA is expected to update this law to be more comprehensive and up-to-date with the country's global commitments (e.g. the SDGs). As part of this process, the boundaries of some protected areas (including the two targeted sites) might be adjusted to include neighbouring areas with high biodiversity importance. Another highly relevant law is Law 4/1994 for the Environment (amended by Law 9/2009), which contains additional provisions for the management of biodiversity inside and outside protected areas by EEAA, including the licensing and permit system for any activity undertaken in protected areas requiring EIAs. All activities carried out in protected areas are subject to EEAA's control, which can take steps to enforce the rules and stop illegal activities and establish relevant management plans (e.g. for coordinated hunting management). EEAA is currently in the process of updating this law, which might include establishing a mechanism to create other forms of conservation areas (i.e. buffer zones) adjacent to PAs in order to make the legislative process more flexible in dealing with growing development nationwide.

EEAA's Nature Conservation Sector (NCS), with support of USD 3,935,190 from the Govt. of Italy, is currently implementing the project "Egyptian Italian Environmental Cooperation phase III (EIECP III): further consolidation of the Nature Conservation Sector to promote community-based income-generating mechanisms for the management of Egypt's protected areas (PAs) system". EIECP III is focused on further developing Egypt's protected areas system by establishing income-generating mechanisms and thereby facilitating the mobilization of resources to ensure the financial sustainability of Egypt's PA system. EIECP III will also strengthen the capacity of the EEAA-NCS for PA management, for example information gathering / generation to support management and analysis. As Egypt's PAs can hardly generate adequate income for local communities if not built around tourism, which is a significant engine of growth for both the national economy and the development of local communities, EIECP III will also tackle the promotion of responsible and sustainable eco-tourism activities, while also pursuing the integration of other local economic activities such as agriculture, grazing and fishing in CBNRM schemes in and around PAs. The EIECP III will provide around USD 0.5 million to develop the visiting area at the waterfalls within Wadi El-Rayan,



including: preparation of an environmentally friendly architectural design for upgrading the facilities (e.g. cafeterias, shade shelters, parking area, signage, trails, etc.). EEAA also will work towards aligning the next phase of the Egyptian-Italian Environmental Cooperation Programme (projected at US\$ 5.8 million) with this proposed project, in particular by securing support for strengthening management infrastructure in the concerned PAs.

The International Union for the Conservation of Nature – Regional office for West Asia (IUCN/ROWA) will invest USD 1.5 million in and around the two protected areas. The focus is mainly on two major areas: (i) Support to the transition to affordable, sustainable and secure energy and water systems, also leading to increased food security of the local communities in and around the two protected areas. This support is part of the project “The MENA Region Initiative as a model of the NEXUS Approach to Renewable Energy Technologies” (MINARET). The project solutions focus on the nexus of energy, water and food which will have a great impact on the region’s economic growth and prosperity, while reducing poverty and improving livelihood opportunities for its people; (ii) Strengthening the communal management of rangeland around the protected areas to improve the resilience of the community and nature.

The Centre for Environment and Development for the Arab Region and Europe (CEDARE) will invest USD 1.5 million in support of the two protected areas. CEDARE will in particular continue with its support to Egypt and in the case of the project with the two PAs in building the capacities of park management in Earth Observation (EO), modelling and in data exploitation. With the regional experience, the park management will be provided access and engagement with the complete ecosystem of EO stakeholders. CEDARE will during the project period in particular focus on promoting the uptake of EO services that are relevant to climate change and improved food security and water resources development. CEDARE will also raise local communities’ awareness on environmental issues and support rangeland management in areas in or adjacent to the PAs during the project period.

### **1.3) The proposed alternative scenario, GEF focal area<sup>14</sup> strategies, with a brief description of expected outcomes and components of the project**

**The Project Objective is** “to improve management effectiveness of Wadi El-Rayan Protected Area and Qarun Protected Area through community involvement and capacity building”. This objective will be achieved through the following component:

#### **Component 1: Strengthen management capacities of targeted PAs for the conservation of threatened and important species and their habitats**

**Outcome 1.1 - Improved management effectiveness (strengthened PA management tools, processes and capacities) demonstrated at two targeted PAs (Wadi El-Rayan and Lake Qarun):** Under this component, the project will help PA authorities to address and prevent developments and practices that transform/degrade habitats within PAs, and in adjacent areas that produce negative impacts on PA ecosystems, by creating management plans and PA regulations that control and minimize development activities and by strengthening the capacity of PA authorities to better monitor potential developments and important ecosystem and biodiversity values.

#### **Output 1.1.1: PA management frameworks of Wadi El-Rayan and Qarun PAs developed, including participatory approaches**

The project will strengthen PA management instruments (PA management plans, species management plans, PA regulations) to ensure that they address endangered species conservation, participatory management approaches and local resource management and access considerations, control of visitors and their impacts, and other priorities. These instruments will be developed jointly between PA authorities and local stakeholders (see component 2) and will include new and strengthened regulations to address key threats to the two PA sites. For tourism development, proposed developments will be carefully evaluated and their operations closely monitored to ensure protection of habitats and to guarantee that they are consistent with the long-term vision and management objectives of the PA. For higher impact tourism facilities and services, investments will privilege the re-development and improvement of existing infrastructures, and any potential high impact developments will be required to apply mitigation measures or be relocated outside of PA boundaries. The plans/regulations will propose that all commercial quarrying and mining activities inside the targeted sites to end within 3 years, while in areas adjacent to the PAs, quarrying and mining will only be allowed if it can be shown to have no negative impacts on PA values and is located in areas with no significant natural or cultural resources. Fossil collection and removal will only be authorized for scientific purposes, and as part of approved research activities. Visitor access will be actively encouraged in designated areas, but regulated according to carrying capacity and sensitivity of sites, and highly valuable or vulnerable areas will be closed to public access or

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<sup>14</sup> For biodiversity projects, in addition to explaining the project’s consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

made accessible to visitors only through escorted visits. In addition, visitors to the PA will be allowed to drive only on defined, marked tracks, and off-road vehicle driving will be formally prohibited and actively inhibited. A visitor fee system will be established for Qaroun PA, based on modalities already applied in WRPA. In order to implement the revised/new management plans, key items of equipment will be purchased to strengthen enforcement (e.g. communications and observation equipment). This will lead to a reduction in illegal hunting, over-harvesting, etc. The PA managers and staff will also be provided with training in conservation and management practices, including PA management planning; monitoring & enforcement programs; enabling participatory community management; and engaging with private sector / industries that may threaten PAs. During the PPG phase, a training needs assessment will be carried out. Further, existing systems for monitoring and early warning of external threats, such as changes in land use, tenure or social/governance structures and proposed land change developments (i.e. tourism, mining, salt extraction, and other developments), with the potential to negatively impact ecosystem services and endangered species, will be strengthened. The project will develop systems and activities to address the threats to aquatic ecosystems at both PA sites. The PA Management Units will initiate a water-quality monitoring program, based on the regular collection and analysis of water samples, including the collection of water samples at the points of discharge of channels feeding into the lakes, improving the monitoring of water inflows and outflows, developing improved indicators for assessing ecosystem health and threats to human health (e.g. coliform bacteria), and where necessary and suitable, developing partnerships with other agencies (e.g., Oceanography Lab) for research and monitoring. Water quality reports, based on the results of the water-quality monitoring program, will be produced regularly (at least yearly) and distributed to concerned authorities and stakeholders.

**Output 1.1.2:** Field monitoring programs within PAs to assess the conservation status of key ecosystems and endangered species developed and implemented

The project will establish and implement monitoring programs for endangered ecosystems and species, by developing, identifying and listing indicator species for monitoring of ecological changes; establishing standard formats for monitoring these species; preparing an action plan to implement the monitoring program. The monitoring programs will focus on identifying approaches to better monitor, and enforce control of, activities such as illegal hunting and the impacts of high visitor levels. Implementation of these monitoring programs will be used to identify problems and challenges for monitoring programs, and to help establish improved standard criteria for Egyptian BD monitoring programs.

## **Component 2: Establish effective community participation in PA management and conservation / management of natural resources**

**Outcome 2.1 - Participatory approaches to PA management have strengthened PA management and reduced unsustainable resource uses in areas within and adjacent to two targeted PAs (Wadi El-Rayan and Qaroun):** Under this component, the project will work with local planning authorities and communities to control development pressures while also addressing the livelihoods needs of local communities, taking advantage of the skills, experience, and knowledge within the communities, and strengthening relationships between the project executing agency and local stakeholders, and thereby increasing the social, environmental and financial sustainability of the project.

**Output 2.1.1:** Programmes for local stakeholder/community participatory planning and involvement in PA Management developed and implemented at targeted PA sites

The project will work closely with communities living in or near the two targeted protected areas to develop and pilot the implementation of programs for local involvement in PA management, including the participation of local communities dependent on PA ecosystem services and resources, local municipalities, NGOs, and others in the preparation and implementation of PA management and species management plans. This will be done through the development of synergies between actors by supporting the development of platforms for coordination and linkage among stakeholders, with the goal of strengthening cooperation between PA authorities and local communities on enforcement activities, and ensuring that planning, management and monitoring instruments address both the PAs themselves and their surrounding landscapes, in order to address external threats and increase the effective size of PAs as habitats for threatened and IBA trigger species. The project will work to strengthen cooperation between PA authorities, other local authorities, and key polluters (municipalities, industrial operations, farms, fish farms) to reduce pollution and ensure sustainable resource use. The project will re-invigorate meetings between the Ministries of Agriculture and Irrigation concerning water levels promote agreements to reduce the level of extraction of water from the lakes, and will convene regular meetings of relevant partners in order to present and discuss the results of the monitoring activities carried out by the PAMU and to push authorities to take actions to control unsustainable practices such as the amount of pesticides and fertilizers used in agriculture. The project will also undertake public awareness activities to enhance local understanding of the potential benefits of protected areas and of opportunities to participate in and benefit from involvement in PA management, as well as to educate locals on ecosystem carrying capacities (including

sustainable fisheries yields and fishing practices). The project will undertake information campaigns targeting relevant ministries and related groups to increase awareness and understanding of the salinity / lake level problems, as well as the impacts of run-off on water quality, and their negative effects on social, economic and ecological benefits; in addition, the Governorate will be targeted given their roles in establishing water treatment plants and developing tourism opportunities.

**Output 2.1.2:** Controls and monitoring programmes to conserve ecosystem services and reduce overharvesting by local communities within Wadi El-Rayan and Qaroun PAs developed and implemented

The project will enable local stakeholders to participate actively in the sustainable management of the ecosystem goods and services on which they depend, such as flood protection and water conservation to benefit agricultural and grazing areas, sustainable management of fisheries, and conservation of scenic landscapes for ecotourism, through basic training and participatory management mechanisms. The project will also develop and implement pilot permit systems within two PAs to control and monitor utilisation of natural resources (fisheries, hunting, grazing, firewood collecting) in order to reduce pressure on BD and ecosystem services. Under these permit systems, PA authorities will issue permits to local resource users based on the understanding of ecosystem carrying capacities developed under Output 1.1.2 while also taking account of traditional community norms and practices, and PA staff will then work with community leaders to monitor compliance with the permit systems. In this way, local stakeholders will participate in both the setting of offtake levels, the creation of offtake monitoring guidelines and protocols, and the enforcement of harvesting guidelines. Detailed assessment of the permit systems will be carried out with the hope of establishing a model for potential replication throughout the National Protected Area System.

The project is aligned to the GEF 6 biodiversity focal area strategy in that it corresponds to objective 1: Improve sustainability of Protected Area Systems, Program 1: Improving Financial Sustainability and Effective Management of the National Ecological Infrastructure. The project will contribute to Outcome 1.2: Improved management effectiveness of protected areas under this program. The project is further aligned to Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity of the Strategic Plan for Biodiversity 2011 – 2020. Within this plan the project will support the accomplishment of the following Aichi biodiversity targets: Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other area-based conservation measures, and integrated into the wider landscapes and seascapes; as well as target 12: by 2020 the extinction of known threatened species has been prevented and their conservation status, particularly those most in decline, has been improved and sustained. The project will also contribute to the Sustainable Development Goals, in particular to SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss, Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species. The project is also aligned to UN Environment’s programme of work, in particular to the Ecosystems Subprogramme Expected Accomplishment 1: Use of the ecosystem services and sustainable productivity of terrestrial and aquatic systems is increased.

**1.4) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing**

The table below summarises the environmental and other incremental benefits:

Baseline Scenario	Alternative Scenario	Environmental and Other Incremental Benefits
<b>Component 1: Strengthen management capacities of targeted PAs for the conservation and sustainable use of endangered ecosystems and species</b>		
Management planning instruments are either outdated or non-existent resulting in uncoordinated development and little regulation Existing planning instruments have been developed without the participation of local communities and other stakeholders.	Management instruments will be developed jointly between protected areas and local stakeholders resulting in a local buy-in, support and champions for the implementation of such plans.	Increased financing for the protected areas and least costs as a result of local support and less enforcement due to this support. Less habitat loss of threatened species and IBA trigger species. Improved PA management effectiveness indicated through METT scores
Adjustment of boundaries of two protected areas through the updating of the PA Law	Informed decision making through improved monitoring systems to address	Reduced habitat loss of threatened species and IBA trigger species.

(Law 102/1983) with no or limited information on the two PAs and its ecology and the species that use it as habitat.	threats to the biodiversity of the PAs will inform the expansion of the boundaries of the PAs as well as the establishment of other forms of conservation areas adjacent to the PAs.	
Fragmented data/information (e.g. Earth Observation) and not channelled/coordinated and available for use in PA management decision making	Strengthened systems for monitoring and early warning of external threats with a specific focus of improving water quality	Improved PA management effectiveness indicated through METT scores Increased water quality result in improved ecosystem health and human health
Fragmented and mostly absent information/data on key ecosystem and threatened and important species in the target PAs  Different PAs use different criteria to set up monitoring systems in PAs and many systems not geared to address threats to the ecosystem or species	Agreed indicator species to monitor in target PA in order to measure outcome improvement in PA management  Monitoring programs established for endangered species and ecosystems  Standard criteria for Egyptian Biodiversity monitoring programs	Outcome evidence of increase in PA management effectiveness  Monitoring of endangered species and habitat/ecosystems resulting in action to address threats  Data from monitoring meaningful and can be used for decision-making at various levels of the management hierarchy.
<b>Component 2: Establish effective community participation in PA management and conservation/management of natural resources</b>		
PA Management is considered as the exclusive responsibility of the PA Management and therefore little coordination with communities and sectors that are influencing the successful management of the PAs  PA management not linked to areas adjacent to the PA, although many of the habitats and services provided are outside or are provided from areas outside the PAs	Development of platforms for coordination and linkage among stakeholders.  Strengthened cooperation between PA authorities and local communities on enforcement activities.  Planning, management and monitoring instruments address both the PAs themselves and the surrounding areas	Reduced threats from outside the PAs on the threatened biodiversity and IBA trigger species and their habitats.  Increase of area of habitats of the threatened and IBA trigger species as a result of including management of areas outside PAs as part of the management responsibility.
Little awareness and support from the community and local stakeholders for the management of the PAs.	Enhanced local understanding of the benefits of protected areas and of the opportunities	Increase citizen monitoring and enforcement.  Reduced threats through lifestyle changes by communities and local stakeholders.
Communities either overharvest or harvest the natural resources illegally for which they are prosecuted. In both overharvesting and illegal harvesting, there is an economic loss to the communities: (i) the resource is not harvested at the maximum sustainable yield, (ii) loss of costs to enforce from authorities and the cost of the communities in order not to be caught when undertaking the illegal activities.	Permit systems established in the two PAs to control and monitor utilisation of the natural resources (fisheries, hunting, grazing, firewood collection) with the full involvement of local communities	Increased positive attitude of the local community towards the PA management and appreciation of the PAs  Increase citizen monitoring and enforcement  Reduced threats due to sustainable utilisation of natural resources by communities and local stakeholders.

Scenario without GEF Involvement: Natural desert ecosystems in Egypt are under severe pressure. During the last 25 years, about 40% of plant species in desert ecosystems became extinct as a result of overexploitation for food and medicine, while As drought and unregulated hunting activities during the last 60 years have resulted in the extirpation of numerous faunal species, including Mountain Gazelles (*Gazella gazella*), Scimitar-Horned Oryxes (*Oryx dammah*), Addaxes (*Addax nasomaculatus*) and Bubal Hartebeasts (*Alcelaphus buselaphus*), in the country. Today, even those species that remain, such as the Dorcas Gazelle (*Gazella dorcas*) and Slender-horned Gazelle (*Gazella leptoceros*), are threatened with extinction due to the contraction of their ranges. Bird populations at IBAs face excessive mortality and disturbance due to unregulated hunting for sport, food and supplementary income, as well as improper pest control practices. Protected areas are one important mechanism for conserving desert ecosystems and the biodiversity they harbour, and for several decades national and foreign donor-supported projects, including projects by the EU, USAID, Italian Cooperation, UNDP/GEF and World Bank/GEF, have worked on protected areas issues in Egypt. However, while these projects have succeeded in helping Egypt to establish new PA units, in general they have

not succeeded in creating PAs that are effectively managed over the long-term. In part this is a problem of insufficient financing, and projects are now underway to improve PA financing frameworks. However, financial resources are likely to remain very limited for the foreseeable future, in particular if local / regional stakeholders are not invested in or participating in actions to support the management of PA units. In addition, local support and partnering on PA regulations and monitoring and enforcement will remain low, and communities within and adjacent to PA sites will continue to engage in unsustainable resource uses and actions that damage ecosystem services. Thus, in the absence of the proposed GEF project, Egypt will continue to lack demonstrated models of PAs that have sufficient resources, capacities, and partnerships for effective management of endangered ecosystems and species, and the status of desert ecosystems and biodiversity will continue to decline.

Scenario with GEF Involvement: The project will build on existing initiatives at two PA sites in Egypt to conserve globally significant biodiversity by strengthening the capacities of PA management and staff and by demonstrating the potential for participatory community management as a strategy for strengthening the management of protected areas (i.e. by getting local stakeholders to participate in PA planning and become more invested in the success of PAs, to support monitoring and enforcement efforts to conserve biodiversity and protect ecosystem services and resource, to reduce over-use of natural resources and destructive resource use practices within PAs and also in adjoining areas where such activities might negatively impact PAs, etc.). In so doing, the project will provide Egypt with demonstrations of the efficacy of participatory PA management that can serve as a model for other protected areas in the country. At the same time, the project will have helped the EEAA to reduce the current level of threats to the desert ecosystems and species at the Wadi El Rayan and Lake Qarun protected areas, and thereby offer better protection to globally threatened species listed in IUCN Red Data List. The project will play the role of catalyst of bringing the existing baseline activities and information together in a well-directed and forward looking plan and monitoring system focused on improving the management effectiveness of the PAs as well as capacitating the management to implement the plans.

At present, the livelihoods of most of the members of the communities located in the project's target areas are dominated by primary production for subsistence: in terrestrial areas, principally the production of maize, beans and smaller amounts of a number of other crops, fishing for both local consumption and sale. In both cases, the production systems are characterised by limited technicalities and marketing and, consequently, low productivity and profitability. The implementation of programmes for the conservation and sustainable management of 'charismatic' threatened species has the potential to generate significant levels of income for local communities, both directly and indirectly, for example through: establishment of businesses based on ecotourism and associated services (e.g. employment as guides, provision of accommodation and catering services for tourists to lessen the threats for endangered species and their habitats associated with current agricultural and fishing practices

### **1.5) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)**

The project will put in place measures to strengthen the management of protected areas that include globally important landscapes, and the enforcement of policies and regulations to protect native flora and fauna, in particular globally significant and threatened species at sites within or adjacent to the Wadi El Rayan and Lake Qarun protected areas. The project is expected to produce tangible conservation benefits for species such as Four-toed jerboa (*Allactaga tetradactyla*, EN), Dorcas gazelle (*Gazella dorcas*, VU), Slender-horned Gazelle (*Gazella leptoceros*, EN), Striped hyena (*Hyaena hyaena*, NT), Fennec fox (*Vulpes zerda*, LC), Ruppell's Sand fox (*Vulpes rueppelli*, LC), Flower's Shrew (*Crocidura floweri*, DD), Ferruginous Duck (*Aythya nyroca*, NT), Pallid Harrier (*Circus macrourus*, NT), Purple Gallinule (*Porphyrio porphyrio*, LC), Slender-billed Gull (*Larus genei*, LC), and Egyptian Eared Grebe (*Podiceps nigricollis*, LC). Investments, training, and participatory management arrangements will address priority conservation planning and management problems common to many important and threatened biodiversity sites throughout Egypt, and therefore will generate models for replication in priority conservation sites in other parts of the country and region.

Project support to GEF focal area strategies, Aichi Targets and CBD work programmes: The project is fully consistent with Objective 1 of the GEF BD Focal Area as it will improve the management effectiveness of existing PAs for the conservation of priority endemic and endangered species and critical habitats, through the development of adaptive management frameworks, operational capacities and mechanisms for the participation of local communities. The project also will contribute to Egypt's achievement of the CBD 2020 Aichi Targets as follows: Target 9, by strengthening PA management capacity and landscape level approaches to BD conservation that will reduce the introduction and spread of IAS into natural habitats; Target 11, by adding additional natural habitats to the PA system and improving the overall ecological representativeness of the national PA system; and Target 12, by improving monitoring and enforcement activities for the protection of threatened species. Finally, the project will contribute to the following goals of the CBD Programme of Work on Protected Areas (PoWPA): 1.2 "To integrate protected areas into broader land- and seascapes and sectors so as to maintain ecological structure and function"; 1.4 "To substantially improve site-based protected area planning and management"; 1.5 "To prevent and mitigate the negative impacts

of key threats to protected areas”; and 2.2: “To enhance and secure involvement of indigenous and local communities and relevant stakeholders”.

### 1.6) Sustainability, potential for scaling up and Innovation,

**Sustainability:** The overall sustainability of the project results will be supported by embedding capacity into the institutions and entities that need and can make good use of strengthened abilities and resources. At the national level, the project will raise awareness in government and other decision makers on the importance of conserving the two protected areas and wildlife, thereby increasing their support for additional funding for conservation and for mainstreaming conservation objectives across all branches of government, including in particular Finance, Tourism, and Planning and Natural Resource Management. Capacity building will strengthen the on-going ability of EEAA and protected area agencies with jurisdiction over species and their habitats, and of rural communities dependent on natural resources for their livelihoods, to continue to carry out activities that can benefit wildlife and ecosystem services. Developing effective PA management frameworks, building good policies, strong legislation and the capacity to implement them will establish the enabling environment for protecting the Wadi El-Rayan and Lake Qarun PAs and their critical ecosystems and endangered species. Securing alternative development pathways that rely on a resilient and healthy wildlife stock that benefits communities will reduce the incentives for rural populations to engage in illegal wildlife hunting or destructive ecosystem management practices. The project will seek to create stable situations on the ground where there is participatory monitoring and enforcement carried out in partnership with local communities so that the mechanisms and capacities for such activities are embedded not just in PA staff but also among local stakeholders, thereby reducing the need for long-term financing of such actions. In addition, the project activities to establish conservation-compatible activities that generate local benefits will provide incentives for local stakeholders to support conservation over the long-term.

**Scaling Up:** The proposed project will address capacity building for EEAA and PA management staff on managing information systems for PA monitoring, poaching and illegal hunting, as well as training on PA management for staff at the targeted PA sites, which together will allow for best practices and lessons learned to be widely up-scaled to overall national wildlife protection operations and throughout the national protected area system. Training of CBOs and local communities within and adjacent to the targeted PA sites in wildlife protection and community co-management processes will be crucial for developing models that can be replicated elsewhere in the country, and replication of lessons and best practices may be enabled in areas such as monitoring, enforcement, ecotourism and other biodiversity-compatible livelihood opportunities. International exchanges with other countries practicing Community Based Natural Resource Management will be used to further strengthen skills in these technical areas among stakeholders at the targeted PA sites, who can then provide peer training to their colleagues at other sites in Egypt. UNEP-ROWA will also facilitate the regional upscaling of lessons / models from Egypt’s protected areas network through its established mechanisms within the League of Arab States and its biodiversity ministerial fora, and through the coherent implementation of biodiversity-related MEAs and promotion of synergies amongst CBD, CMS, Ramsar, WHC and CITES.

**Innovation:** Development of PA management frameworks that include participatory approaches is not yet a widespread practice in Egypt and the associated methodologies will be applied for the first time. The Project will catalyse different innovations that can be deployed at speed and at scale across other sites, for example identifying consensus indicators to measure success in conserving wildlife populations and ecosystem services. The equipment, devices and intervention strategies that are proposed for adoption by the EEAA and at the site level are innovations in the national context. For example, drone monitoring will be considered and is not yet a recognised PA management option in Egypt. Innovation will also be infused in the training and capacity building methods that the project will promote.

**2. Stakeholders.** Will project design include the participation of relevant stakeholders from civil society organizations (yes  /no ) and indigenous peoples (yes  /no ) If yes, identify key stakeholders and briefly describe how they will be engaged in project preparation.

Below is a description of relevant actors and their responsibilities relevant to the management of protected areas and the conservation of biodiversity in Egypt. During the PPG phase, detailed consultations will be carried out with relevant stakeholders to further detail their specific level of involvement and participation in the project.

Organizations	Potential role in the project preparation
Egyptian Environmental Affairs Agency (EEAA)	EEAA as the official project Executing Agency on behalf of the Government of Egypt will have oversight of the overall project preparation process. EEAA also will ensure that protected area management and biodiversity conservation are addressed in the project design, and it will provide data as needed on threats impacts on biodiversity as well as potential mitigation measures.



Organizations	Potential role in the project preparation
Nature Conservation Sector (NCS)	NCS is the leading governmental body responsible for PA management and the conservation of biodiversity, and thus it will play the lead technical role in executing the project. NCS sits within the Egyptian Environmental Affairs Agency (EEAA) under MoE; the EEAA manages Egypt's EIA processes, which are the country's main tool for controlling and regulating the environmental impacts of development projects, and it will be responsible for developing project activities related to policies and laws on biodiversity conservation and wildlife management. NCS will design project activities related to policy / regulatory changes to ensure compliance with habitat and species protection legislation, and all issues related to biodiversity conservation within the broader landscape.
IUCN/ROWA	IUCN ROWA's role is to implement the activities and coordinate with the project partners. Other cross cutting issues that will include gender mainstreaming and natural resource management. This comes as a challenge since environmental priorities are intimately associated with poverty, equity, security and conflict. Therefore, implanting and mainstreaming conservation efforts with the development agenda becomes very crucial. IUCN ROWA's mandate is to work supportively and in collaboration with the project stakeholders and partners in Egypt, which include NGOs and governments, to achieve a new paradigm for sustainable development based on the concept of people centered development. Its role is to share critical conservation knowledge with all stakeholders and partners and currently focus on providing services, which brings added value to the on-going activities. One of the many IUCN ROWA strengths is its ability to catalyse policy. IUCN ROWA also takes pride in providing this technical assistance to the state member in Egypt.
UNEP/ROWA	UNEP/ROWA's role is to link the project activities to the on-going regional upscaling of PAs network in the Arab Region. UNEP/ROWA will ensure the synergies among biodiversity related MEAs and SDGs at both national and PA's levels. UNEP/ROWA will work to improve the capacity building of the PAs staff through specialized training programs (e.g. ecosystem based-management tools – Aichi targets – etc.).
Academic Institutions	Some universities will assist the project design and implementation by providing data through research and outreach activities. The actual universities to be involved will be determined at PPG stage
Local communities	Local community involvement and full participation in the design of site level components on PA management, species conservation, sustainable resources uses, etc. of this project is critical and is an important sustainability trigger for the project as a whole
Private businesses (e.g. tourism and hunting companies)	Private companies are important users of natural resources and a key partner for local communities to generate income and employment opportunities, and they will be consulted intensively during the preparatory phase. The details of private companies to be involved and how will be provided at the PPG stage.

**3. Gender Equality and Women's Empowerment.** Are issues on gender equality and women's empowerment taken into account? (yes  /no ). If yes, briefly describe how it will be mainstreamed into project preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.

While degradation of natural ecosystems has an impact on all rural residents, women have frequently suffered more than men from the loss of traditional access to natural resources, particularly as they often play a critical role in collecting wild foods and medicines and in ensuring household food security. In addition, despite their critical role in the management of natural resources, women have limited property rights to ensure their access to natural resources, and gender disparity in access to and utilization of natural resources is a major contributor to poverty among women. Therefore, the project coordination will ensure that that gender considerations become an integral part of all project activities, and particularly those in the field, following CBD COP guidance<sup>15</sup>. The project will ensure that targeted interventions tackle issues of concern to women, and indicators will be included in the project monitoring system to track the participation of women in project activities. Awareness raising and training with communities will be based on an analysis of the often distinct roles and needs of women and men. In addition, gender marking will measure the following data at the end of year 2 and at the end of the project: 1) the number of women and men among the full-time project staff; 2) the number of women and men that are Project Board members; and 3) the number of women and men who are employed in jobs created by the project.

**4 Risks.** Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).

IDENTIFIED RISKS	RISK ASSESSMENT	MITIGATION MEASURES
Government resources (e.g.	Medium	The Project assumes a six-month start-up phase (3 months hiring and 3 months

<sup>15</sup> See e.g. [www.cbd.int/doc/nbsap/nbsapcbw-pac-02/nbsap-nadi-scbd-gender.pdf](http://www.cbd.int/doc/nbsap/nbsapcbw-pac-02/nbsap-nadi-scbd-gender.pdf) and [www.cbd.int/doc/publications/cbd-ts-49-en.pdf](http://www.cbd.int/doc/publications/cbd-ts-49-en.pdf)

IDENTIFIED RISKS	RISK ASSESSMENT	MITIGATION MEASURES
counterpart staff) and co-financing contributions are not forthcoming in a timely manner		inception period) to bring all staff, partners, and government agencies on board. Co-financing commitments with EEAA and other partners will be detailed and confirmed during the PPG stage.
Change in leadership in relevant governmental bodies could cause delay in implementation of the project activities	Low	The establishment of a Project Steering Committee (PSC) will ensure that the policy agreements reached during the Inception Phase remain in place, as the PSC will be tasked with developing and monitoring clear terms of reference for all project partnerships. Communication and awareness efforts supported by the project will ensure support and understanding for the project within relevant institutions.
Limited local expertise to lead and participate in project activities.	Low	An international Technical Advisor (TA) will provide technical skills and support to the project team and its partners. However, since such external expertise is not sustainable over the long-term, the TA will be tasked with training and transferring knowledge to staff of the NCS including its monitoring team. The monitoring core team within NCS that will be established during the lifetime of the project that will work with the international TA to ensure that training and knowledge transfer takes place in a comprehensive and timely manner.
Failure of government agencies to implement project activities or to resolve conflicts among different stakeholders	Medium	The project will institute a collaborative management structure for decision-making and will strengthen policymaking, planning, monitoring and enforcement functions of local authorities to enable them to fulfil their statutory responsibilities for environmental management. All relevant stakeholders will be involved from the start to create ownership and strengthen commitment to proposed changes and reforms.

##### 5. Coordination. Outline the coordination with other relevant GEF-financed and other initiatives

EEAA's Nature Conservation Sector (NCS) is implementing the UNDP-GEF project "*Strengthening protected area financing and management systems*" with a GEF contribution of USD 3,616,000. The project's objective is the establishment of a sustainable protected area financing system, with associated management structures, systems and capacities needed to ensure the effective use of generated revenues for priority biodiversity conservation needs. The project is designed to remove or significantly reduce a wide range of barriers to sustainable financing by: 1) strengthening legal, policy, regulatory and institutional frameworks that facilitate revenue generation and retention and other aspects of sustainable PA financing; 2) ensuring that levels of financial resource mobilization are adequate for effective conservation-oriented management of Egypt's PA system; and 3) establishing business planning and cost-effective management systems that ensure the effective allocation and management of mobilized resources. The project is particularly focused on policy changes that will enable NCS to substantially increase its levels of revenue generation, while also ensuring that the bulk of these revenues remain available to NCS for hiring and compensating staff, developing site infrastructure, etc. A key to ensuring the sustainability of the policy changes will be to ensure that the funding made available to NCS is disbursed in an efficacious and cost-effective manner. For this reason, the project will guide the investment of re-injected funds into a number of high priority sites and activities, where it will seek to leverage additional funding and establish planning, allocation, management and monitoring tools to demonstrate the impact and cost effectiveness of these investments, thereby providing NCS with a powerful set of arguments for continuing long-term investment, financing and expansion of Egypt's PA system, mainly through self-generated revenues.

One of the eight PA sites included in the PA finance project is Wadi El-Rayan. At this site, the project will focus on strengthening the process for collecting entrance fees; developing and printing awareness materials; upgrading the visitor centre, and improving the quality of the road network within the PA. The proposed project will complement the PA finance project by: enhancing the legal framework and oversight mechanisms for PA spatial planning; strengthening the management of PAs on the ground safeguarding key landscape and biodiversity assets; and enhancing the recognition and sustainable use of biodiversity. This proposed project will not develop systemic tools for enhanced financial flows, however it will as part of its strategy apply the frameworks and mechanisms developed under the PA Finance project and implement them at the local level at the targeted PA sites. Tools and lessons learnt will be adapted from the PA financing project through coordination via the respective project management units.

**6. Consistency with National Priorities.** Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes  /no  ). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

The project objective is grounded in key national policy and planning documents. The project is consistent with Egypt's National Biodiversity Strategy and Action Plan (NBSAP) 2015-2030, which is the principle policy document that drives

biodiversity conservation in Egypt. In 2014, Egypt revised its NBSAP in line with the new CBD Strategic Plan for Biodiversity 2011–2020; after initial stocktaking and appraisal of the current status of national biodiversity and the underlying causes of biodiversity loss, six strategic goals were identified to address the decline in biodiversity and to achieve the Aichi Targets. The revised NBSAP also calls for the further development of “the management and infrastructure of the protected area network, including the development and implementation of management plans. These plans should address the integration and development needs of local communities, the sustainable utilization of the resources which they contain, [and] the potential for eco-tourism”. The project will help Egypt to achieve the NBSAP’s Strategic Goal 1: “Conserve and manage terrestrial and aquatic biodiversity to ensure sustainable use and equitable benefits to the people”, by supporting the following targets under this strategic goal: 1) By 2030, PAs network secured and expanded to cover 17% of total terrestrial and inland water and at least 5% of coastal and marine representative areas, especially priority sites of particular importance for biodiversity and key ecological Processes, and Effective management of PAs; 2) By, 2020 develop and implement unified Egyptian methodology for the identification and monitoring of priority of all components of biodiversity according to the international standards to ensure the maintenance or rehabilitation of 50% of our most threatened species focusing on mammals and reptiles to a favourable conservation status; 3) By 2030, National conservation and/or rehabilitation programmes of the largest part of threatened species and endemic species at risk are developed and implemented with measures to evaluate its implementation; and 4) By 2020, all IAS and pathways are identified and prioritized with measures in place to update and verify these pathways, in addition to development of national programmes to control and manage IAS. The project is also consistent with Egypt’s National Development Plan (NDP) as it will enhance the sustainability of development activities within and around protected areas, and will support the need to balance economic growth with biodiversity conservation considerations and to address trade-offs between economic development and ecosystem resilience.

**7. Knowledge Management.** Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

Capturing and sharing knowledge and lessons learned will constitute an important element of the project and an essential way to ensure sustainability and replicability of project achievements. The project will identify important best practices and lessons learned that can be of value to all key stakeholders, specifically national decision makers in the EEAA and NCS and the Governorates in the project area, as well as important development actors in the country. These best practices and lessons learned will be documented; the project team will prepare guidelines for facilitating the wider replication and “up-scaling” of results from the project; and UNEP will provide a format and assist the team in categorizing, documenting and reporting on lessons learned. Subsequently, the project will make systematic efforts for the dissemination of lessons learned both within and beyond the project intervention zone, utilizing a number of existing information sharing networks and forums, publications in written and digital format, dissemination workshops and cross-fertilization activities. In addition, the project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation through lessons learned.

### **PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

**A. RECORD OF ENDORSEMENT<sup>16</sup> OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the [Operational Focal Point endorsement letter](#)(s) with this template. For SGP, use this [SGP OFP endorsement letter](#)).


NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Eng. Ahmed Abou Elsoud	GEF OFP	Egyptian Environmental Affairs Agency	03/13/2016

### **B. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF policies<sup>17</sup> and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

<sup>16</sup> For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

<sup>17</sup> GEF policies encompass all managed trust funds, namely: GEFTE, LDCF, and SCCF

<b>Agency Coordinator, Agency name</b>	<b>Signature</b>	<b>Date (MM/dd/yyyy)</b>	<b>Project Contact Person</b>	<b>Telephone</b>	<b>Email</b>
Kelly West UN Environment/GEF Coordinator Portfolio Manager Corporate Services Division UN Environment		June 14, 2017	Jane Nimpamya Division of Environmental Policy Implementation (DEPI) UNEP Nairobi, Kenya	Tel: +254 207 624 629 Cell phone +254 718436427	<a href="mailto:Jane.Nimpamya@unep.org">Jane.Nimpamya@unep.org</a>

**C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)**

For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to the PIF.

## Annex 1: Key Biodiversity Areas in Egypt that are the focus of the project

### Wadi El Rayan Protected Area<sup>18</sup>

International [KBA] Name: Wadi El Rayan Protected Area

Area: 175,901 ha

Protection Status: 100% of site under protected area status

Site Description: Wadi El Rayan was originally an arid desert depression located to the south-west of Fayoum, with an average elevation of 43 m below sea-level and a maximum depth of 64 m below sea-level. As of 1973, excess drainage water from Fayoum was diverted into the depression, flooding large parts of it. Two large lakes were formed as a result. The first lake reached its current level of 5 m below sea-level in 1978. The second lake, which lies at a lower elevation, has a current estimated water-level of 20 m below sea-level and is still in the process of filling. It is expected that the water-level in the lake will be allowed to reach 13 m below sea-level. About 0.25 km<sup>3</sup> of drainage-water reaches the lakes of Wadi El Rayan annually (salinity 1 g/l). This is carried through a canal and a tunnel, which link the first lake and El Wadi Drain and flows from the first lake to the second via a shallow, swampy canal and a small waterfall. Because water-levels in the first lake have been stable for a considerable length of time, a very dense growth of *Phragmites* and *Tamarix* has developed along the shores of this lake. In contrast, the second lake has scant cover along its shores because of the constantly, though slowly, rising level of water in it. Salinity is also rising slowly in the second lake (which has no outflow) as a result of evaporation. The salt-level in the lake is currently about 2.5 g/l, but it is only a matter of time before it becomes as saline as Lake Qarun. Salinity is expected to remain stable in the first lake, since it is constantly flushed. The lakes of Wadi El Rayan produced an average of 477 tonnes of fish annually between 1980 and 1990, composed mostly of *Tilapia* sp. and *Mugil* sp. To the west of the lakes of Wadi El Rayan is a further, shallower, sandy depression that supports three natural springs and extensive desert scrub. A limestone escarpment surrounds the depression on all sides except the east, where it is closed off by a series of high longitudinal dunes. The vegetation is dominated by shrubs of *Alhagi*, *Nitraria*, *Calligonum* and *Tamarix*. This is an excellent and rare example of an undeveloped Saharan oasis.

KBA Criteria: This site has been identified as an Important Bird and Biodiversity Area based on the presence of: 1) Significant populations of one or more bird species at certain times of their lifecycle or seasonal migration.

Key biodiversity: The lakes of Wadi El Rayan have become fairly important wintering grounds for waterbirds and appear to be increasing in importance. A total of 12,600 waterbirds were counted in January 1995. Most numerous were *Podiceps cristatus*, *Podiceps nigricollis*, *Aythya fuligula*, *Aythya ferina* and *Fulica atra*. The second lake holds more waterbirds than the first, because of its larger size and its greater isolation. The second lake also supports a substantial breeding population of *Porphyrio porphyrio*. Other breeding species include *Tachybaptus ruficollis*, *Ixobrychus minutus*, *Egretta garzetta*, *Gallinula chloropus* and *Acrocephalus stentoreus*. The desert habitats of Wadi El Rayan spring area also hold a number of Sahara–Sindian biome restricted species. At least four of these species are known or are expected to breed in the area. These are *Falco concolor*, *Bubo ascalaphus*, *Oenanthe lugens* and *Alaemon alaudipes*.

Non-bird biodiversity: Mammals: four threatened mammals are found in the desert habitats of Wadi El Rayan. *Gazella leptoceros* (EN) occurred until the mid-1980s, but has probably become locally extirpated. *Gazella Dorcas* (VU) is still found in the area in small numbers, but is rapidly declining. Both *Vulpes zerda* (DD) and *Vulpes rueppelli* (DD) are scarce and are also declining due to illegal hunting.

Populations of IBA trigger species:

- *Species:* Ferruginous Duck *Aythya nyroca*; IUCN Red-list Category: NT
- *Species:* Purple Swamphen *Porphyrio porphyrio*; IUCN Red-list Category: LC

### Lake Qarun Protected Area<sup>19</sup>

International Name: Lake Qarun Protected Area

Area: 134,042 ha

Protection Status: 100% of site under protected area status

Site Description: Lake Qarun occupies the deepest part of the Fayoum Depression, located some 220 km south of the Mediterranean. In 1992, the elevation of the lake surface was 43.5 m below sea-level and mean water depth was 4.2 m. The lake is bordered by agricultural land to the south and desert to the north. There are several lagoons and bays along the southern and

<sup>18</sup> Information from [www.ibat-alliance.org/ibat-conservation](http://www.ibat-alliance.org/ibat-conservation) and <http://datazone.birdlife.org/site/factsheet/wadi-el-ryan-protected-area-iba-egypt>

<sup>19</sup> Information from [www.ibat-alliance.org/ibat-conservation](http://www.ibat-alliance.org/ibat-conservation) and <http://datazone.birdlife.org/site/factsheet/lake-qarun-protected-area-iba-egypt/text>

northern shores of the lake, some of which hold mud- or saltflats of various sizes. El Qarn, the only sizeable island in the lake, covers almost 2 km<sup>2</sup>. Formerly, Qarun was a much larger freshwater lake, with dense marsh vegetation along its shores. The main source of water for the lake is drainage from irrigated land, which it receives through two major drains: El Batts and El Wadi. With the intensification of cultivation and irrigation since the early part of this century, the salt load of the water reaching Qarun has increased significantly. As the only outflow for the water is evaporation, salinity is continually increasing. Today, Lake Qarun is slightly more saline than seawater (about 40 g/l) and salinity increases at the rate of 0.5 g/l annually (Euroconsult 1992b). The highest salinity is recorded in the west and north of the lake, while swamp and marsh vegetation is now restricted to the vicinity of drain outlets, on the eastern and southern shores of the lake. Nilotic aquatic fauna has mostly disappeared, being replaced by many marine species that have been introduced from the Mediterranean to restock the ecologically modified lake. Between 1980 and 1990, Lake Qarun produced an average of 956 tonnes of fish and shrimps annually, of which 40% was *Tilapia* sp. and 36% shrimps.

KBA Criteria: This site has been identified as an Important Bird and Biodiversity Area based on the presence of: 1) Significant congregations of one or more bird species at certain times in their lifecycle or seasonal migration

Key biodiversity: Lake Qarun holds large numbers of waterfowl in winter, e.g. 32,665 were present in the winter of 1989/90. Grebes are particularly abundant, and there are also large numbers of *Anas crecca*, *Aythya fuligula* and *Fulica atra*. At least 10 species of waterbird are known to breed, the most prominent of which are *Bubulcus ibis*, *Vanellus spinosus*, *Charadrius alexandrinus*, *Sterna albifrons* and *Larus genei*. The last species started breeding at Lake Qarun in the early 1990s, and in summer 1998 an estimated 1,000 pairs nested on El Qarn island.

Populations of IBA trigger species:

- *Species:* Black-necked Grebe *Podiceps nigricollis*; IUCN Red-list Category: LC
- *Species:* Spur-winged Lapwing *Vanellus spinosus*; IUCN Red-list Category: LC
- *Species:* Slender-billed Gull *Larus genei*; IUCN Red-list Category: LC
- *Species group* – waterbirds: IUCN Red-list Category: na



## Annex 2: Information on Threatened/Endangered Species in Wadi El-Rayan and Lake Qarun PAs

**Table 1: List of species inside the two protected areas that will be of primary focus of the project**

Class	Common name	Scientific name	IUCN Category	PA Site	
				WRPA	Qarun
Mammals	Four-toed jerboa	<i>Allactaga tetradactyla</i>	Endangered	X	
	Dorcas gazelle	<i>Gazella dorcas</i>	Vulnerable	X	X
	Slender-horned Gazelle	<i>Gazella leptoceros</i>	Endangered	Possibly	Possibly
	Striped hyena	<i>Hyaena hyaena</i>	Near Threatened	Possibly	Possibly
	Fennec fox	<i>Vulpes zerda</i>	Least concern	X	X
	Ruppell's Sand fox	<i>Vulpes rueppelli</i>	Least concern	X	X
	Flower's Shrew	<i>Crocidura floweri</i>	Data Deficient	X	
Birds	Ferruginous Duck <sup>20</sup> (diving duck)	<i>Aythya nyroca</i>	Near Threatened	X	
	Pallid Harrier	<i>Circus macrourus</i>	Near Threatened	X	
	Purple Gallinule (western swamp hen or purple swamp hen)	<i>Porphyrio porphyrio</i> <sup>21</sup>	Least concern	X	
	Slender-billed Gull	<i>Larus genei</i>	Least concern		X
	Egyptian Eared Grebe	<i>Podiceps nigricollis</i>	Least concern		X

### Information on status and threats to Gazelles

Six antelope species used to inhabit the Egyptian desert; of these, four were extinct by the end of the last century (Saleh 1987, El Alqamy and El Din 2006), and of the two remaining species, the Dorcas gazelle (*Gazella dorcas*) is highly threatened and the Slender-horned Gazelle (*Gazella leptoceros*) is at the brink of extinction (Saleh 1987, Ryder 1987, Alqamy and Din 2006, Bahaa-el-din 2007). The Dorcas gazelle is the smallest member of the genus *Gazella*, and is an extreme habitat generalist (ALGADAFI *et al.* 2017) represented in Egypt by two distinct subspecies, *G. d. dorcas* and *G. d. Isabella* (=littoralis). The latter sub-species occupies the Eastern desert and Sinai region (Osborn and Helmy 1980, El Alqamy and El Din 2006), while the former sub-species is found in the Western desert. The Slender-horned gazelle is represented in Egypt by one subspecies *G. leptoceros leptoceros* endemic to Egypt (Osborn and Helmy 1980, Alqamy and Din 2006, Bahaa-el-din 2007), and distributed in the Western desert. The presence of these two species in the Western desert is believed to contribute to the maintenance of ecological systems. Unlike most other herbivorous species, gazelles are known to be browsers not grazers, which allows the vegetation cover of desert ecosystems to survive and persist and also provides a means for the dispersal of plant seeds (Osborn and Helmy 1980, Alqamy 2002, Alqamy and Din 2006). Gazelles also are the main prey for the Cheetah (*Acinonyx jubatus*), which showed declines as a consequence of the gazelle's decline (Durant *et al.* 2017).

Illegal hunting and habitat destruction are among the major threats that have limited distribution of these two gazelle species to the northern region of the western desert (Ryder 1987, Saleh 2001, El Alqamy and El Din 2006). Illegal hunting occurs due to lack of effective enforcement in both protected areas and unprotected sites; in 1999, a military-style hunting expedition from Gulf countries operated in the Western desert for many weeks and killed large numbers of the gazelles' populations (Saleh 2001). However, (El Alqamy and El Din 2006) confirmed that the gazelles were not totally wiped out and populations still exist in the Wadi Al-Rayan and Siwa protected areas, which are now priority areas for antelope restoration and reintroduction. In 2006, a survey conducted in these regions estimated the population sizes of the Dorcas gazelle and Slender-horned gazelle at over 200 and 40 individuals respectively (Gazelle monitoring report by Wadi Al-Rayan team 2006), and this result was confirmed in a 2008 survey with additional new observations for Slender-horned gazelle (Gazelle monitoring report by Wadi Al-Rayan team 2008). However, during the 2011 uprising in Egypt, illegal drilling, constructing and land reclamation resulted in extensive habitat destruction, in particular in Wadi Al-Rayan, and a 2012 survey revealed a sharp decline in the population size of the gazelles. Despite this, in early 2017, new observations provided some optimism that these gazelle species could still be conserved in their desert habitats, particularly as previous studies have demonstrated that the gazelles are able to proliferate even in the presence of human activities if effective hunting controls are in place (Yom-Tov and Ilani 1987, Ryder 1987).

<sup>20</sup> The ferruginous duck is classified as Near Threatened (NT) on the IUCN Red List. It is also listed on Appendices I and II of the Convention on Migratory Species (CMS or Bonn Convention), Appendix III of the Bern Convention on the Conservation of European Wildlife and Natural Habitats, Annex I of the EC Birds Directive, and Annex 2 of the African-Eurasian Migratory Waterbird Agreement.

<sup>21</sup> *Porphyrio porphyrio* in the Mediterranean has declined due to habitat loss, hunting and pesticide use, and requires strict protection.