GEF-7 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:GEF Trust Fund

PART I: Project Information

Project Title:	Promotion of Integrated Biodiversity Conservation and Land Degradation Neutrality in Highly Degraded Landscapes of Iraq		
Country(ies):	Iraq	GEF Project ID:	10672
GEF Agency(ies):	UNEP	GEF Agency Project ID:	
Project Executing Entity(s):	The Ministry of Health and Environment, Iraq	Submission Date:	
GEF Focal Area(s):	Multi-focal Areas	Project Duration (Months)	48

A. INDICATIVE FOCAL/NON-FOCAL AREA ELEMENTS

Programming Directions	Trust Fund	(in $)	
		GEF Project Financing	Co-financing
BD-1-1	GEFTF	600,000	2,000,000
BD-2-7	GEFTF	1,168,046	8,500,000
LD-2-5	GEFTF	447,160	1,642,857
LD-1-1	GEFTF	2,322,922	13,357,143
Total Project Cost		4,538,128	25,500,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: Strengthen governmental and non-governmental capacities to achieve biodiversity conservation and land degradation neutrality in Middle Euphrates landscape through integrated landscape management

Project Components	Component Type	Project Outcomes	Project Outputs	Trust Fund	(in $)	
					GEF Project Financing	Co-financing
Component 1. Strengthened policies, frameworks, (Sustainable Land Management, Biodiversity and Protected Areas Management)	TA 100%	**Outcome 1.1** Adoption of new policies and plans which integrate landscape level SLM, and biodiversity conservation measures by the Ministry of Health and Environment *Indicators:* *- Number of adopted policies and plans integrating biodiversity conservation and sustainable land management* *-Increased capacity of the Ministry of Health and*	1.1.1 Assessment of national/subnational policies, legislation and procedures that identify integration of biodiversity conservation and land degradation neutrality into national policies and plans with consideration to the impact and role of women in conservation 1.1.2 A national cross-sector and multi-level Integrated Conservation Management Framework (ICMF) developed, and approved by the key Ministries (Ministry of Health and Environment, Ministry	GEFTF	1,047,160	3,642,857

		Environment to implement Integrated Conservation Management Framework as measured by the Capacity Development Scorecard. *(baseline targets will be developed during PPG)*	of Agriculture, Ministry of Water Resources) 1.1.3 Economic incentives and disincentives designed to promote the implementation of ICMF 1.1.4 Joint multi-stakeholder/multi-sectoral working groups established to form a coordination mechanism for the implementation of the ICMF (considering involvement of private sector, gender balance and trainings and workshops targeted for women and girls) 1.1.5 Increased capacity on Integrated Conservation Management and Compliance designed and implemented across relevant ministerial sectors (e.g. agriculture, fisheries, trade, and environment) targeting national and sub-national professionals, administrators, NGOs, private sector and community leaders and other stakeholders considering gender appropriate responses particularly women on the field. 1.1.6 The Integrated Conservation Management plan for the Middle Euphrates Landscape developed to identify and reduce the pressures on natural resources from competing land uses in Middle Euphrates landscape and disseminated to all			

			relevant stakeholders (Implementation of the Plan formulated under Components 2, 3 and 4)			
Component 2 Measures avoiding degradation and biodiversity loss and land rehabilitation to improve ecosystem functions and services	TA 80% INV 20%	**Outcome 2.1** Four new PAs established and sustainably managed in Razzaza Lake, Lake Sawa, North Ibn Najm and Ibn Najm *Indicator:* - Establishment of four new PA proposed for protection of representative ecosystems covering up to 182,081 ha - Increase in Management Effectiveness Tracking Tool scores of the new 4 PAs - PA Management Plan adopted for the new PAs	2.1.1 The National Protected Area Network of Iraq is expanded by 182,081 ha through the declaration and establishments of new 4 Pas that are sustainably managed. 2.1.2 PA Management plans factoring the resilience to climate change developed and implemented for Razzaza Lake, Lake Sawa, North Ibn Najm and Ibn Najm 2.1.3 Operationalization of habitat, biodiversity and land monitoring system aligned with the Integrated Conservation Management Plan in collaboration with key government stakeholders (Ministry of Health and Environment, Ministry of Agriculture, Ministry of Water Resources and Ministry of Planning) taking into account gender disparities and empowering women in decision making processes	GEFTF	1,180,221	6,071,429
Component 3 Demonstration of more sustainable flow of agro-ecosystem services through implementing nature-based solutions in Middle Euphrates Landscape	TA 40% INV 60%	**Outcome 3.1** The replication/ scaling up of SLM in more sites of similar nature in Middle Euphrates Landscape in line with Output 1.1.6 *Indicator:* -20,000 ha of agricultural arable land under sustainable land management and	3.1.1 Decision support tools for locally adaptive LDN measures provided to support decision-making through assessments (ecological and vulnerability) 3.1.2 Locally adaptive LDN measures to enhance water conservation and prevent changes in the characteristics of soil, wind erosion,	GEFTF	1,612,424	8,500,000

		climate smart agricultural practices strengthening the implementation of LDN - Increased productivity of farmers participating in Project pilots - Number of benefiting farmers (baseline targets will be developed during PPG)	salinization and loss of natural fertility of soil identified and validated by the governates and Ministry of Health and Environment 3.1.3 Techniques and management practices including but not limited to the revision/reform of existing policies and possibly adoption of new policies for sustainable land management developed and tested in 20,000 ha (results will be monitored through the monitoring system developed under Output 2.1.3 3.1.4 In collaboration with the Office of Agricultural Extension Services and Training, capacity development program established and local stakeholders (e.g. farmers, farmer cooperative systems, agricultural associations, PA managers, women) trained on best practices for SLM, biodiversity conservation, water conservation, climate smart agriculture and agrobiodiversity. 3.1.5 Training sessions on sustainable finance for the local banks in the Middle Euphrates landscape organized			
Component 4 Capacity building and knowledge management	TA	**Outcome 4.1** Stakeholders apply their increased knowledge and take actions on land use planning, biodiversity conservation, ecosystem services and LDN.	4.1.1 An information/knowledge management system developed and made accessible to stakeholders enabling learning from and upscaling of pilot activities (ensuring accessibility by men, women, and youth))		482,222	6,585,714

		Indicator: - Number of Stakeholder engagement workshops (government level, local people, women, etc) - Number of case studies developed (at least one case study on the impact of the project on women) - Availability of materials published and disseminated (# of fact sheets/infographics, # of awareness raising events	4.1.2 A communication and awareness strategy is developed to support implementation of ICMF 4.1.3 Awareness raising and technical materials, based on best-practices identified through Component 2 and 3, developed in local languages, disseminated and used for training of landowners, communities and private sector, taking into account gender balance, to promote adoption of SLM practices and biodiversity conservation 4.1.4 Project monitoring and evaluation system operating providing systematic information on progress in meeting project outcome and output targets			
Subtotal				GEFTF	4,322,027	24,800,000
Project Management Cost (PMC)				GEFTF	216,101	700,000
Total Project Cost					**4,538,128**	**25,500,000**

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: ( )

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount ($)
Recipient Country Government	Ministry of Health and Environment	In-Kind	Recurrent Expenditure	4,500,000
Recipient Country Government	Ministry of Health and Environment	Grant	Investment mobilized	500,000
Recipient Country Government	Ministry of Agriculture	In-Kind	Recurrent Expenditure	5,000,000
Recipient Country Government	Ministry of Water Resources	In-Kind	Recurrent Expenditure	5,000,000
Recipient Country Government	Governorates of Babil, Karbala, Najaf, and Al-Qadisiyah provinces	In-Kind	Recurrent Expenditure	10,000,000
GEF Agency	UN Environment	In-Kind	Recurrent Expenditure	500,000
Total Co-financing				25,500,000

Describe how any "Investment Mobilized" was identified.

Investments mobilized were identified following close consultations with key Government of Iraq stakeholders. Government co-financing will come from the Ministry of Health and Environment and other Government agencies in

the form of both cash and in-kind contributions. Their support and contribution will relate to policy and regulatory framework development and enforcement, knowledge management and capacity development. The grant investment is estimated for the cost of the new staff and infrastructure needs of the new protected areas, which will be funded by the Government.

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional / Global	Focal Area	Programming of Funds	(in $) GEF Project Financing (a)	Agency Fee (b)	Total (c)=a+b
UNEP	GEFTF	Iraq	LD	LD STAR allocations	2,770,082	263,157	3,033,239
UNEP	GEFTF	Iraq	BD	BD STAR allocations	1,768,046	167,964	1,936,010
Total GEF Resources					**4,538,128**	**431,121**	**4,969,249**

E. PROJECT PREPARATION GRANT (PPG)

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

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in $) PPG (a)	Agency Fee (b)	Total c = a + b
UNEP	GEFTF	Iraq	LD	LD STAR allocations	91,561	8,698	100,259
UNEP	GEFTF	Iraq	BD	BD STAR allocations	58,439	5,551	63,990
Total PPG Amount					150,000	14,249	164,249

F. PROJECT'S TARGET CONTRIBUTIONS TO GEF 7 CORE INDICATORS

Provide the relevant sub-indicator values for this project using the methodologies indicated in the Core Indicator Worksheet provided in Annex B and aggregating them in the table below. Progress in programming against these targets is updated at the time of CEO endorsement, at midterm evaluation, and at terminal evaluation. Achieved targets will be aggregated and reported at anytime during the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Project Core Indicators		Expected at PIF
1	**Terrestrial protected areas** created or under improved management for conservation and sustainable use (Hectares)	182,081 ha
2	**Marine protected areas** created or under improved management for conservation and sustainable use (Hectares)	
3	Area of **land restored (**Hectares)	
4	Area of **landscapes under improved practices** (excluding protected areas)(Hectares)	20,000 ha
5	Area of **marine habitat under improved practices** (excluding protected areas) (Hectares)	
6	**Greenhouse Gas Emissions Mitigated** (metric tons of CO2e)	
7	**Number of shared water ecosystems** (fresh or marine) under new or improved cooperative management	
8	Globally over-exploited **marine fisheries** moved to more sustainable levels (metric tons)	

9	**Reduction**, disposal/destruction, phase out, **elimination** and avoidance of **chemicals of global concern** and their waste in the environment and in processes, materials and products (metric tons of toxic chemicals reduced)	
10	Reduction, avoidance of emissions of **POPs to air** from point and non-point sources (grams of toxic equivalent gTEQ)	
11	Number of **direct beneficiaries disaggregated by gender** as co-benefit of GEF investment	300,000 (50% are women)

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicators targets are not provided.

Aichi Targets	▪ **Target 7 - Sustainable agriculture, aquaculture and forestry** The project focuses on sustainable flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management by promoting nature-based solutions to meet future needs. The main outcome will be the implementation of climate-smart conservation practices and reduced impact severity of erosion, salinization and fertility of soils in affected ecosystems through restoration. ▪ **Target 11 - Protected areas increased and improved** The establishment of new protected areas in the lowlands of Euprhrates-3 subbasin will expand the protected area network and enhance the sustainability of national protected area system, which is a milestone of Aichi Target 11 " By 2020, at least seventeen per cent of terrestrial and inland water, […], especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes." ▪ **Target 15 - Ecosystems restored and resilience enhanced** The degradation of land in Iraq is an opportunity for an integrated landscape approach by linking agriculture, urban development, ecosystem restoration & biodiversity conservation. This project will cover several restoration strategies to restore degraded ecosystems and curb biodiversity loss, while integrating biodiversity conservation and land degradation neutrality considerations into the management of Key Biodiversity Areas.
LDN Targets	▪ **This project will support Iraq in achieving LDN targets by helping to improve land productivity and SOC stocks and hence achieving target 1 and 2; to support sustainable flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management through implementing nature based solutions and therefore helping to meet target 3; minimize salinization, which will ultimately help meet target 4.**

G. PROJECT TAXONOMY

Please fill in the table below for the taxonomic information required of this project. Use the GEF Taxonomy Worksheet provided in Annex C to help you select the most relevant keywords/ topics/themes that best describe this project.

Level 1	Level 2	Level 3	Level 4
Influencing Models	(multiple selection)	(multiple selection)	(multiple selection)

Stakeholders	(multiple selection)	(multiple selection)	(multiple selection)
Capacity, Knowledge and Research	(multiple selection)	(multiple selection)	(multiple selection)
Gender Equality	(multiple selection)	(multiple selection)	(multiple selection)
Focal Area/Theme	(multiple selection)	(multiple selection)	(multiple selection)
Rio Marker	(multiple selection)		

PART II: PROJECT JUSTIFICATION

1a. *Project Description.* Briefly describe:
1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description); 2) the baseline scenario and any associated baseline projects, 3) the proposed alternative scenario with a brief description of expected outcomes and components of the project; 4) alignment with GEF focal area and/or Impact Program strategies; 5) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing; 6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF); and 7) innovation, sustainability and potential for scaling up.

1.1) THE GLOBAL ENVIRONMENT PROBLEM, ROOT CAUSES AND BARRIERES THAT NEED TO BE ADDRESSED

Overview
Iraq is a country in Western Asia of approximately 37 million people and with a total area of 437,072km^2, of which around 54% is desert. The Northern landscape is mostly composed of mountains with a small coastline measuring 58 km along the Regional Organisation for the Protection of the Marine Environment (ROPME) Sea Area. Iraq is a biodiversity-rich and biogeographically diverse country with 7 main terrestrial ecoregions, three freshwater ecoregions, and one marine ecoregion. The variety of natural habitats including lowlands, desert, steppes, plateaus and mountains, wetlands, coastal and marine habitats provides the country with natural biological and economical diversity.

Nevertheless, the biodiversity and ecosystems in Iraq have suffered and still suffer many problems closely linked to food security, poverty, urbanization, land degradation and biodiversity loss. Other key issues include: weak policies, overexploitation of water resources, plant cover reduction, wildlife stocks reduction, loss of traditional agriculture and local species, loss of native endemic plants and animals. There are several factors that caused degradation of agro-ecosystems in Iraq, including the loss of soil fertility through wind and water erosion, improper livestock practices like overgrazing; the reduction in species because of a production focus on monoculture prioritizing commercial varieties; and salinization due to unsustainable irrigation practices. Although there is no baseline established in Iraq, there is a consensus among ministries and stakeholders in Iraq that unsustainable use of agro-ecosystems is the primary cause of land degradation in the majority of Iraq's land.

Climate change has also affected the agricultural areas in Iraq by increasing desertification, weakening agricultural development and eradicating livestock, which has led to the degradation and lack of natural vegetation, which has negatively affected the human and food security of the country. According to the Government of Iraq, 92% of the total area of Iraq is at risk of desertification. 90% of the area of Iraq is located within the dry-semi-dry climatic zone, and high summer temperatures reach more than 50 degrees Celsius. The low rainfall rate, varying between 5-15 cm is affected by the high evaporation rate. The rainfall rate in the south is 40 days with a lack of humidity (affecting soil biological cycles and vegetation). Between 1951-1990 the maximum annual SDS used to be twenty-four days per year, while in 2013 it was recorded at 300 days per year.

Desertification in Iraq has been a serious problem jeopardizing its food security, in which many natural and human factors (combined) are affecting it. The Euphrates and Tigris basin has been identified as a significant source area for dust storms in Iraq and across the region. Fallow agricultural lands are considered the main hotspots of dust generation. It is likely that within the next 10 years the number of dust-storms will significantly increase with potentially devastating consequences on productive land and food security. The increase in sand dunes, diminishing forms of biota, increase in air pollution and sand movement, will also increasing pressure on groundwater. Increasing encroachment of it in central

and southern Iraq is attributable to incorrect irrigation and absence of drainage resulting in waterlogging and salinization of the soil; overgrazing; deforestation; the formation of sand dunes due to reduced precipitation levels; increased temperatures; increased evapotranspiration; and elevated wind speeds.[1] The decrease in annual rainfall and reductions in vegetation cover and river flow due to the construction of river dams upstream have also given rise to increasingly frequent sand and dust storms (SDS). The sand and dust storms have caused soil loss and removal of organic matter and nutrient-rich particles, hereby reducing agricultural productivity.[2]

There is a lack of strategic frameworks to manage and adapt salinity in the Mesopotamian Plain. Current efforts aimed at managing land salinity are not based on strategic plans with clear targets and there is little emphasis on controlling salinity in the rivers and surface waters within Iraq. Policies related to agriculture and water management need to be evaluated for their effectiveness in controlling salinity and promoting sustainable agriculture. Salinity and waterlogging are currently impacting upon agricultural production society and the economy, culture and environment. In salt-affected areas farmers are cropping only about 30% of their land and are achieving only about 50% of expected yields.

With a large population, growing at a rate of 2.5% annually, more than 70% of the population is urban and concentrated in the largest cities of the country, mainly Baghdad, Al Mousel and Al Basrah. Despite the declining performance of the agriculture sector in Iraq, it continues to employ almost one-third of the country's labor force, however there are no hard figures available to support this. In 2000, Iraq's farmers were hit by the worst drought in a century which has forced many farmers to ask the government to loan them money to pay banks back for the funds they had borrowed to plant their crops. Most agricultural activity is located in the lowlands in the Mesopotamian plains irrigated from the Tigris and Euphrates rivers. However due to the above limitations, such as soil salinity, drought and shortage of irrigation water, the estimated average area cropped each year ranges from 3-4 million hectares.

Agriculture based livelihoods face severe constraints across the value chain; major constraints include: restricted access to land due to the intensification of violence, population displacement, reduced availability and increased cost of farming inputs; physical damage to land, farming equipment and infrastructure including storage facilities; the disruption of markets, etc. This has implications on medium-term food security.

Weak policies have also contributed to the declining sector including outdated farming practices, lack of farmers skills and competences, and the lack of entrepreneurial skills. In 2013, the Ministry of Agriculture attempted to tie the agricultural sector to global capital through investment law, by making provision for the subsided lease of plots of land to international agro-industrial corporations. Unfortunately, this was not sustainable due to the weakened policies and elimination of subsidies and knowledge infrastructures.

The selected area for the project is the Middle Euphrates Landscape, which lies in Mesopotamian Plain. The site is located across central and southern Iraq. The size of the landscape is around 2 million ha. The region hosts 2 key ecoregions: Arabian desert and Mesopotamian Marshlands. The variety of natural habitats including lowlands, desert, steppes, plateaus and mountains, wetlands habitats is providing the country with natural, biological and economic diversity. Many species are threatened species and several of these are endemic. These species are highlighted in the following section. The Middle Euphrates Landscape is comprised of a few governates of significance biodiversity importance; most notably, Karbala, Najaf, Babil Qadisiya, as well as Najaf.

The region is characterized by a variety of natural habitats including lowlands, wetlands, marshes, desert and cultivated land. The selected area provides the following ecosystem services: pasture for livestock, orchards, vegetables and legumes, summer fruits, citrus fruits, data, agricultural fields, wheat and barley crops, shrub crops, sunflower, cotton crop, maize crop, poultry breeding fields, milk and dairy products. It also includes large reserves of ground water and freshwater. The region has several challenges and threats that have affected biodiversity but also sustainable land management in the region; urbanization and population increase, various large-scale water diversion projects have

[1] Al-Saidi, A and Al-Juaiali, S. (2013) The economic costs and consequences of desertification in Iraq. Global Journal of Political Science and Administration. 1(1) pp. 40-45

[2] Sissakian, V., Al-Ansari, N. and Knutsson, S. (2013) Sand and dust storm events in Iraq. Natural Science, 5, 1084-1094.

degraded the Tigris- Euphrates alluvial salt marsh and have had major impacts on land use patterns in this region, besides the decrease in the amount of the rainfall as well as industrial pollution.

The selected area includes four key biodiversity areas (KBAs) Razzaza Lake, North Ibn Najm, Ibn Najm, and Sawa Lake (See Annex D for the detailed descriptions of these selected KBAs). Four additional KBAs (Wadi Al Weir, Suwaubaat, Dalmaj Marsh, and Gharraf River) are very close to the targeted landscape and will benefit from the project activities. These areas are identified as key biodiversity areas within the document Key Biodiversity Areas of Iraq – Priority Sites for Conservation and Protection by the Ministry of Health and Environment and Nature Iraq in 2015. The Southeastern part of Iraq, the Iraqi Marshlands, also lies very close to the area, however over 90% of the original marshland areas were drained or destroyed due to systematic over-exploitation, political conflict, and a lack of coordinated management during the 1980s and 1990s. The Government is now trying to restore these marshlands to their original state and extent.

Biodiversity and the Importance of Conservation to Species in the Selected Sites

Due to its strategic location in the West Asia Region, the country is considered an important link between the east and west as an ecological corridor. It has been recorded that 10 amphibian species, 98 reptile species and 74 mammal species have been found throughout all the habitats of Iraq. Many are conservation concern species and several of these are endemic or near-endemics in Iraq. Regarding the plant species, it has been recorded that there are approximately 195 endemic species of about 4,500 plants in Iraq. In addition, many marine fish that are important in the fisheries of the Gulf countries utilize the Iraqi marshlands for spawning and nursery grounds making this ecosystem particularly important to regional biodiversity. Some 106 species of fish (including freshwater and marine entrant species) have been recorded in the non-marine waters of Iraq. In 2010, a number of Iraqi species were assessed with the status of Critically Endangered, Endangered, Vulnerable, Near-threatened or Extinct[3], however it is widely acknowledged and reflected in Iraq's NBSAP that further assessment and evaluation of the Iraqi species should be conducted to update the information. A preliminary checklist of the Birds of Iraq has been developed that includes 417 bird species, of which 182 are considered passage migrants to Iraq and an additional 27 are migrant species. Of these, 78 species are considered to be of conservation concern, the majority of which are either possible or confirmed breeders while five species of birds are either endemic or have endemic races found in Iraq.

Sawa Lake, a dedicated Ramsar site within the selected area, is a highly saline lake that has no inlet or outlet but draws water from the Euphrates river through a system of joint cracks and fissures which transport water to aquifers beneath it. Due to its high level of salinity, no plants grow in the lake or on its shores, however one kind of fish lives in Sawa Lake, the Arabian toothcarp of the genus Aphanius, Cyprinodontidatae family, characterized by its soft appearance and small size. Also, there are the *Pomatiopsis tryon* lives in brackish water from Oligocene age to recent times. However, the lake is rich with birds; 25 species of resident and immigrant birds were observed in Sawa Lake and the surrounding areas. The lake holds large numbers of waterfowl, mainly ducks and coot. The endemic race of little grebe (*Tachybaptus ruficollis iraquensis*) and the Mesopotamian crow *(Corvus cornix Capellanus)* occur, as well as the near-endemic grey hypocolius. The flat arid/semi-desert areas over the southern parts of the lake might harbor considerable wildlife diversity, mammals present include Rüppell's fox, striped hyena (near-threatened), honey badger, and Indian gray mongoose (*Herpestes edwardsii*). Reptiles found included: Water snake (maybe Natrix tessellata). Due to its unique closed water body, Sawa lake is an important site to protect for its scientific, educational and biodiversity value. Three threats were classified as 'high' in Key Biodiversity Areas Of Iraq Book: urban expansion; hunting, primarily represented by fishing (mainly netting) and hunting of birds, and pollution caused by the frequent visitors.

The vast wetlands and marshlands present in the middle and southern part of the country are forming a large network of interconnected freshwater wetland systems running through often arid deserts with xeric vegetation, and they provide important corridors for wildlife species. **Ibn Najm and North Ibn Najm** are key biodiversity areas in Iraq which are isolated marshes that receive water from the surrounding network of canals bringing drainage water from rice fields, farms and orchards that surround the site. It is in the triangle between Babil, Qadissiya, and Najaf (75% within the

[3] Fourth National Report of Iraq to CBD

borders of Najaf). The original body of water at the site has shrunk to scattered marshes. The geology of the area is Mesopotamian alluvium, mainly silts[4], which covers more than 17,000 ha. 10,000 ha freshwater marsh of possible great importance for wintering water birds was listed as a wetland reserve of international importance (IBA026). During the period of agricultural expansion, the original Ibn Najm was reduced to small patches among the rice fields and palm orchards. Dense reed beds of *Phragmites* and *Typha* grow in the area, along with many species of aquatic plants. Also, the area contains shrub woodlands with *Tamrix sp*. and *Alhagi graecorum*. Several endangered and threatened species have been observed in the area including *Rafetus euphraticus (EN)*, Marbled Duck *Marmaronetta angustirostris (VU)* and Basra Reed Warbler *Acrocephalus griseldis (EN)*. A total of 54 bird species were observed in the area. Additionally, the site supported seven breeding Sahara-Sindian Desert biome-restricted species. The endemic race of Little Grebe *Tachybaptus ruficollis iraquensis* and endemic race of Hooded Crow *Corvus cornix capellanus* (also known as Mesopotamian Crow) breed regularly at the site. Although not an IBA species, it is noteworthy that Blackshouldered Kite *Elanus caeruleus*, which appears to be slowly colonizing Iraq, has recently started to breed in this area[5]. Reports show the observation of Red Fox/Ruppell's Fox *Vulpes sp.* and Golden Jackal *Canis aureus (LC)*. For fish species, tens of important fish species were observed in the area, including: *Acanthopagrus cf. arabicus, Acanthobrama marmid, Alburnus mossulensis, Carasobarbus luteus, Carassius auratus, Ctenopharyngodon idella, Cyprinus carpio* (Vulnerable), *Leuciscus vorax, Liza abu, Heteropneustes fossilis, Luciobarbus xanthopterus* (Vulnerable), *Mesopotamichthys sharpeyi* (Vulnerable), and *Siluru striostegu*[6]. For plants, *Polypogon maritimus*, which is very rare in Iraq, were reported in Ibn Najm area. Thus, this area harbored a remarkable diversity of birds including threatened and endemic species along with large numbers of wintering waterfowl, waders and raptors however the area is slowly eradicated due to unsustainable hunting and overfishing, human disturbances, and agricultural expansion. The introduced invasive species Tilapia zillii was also reported by fishermen. *Phragmites australis*, which is an important plant for local people for economic and cultural heritage reasons, is present. BirdLife International recognizes this site as highly threatened as of 2014 with increasing pressure due to the presence of critically endangered and endangered species (30 individuals or 10 pairs).

Qadissiya Lake, which is over 1450 km^2, was identified as a Key Biodiversity Area (KBA) and an Important Bird & Biodiversity Area (site code IQ049).[13] The rich biological diversity in the area includes species of global conservation concern, including the Sociable Lapwing *Vanellus gregarious* (a critically endangered bird which is found in only two KBAs of Iraq) and the Egyptian Vulture *Neophron percnopterus* (a bird considered to be endangered).[13] Moreover, Qadissiya Lake is home to two biome-restricted species: *Pycnonotus leucotis* and *Ammomanes deserti*.[13] Land degradation is posing a serious threat to the ecosystems of the area, and sustainable land management is vital to protect the rich biodiversity.

Land Degradation & Desertification

Desertification has increased over recent decades in Iraq creating negative impacts on environmental, economic and social levels. This is mainly due to several drivers: climate change, low rainfall levels, overgrazing of nature pastures, illegal urban expansion to agricultural land, unsustainable farming practices and old irrigation techniques. The increasing deterioration of Iraqi rivers (e.g. reductions in water flow due to upstream dams) have also increased desertification which has now reached areas that once were among the world's most fertile agricultural areas.

The wheat production in the targeted landscape is about 520 thousand tons on 310 thousand ha land. Irrigation efficiency of the region 1,122 m^3 irrigation water/1-ton wheat production, is 70% higher than the country average (650 m^3/ton). This lower productivity is partly due to land degradation, which is estimated to the cause of 40% of the production losses. Many farmlands have been impacted by soil salinization, waterlogging & soil erosion. The decrease in the fertility of land resources is caused by unsustainable agricultural practices, improper management of pesticides & fertilizers, overexploitation of water resources, problems in drainage systems and climate change. Unsustainable practices have resulted in the drying out of wetlands important for regulation of hydrological flows. The lack of reclamation of agricultural land has led to the deterioration of the land though the exacerbation of soil salinization and

4 BirdLife International (2019) Important Bird Areas factsheet: Ibn Najm.

5 Iraqi Ministry of Environment & Nature Iraq (2014). Inventory of Key Biodiversity Areas of Iraq. Baghdad, Iraq: Iraqi Ministry of Environment & Nature Iraq.

6 Coad B.W. (2010). Freshwater Fishes of Iraq.

deterioration of natural vegetation which led to the formation of sand dunes especially in the selected project sites, the central and southern areas. Land degradation is also negatively affecting the optimal functioning of the ecosystems.

Most of the Middle Euphrates Landscape is covered by Quaternary sediments, among which the flood plain sediments of the Tigris and Euphrates rivers are the most dominant parts. Aeolian sediments also cover considerable areas at different parts of the plain in forms of sand dunes, and sand sheets. The dunes are the most common form and they are creeping as well as sand sheets in vast areas causing desertification. Climate change is the main reason for desertification. Salinization is another significant problem in the plain whereby the affected areas are growing and the concentration of the salt in the soil, as well as the groundwater, is increasing rapidly. The increase in salinization is due to mismanagement of water resources.

Salinization

The flat irrigated areas in selected sites include regional groundwater aquifers that flow towards the coast under the Plain and discharge over most of the lower Plain. Consequently, shallow water-tables of varying degrees of salinity and depths underlie the area. The increase in demand for water by Turkey and Syria causes the return of saline drainage water back into the rivers in upstream countries and reduces the quality of water that flows into the Iraqi part of the basins. This apparent water scarcity and water quality deterioration, together with inefficient delivery and drainage systems combine to increase the salinization of irrigated fields and reduce productivity. The deterioration of drainage infrastructure and lack of maintenance in the recent past has further compounded the situation.[7] Salinity has reduced the production potential of the total irrigated area of Iraq by 70 percent with up to 30 percent completely lost to production.[8] It is estimated that 4 percent of irrigated areas is severely saline, 50 percent moderately saline and 20 percent slightly saline.[9] More than 70 % of irrigated agriculture lands in central and southern Iraq have been abandoned in recent years and caused yield declines of between 30% and 60%, mainly due to salt accumulation caused by the salinization process. Salinity is a dynamic phenomenon that can be changed with time. Figure 1 shows the dramatic change of soil salinity within the Mesopotamia plain between 2000 and 2010.

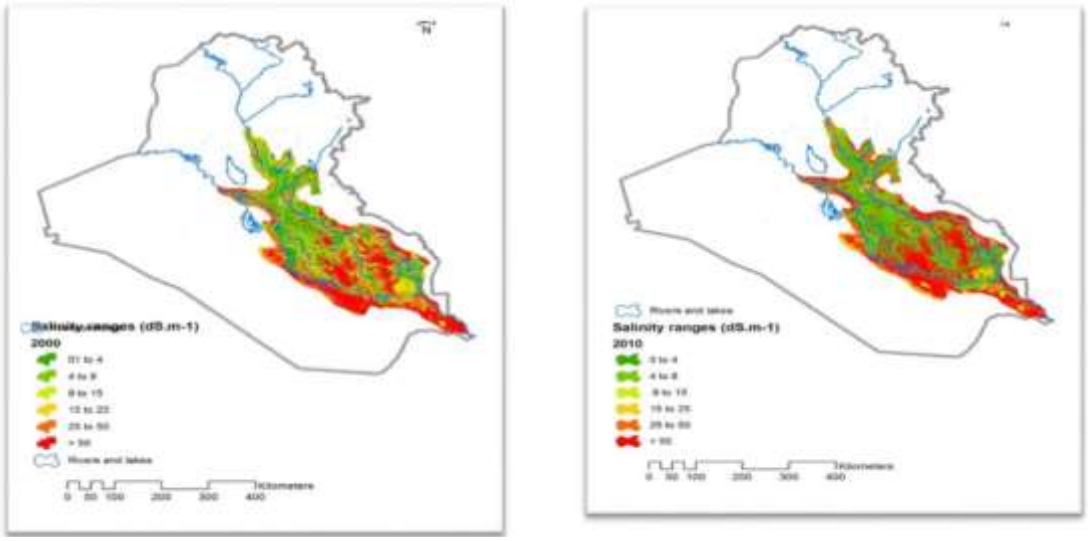


Figure 1: Spatial distribution of salinity levels across the Mesopotamia plain 2000 and 2010.[8]

[7] ICARDA (2012) Methodologies to improve soil, agronomic, irrigation, water and drainage management for salinity control. http://www.icarda.org/publications-resources/Iraq_Salinity

[8] FAO (2011) Crops. FAOSTAT: http://faostat.org/site/567/default.aspx#ancor

[9] Al-Taie, F. Report to seminar on methods of amelioration of saline and water-logged soils. Baghdad, Iraq

Barriers

In response to these threats, the long-term solution is to strengthen the knowledge, capacities and skills of national and local government institutions as well as other stakeholders in Iraq to establish sustainable land management approaches, to learn from and to scale up pilot implementation measures for minimizing degradation and biodiversity loss, and to intensify sustainable land management practices and land rehabilitation. However, the following barriers are preventing this solution:

Barrier 1: Uncoordinated and contradictory institutional and regulatory framework

The primary barrier is the uncoordinated and contradictory institutional and regulatory setting. Following years of turmoil and international sanctions the institutional capacity and governance structures in agriculture and environment sectors in Iraq are severely underdeveloped. Many of the laws and regulations on land management are "reactive" and narrowly focused, and thus fail to provide an integrated and comprehensive framework for land management that addresses land use planning, reforms, protections, tenure, transactions and other sustainability elements. Existing laws on land reform, land tenure and land transactions need to be revised, coordinated and consolidated into one comprehensive law and pertaining by-laws. Many strategies and plans are undertaken in Iraq concerning issues of land protection and land degradation and desertification, but the steps/actions proposed by different strategies and plans frequently differ in terms of both priorities and activities. As a result, sectorial policies are often conflicting, the most pressing needs are often not incorporated into planning processes, and proposed strategies and plans often do not result in actual implementation. Iraq has recently made significant progress in policy by moving decentralization forward in transiting the political and administrative responsibilities from the central government to the governorates. However, several issues are still in place that is hindering the progress and affect decision making and service delivery in the governates in the Middle Euphrates Landscape. These issues include inappropriate fiscal arrangements to match the decentralization policy, the changes made on the policy do not match at the operational level, and lack of clarity in the ministerial functions. These issues have created uncertainty in authority and decision-making process which causes delays in service deliveries and infrastructure projects in these governates.
Government decision-makers and technical staff have not been afforded the opportunity to be exposed and trained in how to generate the institutional and policy frameworks required to support and incentivize the uptake of the improved practices in SLM or BD conservation. The institutional capacity and governance structures in environment sectors are underdeveloped. Ministries of Health and Environment, Water Resources, and Agriculture suffer from limited technical and research capacity.

Barrier 2: Stagnation of establishment of new protected areas

Iraq has elaborated an important legislation for the protection of biodiversity: Protected Areas Law No 2 of 2014 "The Regulation of the Protected Area system", to identify and approve protected areas in Iraq. As of today, the total land area protected covers only 1.53% of Iraq, while none of the protected areas (PAs) have undergone a management evaluation, efforts have been made to expand the protected area network in the country, the Key Biodiversity Areas study by the MoHE and Nature Iraq (NGO) being the most important one. Recently, no new PAs have been declared under the lead of the Ministry of Health and Environment, hindering the execution rate of this program.

The ongoing GEF funded Protected Area Project (GEF id 5392) has been supporting the Ministry of Health and Environment (MoHE) in developing national policies, strategies and plans for environmental protection and sustainable development and establishment of two new protected areas. However, many gaps and weaknesses are still present in the institutional and legislative framework. In developing new protected areas, the MoHE is often overlapping the jurisdiction of other line Ministries and with regional or local government institutions. Within this general context, the institutional and legislative framework for Protected Areas has been addressed through a specific Regulation on Protected Areas. The new regulation on PA delineates the institutional framework and procedure for proposing, evaluating and establishing natural Protected Areas. Although, the new regulation has marked a significant advancement in the institutional process of planning, establishing and managing Protected Areas, the process needs to be enforced through proper coordination of several institutions involved, development of procedures, methodologies, and tools with adequate training and capacity building, establishment of new PAs, testing of institutional coordination mechanism and allowing wide stakeholder engagement. Furthermore, the financial sustainability of the PA system has to be planned and taken into account.

Barrier 3: Limited knowledge products to enhance understanding of and interest in sustainable land management (SLM) practices

The Government has very low capacity with regards to the identification of best SLM management practices. Not surprisingly given the country's recent history, there has not been a great deal of effort put into building a strong foundation with regards to international advances in SLM, and ecosystem conservation. SLM practices are limited in Iraq with minimal efforts to integrate sustainable land management into policymaking and execution. Iraq has few successful models or pilot demonstrations for the sustainable use of resources that equally produce positive economic returns, or effective protection of land from degradation. As described in *Barrier 1*, the institutional and regulatory environment is weak, which also hinders the implementation of legislations in terms of priorities and activities. Furthermore, decision and policy makers in the country do not have the necessary knowledge to understand socio-economic impacts from degraded land which poses a problem relative to the opportunities SLM holds.
Sustainable management of ecosystems for livelihood enhancement is directly related to sustainable agriculture. Iraq has witnessed degradation and biodiversity loss, severely impacting food security. Unfortunately, the institutional capacity in agriculture and environment sectors are underdeveloped, suffering from limited technical and research capacity. Furthermore, smallholder farmers have limited capacity to adopt sustainable land-use practices. Current practices have heavily depleted the long-term sustainability of land productivity. Therefore, in order to strengthen implementation of LDN and enhance food security, there is a need of demonstrating more sustainable flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management through implementing nature-based solutions to landscape restoration at the local level. These communities will need the necessary knowledge in terms of conservation agriculture, planning and management skills in order to ensure long term sustainability and safeguard the country's rich biodiversity and ecosystem services.

Barrier 4: Low public awareness and insufficient knowledge and understanding of the importance of biodiversity conservation and SLM practices

Following years of unsustainable practices in land management, Iraq has witnessed knowledge gaps in the application and scaling up of best practices in biodiversity conservation, SLM, as well as sustainable agriculture. Moreover, relevant, and readily available databases and GIS layers (e.g. climate, soil, vegetation, hydrology, geology, ground waters, biodiversity richness, and aquifers as well as land use) do not exist in appropriate scale and become constraints to more advanced and detailed research, analyses, and robust decision-making. At present, there are no readily available databases and GIS layers at the scale needed to create land suitability maps. These maps would support the country in identifying needed future interventions to support the conservation of biodiversity and the sustainable management of land. In addition, Iraq has limited experience, knowledge, resources and capacity at the local level in applying sustainable land management practices, including on monitoring the current status and future changes. Farmers have low awareness on the importance of soil management and on SLM approaches. They are lacking experience and understanding of participatory approaches and opportunities in land management in the context of democracy, decentralization and open markets. These limitations have contributed to the failure to integrate the management of agro-ecosystems at the landscape level. These knowledge gaps have not only affected the smallholder farmers in local communities, but also ministry and government officials at the national level. Therefore, stakeholders in the country have neglected SLM practices and have only focused on short-term benefits, generating a small degree of well-being and food security. The cost of land degradation has not attracted the necessary recognition, and therefore, awareness on the importance of soil and benefits of SLM have not been understood at any level. All in all, awareness on nature-based solutions is very limited in the country.

1.2) THE BASELINE SCENARIO AND ANY ASSOCIATED BASELINE PROJECTS

Government of Iraq Baseline

The Government of Iraq is committed to the improvement of both environmental conservation and agricultural sustainability. The Iraqi government has confronted the problem of land degradation, deforestation, marshland degradation and unsustainable use of land in Iraq by i) creating the Ministry of Agriculture in 1921, ii) creating the Environmental Protection and Improvement Board in 1975, iii) establishing the Ministry of Environment in 2003 that later became the Ministry of Health and Environment, and vi) establishing the Ministry of Water Resources which superseded the Ministry of Irrigation under which a large establishment was created in 1973 for land reclamation. Since 2008 several international agreements have been signed and ratified by Iraq: the Ramsar Convention in 2008, the CBD and UNFCCC in 2009, the UNCCD in 2010, CITES in 2012.

Iraq has established the national voluntary targets for LDN to be achieved by 2030. The national LDN targets were developed in accordance with Iraq's specific national circumstances and development priorities, taking into account the list of options for operationalizing LDN at the national level. In addition, a summary of practices aimed at reducing land

degradation in Iraq have been developed and are being used to promote and improve sustainable land management as part of the ongoing initiatives that have been developed by the Ministry of Health and Environment and the Ministry of Agriculture.

The Ministry of Agriculture have also developed a report (2012) through a collaborative effort between the Ministry of Water Resources, Ministry of Agriculture, Ministry of Education, as well as ICARDA and other key stakeholders on Managing Salinity in Iraq's Agriculture: Current State, Causes and Impacts. The report provides an overview and situation analysis of the state of soil and river salinity in Central and Southern Iraq, with new perspectives and findings on the current status of salinity problems. The report identifies that the greatest impact and rapid results can be achieved through increased investment in developing severely saline lands.

Along with the above, the Ministry of Agriculture is also working with several United Nations agencies, funded by the EU on addressing creation of livelihood and employment and will increase smallholder farming families food security, raise their income and therefore improve their health and living standard. These efforts will establish the baseline on which the project will further build on, by local land use planning with conservation planning to achieve a more comprehensive approach to habitat and biodiversity preservation.

In regard to the key threats to biodiversity, as indicated in the 6th National Report for the Convention of Biological Diversity the figure below indicates the top 10 threats associated with the 648 species for which threats have been assessed on the IUCN Red List.

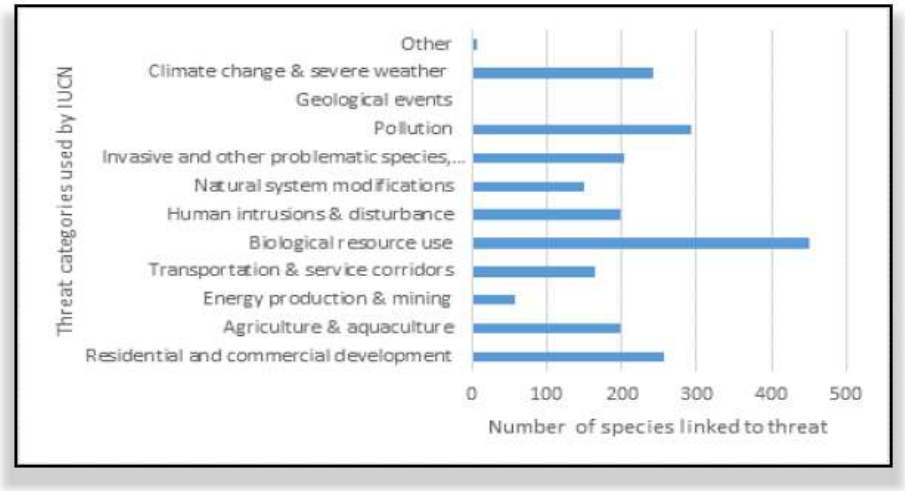


Figure 1-1 Top 10 threats associated with the 648 species for which threats have been assessed on the IUCN Red list

The Ministry of Health and Environment has taken the steps to ensure overall integration and mainstreaming of biodiversity into national strategies and plans as follows: a) Poverty reduction strategy (2018-2022); b) National Environmental Strategy (2013-2017) c) Strategy of Water Resources and Land Management Strategy (2015-2035); d) Integrated National Energy Strategy and e) Ministry of Agriculture Strategic Plan (2015-2025) f) National Development Plan (2018-2022).

The Ministry of Health and Environment and NGO Nature Iraq have developed the Key Biodiversity Areas (KBA) of Iraq: Priority Sites for Conservation & protection (2015). The report summarizes information on Key Biodiversity Areas throughout Iraq, which have been surveyed through the biodiversity initiatives of the Iraqi Ministry of Environment and Nature Iraq with support from the Italian Ministry of Environment, Land & Sea and the Canadian International Development Agency. The project helped establish national and local capacities to undertake well organized field surveys on biodiversity and use rapid assessment techniques and methodologies. The survey work itself has helped to

gain a better understanding of both Iraq's wealth of resources (environmental and human) and the threats that face the country (unsustainable development, pollution, habitat destruction, declines in health and loss of species). It was this document that led to the selection of the priority implementation sites of this project, as the selected sites are Key Biodiversity Areas in terms of biological diversity, variety in habitats and populations of species.

The project will provide important lessons on food security and restoration in drylands. Iraq's drylands are important centers of diversity for crops and forages of global significance, including wheat, barley, chickpea, lentil, and several fruit trees and horticultural species. Iraq's drylands also possess valuable and globally important agrobiodiversity, including the wild progenitors that are of crucial importance in adapting to climate change. Iraq's social capital, particularly a large population of young people can generate income and sustain economic growth. The project can demonstrate how sustainable food production can support inclusive growth, poverty reduction, and generate decent income.

The Department of Forestry and Combating Desertification in the Ministry of Agriculture has transformed more than 300,000 ha of land from sand land to agricultural land, studies indicate that around 1 million ha of active sand dunes and sand sheets still exist in central and southern Iraq and there is the presence of newly formed sand dunes in the country based on the LDN target setting national report that was shared with the secretariat of the UNCCD. Action was originally intended between 2010-2016, and 60% of the Ministry of Agriculture Projects outcomes were achieved, but this was suspended because of the cessation of financial resources caused by a combination of the drop-in oil prices (and associated economic problems) and the budget needed to fight terrorism and violence.

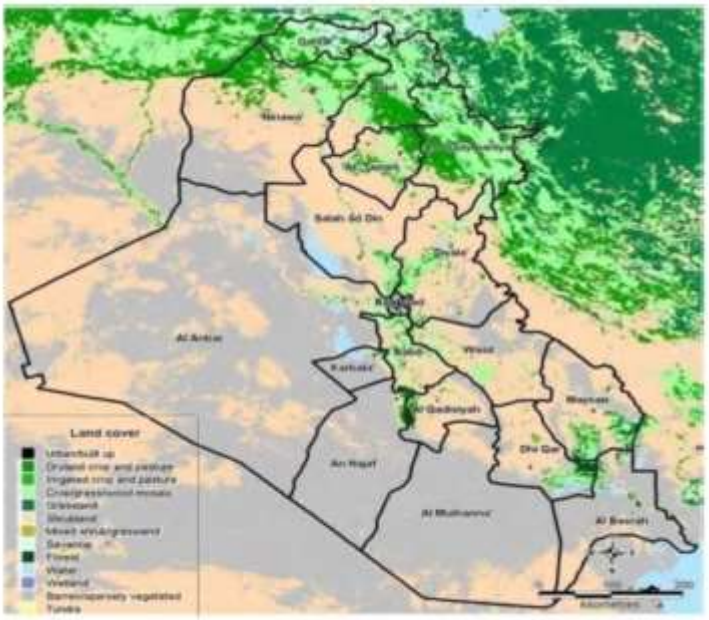


Figure. 2-21 Distribution of the main types of land cover in Iraq

The project will support improved SLM in these lands particularly localized initiatives to strengthen community level planning and coordination and its scaling up.

Stronger governance and land management capacity goes hand in hand with access to finance. Financial services are important to enable scaling up of SLM and biodiversity conservation to strengthen value chains and incomes from natural resource management.

The Sustainable Land Management for Improved Livelihoods in Degraded Areas of Iraq, a GEF funded FAO project that is intends to improve the flow of agro-ecosystem services to sustain food production and livelihoods. The overall objective of the project is to reverse land degradation processes, conserve and sustainably manage land and water resources in degraded marshland ecosystems in Southern Iraq for greater access to services from resilient ecosystems and improved livelihoods. The project was approved in 2017 for a total of GEF Grant amount of USD 3 549 321. The proposed project will build on this existing project in addressing the land degradation threats and will ensure monitoring initiatives in this project are aligned with the FAO project. This will be implemented through the establishment of the 4 newly protected areas and ensure community-based adaptation strategies and practices for management and resilience of protected areas.

The project will build on several technical assistance projects currently ongoing,

Building capacity to advance the National Adaptation Plan process in Iraq

The GCF funded project will advance the National Adaptation Plan in Iraq through strengthening institutional, technical and financial capacities as well as medium- to long-term adaptation will be mainstreamed into national and local planning. The total funding from GCF is US$2,566,795 and the project is in its initial stage and will end in 3 years by 2025. This project will help to identify the climate change scenarios, and options to enhance resilience of Protected areas to climate change. The management plans of PAs will align with the national adaptation plan actions.

Land Degradation Neutrality Target Setting and Implementation:

Under the lead of the Ministry of Agriculture, in 2017 the Iraqi government joined the land degradation neutrality target setting programme (LDN TSP) to alleviate and decrease the effects of soil salinity and erosion, sand dune movement and sand and dust storms, to become land degradation neutral. Five national voluntary LDN targets were set: (1) Improve productivity and Soil Organic Carbon (SOC) stocks in 80,000 ha of annual crops and plantation lands by 2035 as compared to 2017; (2) Increase the current SOC levels by 2035 for shrublands, croplands and grasslands; (3) Conversion of bare land to pasture lands in 100,000 ha by 2035 as compared to 2017; (4) Reduce salinization rate by improving productivity and SOC stocks in crop and plantation lands in 10,000 ha by 2035 as compared to 2017; and (5) Conversion of sand dunes to grasslands in 150,000 ha by 2035 as compared to 2017. This proposed project will directly contribute to achievement of LDN and also will provide a monitoring system.

Sustainable Land Management for Improved Livelihoods in Degraded Areas of Iraq: A GEF-funded FAO project intended to improve the flow of agro-ecosystem services to sustain food production and livelihoods. The overall objective of the project is to reverse land degradation processes, conserve and sustainably manage land and water resources in degraded marshland ecosystems in Southern Iraq for greater access to services from resilient ecosystems and improved livelihoods. The project is for a total of GEF Grant amount: USD 3 549 321 approved in 2017. The Project is expected to start in 2020. During the PPG phase a comprehensive discussion will be undertaken with the project proponents to ensure a stronger synergy. The Ministry of Agriculture is involved in the FAO Sustainable Land Management Project and is the member of the PSC. This project will ensure complementarity between the work that is being carried by the Ministry of Agriculture and the Ministry of Health and Environment.

Building Resilience of the Agriculture Sector to Climate Change in Iraq, an IFAD approved project, will be operational for six years commencing in early 2019 until 2025. The project's total investment is US$ 9.9 million. The project objective is to strengthen the agro-ecological and social resilience to climate change in the four target governorates. The project will take place in governorates that over-lap and compliment the Project activities in the Middle Euphrates Landscape. The project is organized around two components. Under the first component, the project will build capacities required to integrate climate change adaptation and risk reduction into agriculture planning and production systems. Under the project's second component, the project will assist to generate climate-resilient agriculture investments. This baseline Project will provide climate smart solutions, which the proposed Project will ensure these solutions are also part of the LDN implementation actions.

Strengthen Iraq's Capacity for Sustainable Water Resources Management, a project managed by UNDP and funded by the United States Department of State, aims at assisting in the successful launch and the functioning of the National Water Council by supporting its establishment through an interim secretariat hosted by the Prime Minister Advisory Commission and establishing connections between the future council and international experts and institutions. A partnership will be promoted with this project during the full project preparation to share lessons learnt and projects' findings. The total budget for this project is USD 2.45M. The project duration was to cover the years 2013 -2015. However, due to implementation delays, the project is still on-going. The investment amount is USD 2,450,000.

"Improving Rural Livelihoods, Nutrition and Food Security for Returnee and Remainder Households in Newly Regained Areas and Areas Most Affected by the Recent Crisis", " Support to the rehabilitation of solar ground water irrigation pumping systems in the regained areas in Iraq", and "Risk Informed Response to Natural Disasters in Conflict-affected Communities in Iraq" are USD2.5 million Japan-funded FAO projects aiming at achieving improved food and income security in Iraq. The Projects will be completed by 2022. This baseline Project

will use its findings on improvement of livelihoods, whereas this proposed Project will offer SLM solutions to these newly regained areas.

Establishing a Functional Environmental Information System for the Synergistic Implementation of Multilateral Environmental Agreements (MEAs) for Iraq is a currently ongoing UNEP project in Iraq ending in 2021. The GEF-funded $1.1 million project aims to enhance the capacities of Iraq for monitoring and reporting on Multilateral Environment Agreements through a well-integrated and functional environment information system. It will do so by developing a coordinated environmental knowledge and information management system and by enhancing institutional coordination and technical capacities to mainstream, develop, and utilize policies for the effective implementation of MEAs and relevant SDGs. MEA monitoring and reporting activities will provide a basis on the availability of key data and the proposed Project will use this Project's findings to establish a robust baseline for the Project. Furthermore, the monitoring system that will be further developed will comprise MEA monitoring requirements to ensure sustainability of the results of this project.

Initial Steps for the Establishment of the National Protected Areas Network in Iraq is another GEF-funded UNEP project currently ongoing in Iraq. The approved budget of $1.2 million project aims to develop and design national Network of Protected Areas with two key priority sites declared. The project components will address barriers and constraints to effective implementation of the national network of protected areas, focusing on (a) design, planning and establishment of the national system of Protected Areas in Iraq; (b) strengthening the institutional and legislative framework for Protected Areas, through stakeholder consultation, capacity building and provision of technical tools to enable legislation enforcement. The project ends in July 2021. The Project will support the target of increasing the number of protected areas by 6.5% of the total area of the country. In 2014, the Central Marshes were nominated by the Iraqi Government as Iraq's first National Park along with four other sites (Al Hammar Marsh, Central Marshes, Hawizeh Marsh and Sawa Lake which was declared as a Ramsar site. Dalmaj and Teeb are two sites that will be declared as protected areas through the GEF funded project. In 2016 the Southern Mesopotamian Marshes were nominated as a UNESCO World Heritage Site based on its natural, cultural and archaeological significance. In 2019, Babylon was also inscribed as a World Heritage Site.

1.3) THE PROPOSED ALTERNATIVE SCENARIO, WITH A BRIEF DESCRIPTION OF EXPECTED OUTCOMES AND COMPONENTS OF THE PROJECT\

The project is designed to ***governmental and non-governmental capacities to achieve biodiversity conservation and land degradation neutrality in Middle Euphrates landscape through integrated landscape management.*** It will address the identification of gaps and opportunities for policy reform for biodiversity conservation and land degradation neutrality; suggest modifications to existing policies and incorporating them into the management of key biodiversity areas. It will also address activities related to: (a) capacity building on integrated conservation management and compliance with an increased emphasis on management and learning among stakeholders and local communities (b) establish protected areas within the protected area network developed (c) At the site level, the project will pilot the implementation of measures that avoid degradation and biodiversity loss, and land rehabilitation to improve ecosystem services and functions through promoting SLM approaches in support of improved biodiversity, reduce the impact severity of erosion, salinization and the loss of natural fertility of soils. The project will also demonstrate sustainable flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management through implementing nature based solutions to landscape restoration at the local level through (a) capacity development programme for farmers, including resource mobilization, advocacy and communication related to ecosystem valuation and (b) training for local stakeholders e.g. farmers, PA managers, agricultural associations on best practices for agrobiodiversity water conservation and climate smart agriculture. Ecosystem vulnerability assessments and surveys of key land degradation drivers will provide decision making support tools for locally adaptive LDN measures including measures to enhance water conservation and prevent changes of soil characteristics, taking existing practices into account. A capacity development plan for environmental management will be prepared with technical and physical capacities being assessed. An information/knowledge database and strategy will also scale up the long-term impacts of

the project in protecting Iraq's unique biodiversity and the ecosystem services that its people depend on, by providing management plans, best practices, monitoring and data for informed decision making.

The current COVID-19 pandemic poses risks on various aspects of the Project, such as availability of technical expertise for capacity building activities. The remote work and online interaction don't always solve the Project's need for stakeholder engagement. We will ensure the timing of activities and the workplan will tolerate for possible COVID-19 containment measures.

The projects impact will focus on creating positive environmental and social impacts achieved in terms of landscape resilience (SDG 15.1.1 and 15.1.2) forest reforestation (SDG 15.3) contributing to conservation of biodiversity (Aichi targets 7,11,15) and land degradation neutrality. The main premise to reach the overall impact is that (IS1) Standardised SLM and biodiversity conservation measures across national policies and plans lead to new environmental standards and contribute to improving ecosystems and land quality; (IS2) Increased terrestrial protected areas and improved management by the relevant agencies; and (IS3) Support for an enabling environment for promoting sustainable land use. The project's theory of change is based on the interplay amongst its four components driving to the three intermediate states. Outcome 1 will create an enabling environment to support transforming capacities to integrate sustainable conservation management into decision making policies and frameworks. Outcome 2 will ensure that policies and frameworks also include avoiding degradation and biodiversity loss to enable ecosystem functions to be restored. Outcome 3 will strengthen the transition of land management by widely disseminating information, lessons learned and demonstrations for nature-based solutions in land management. Outcome 4 will ensure the project results can be scaled up through capacity building and knowledge management. IS1 will be achieved through Outcome 1 and 2. Outcomes 2, 3 and 4 will lead to IS2 and IS3. The graphical representation of the theory of change is provided in the end of the PIF document.

The Project has four components:

Component 1. Strengthened policies, frameworks, (Sustainable Land Management, Biodiversity and Protected Areas Management): To be effective, sustainable land management needs to occur across the landscape with individual actions working in cooperation with each other and with communal efforts to optimize ecosystem services, biodiversity, and economic productivity. Climate change, especially more severe droughts, poses a risk on the health of the ecosystems. There is a need to improve planning and governance within and between ministries based on an agreed strategic vision and supported by an appropriate policy and incentive framework to establish and maintain production landscapes that are productive, produce global environmental benefits and enhance climate resiliency. Integrated land use plans will include hazard mitigation measures to minimize the impacts of droughts (e.g. through better water management and adoption of drought tolerant crops). The Government of Iraq needs to have the capacity to develop and implement an integrated land management system at landscape scale through identifying appropriate SLM interventions, articulating this vision, setting strategic objectives, defining outcomes, identifying trade-offs, formulating and agreeing on actions. Under this component, legal, policy and institutional gaps and openings for policy reforms for SLM and biodiversity will be identified, and a Land Degredation Neutrality (LDN) baseline and an assessment of the state of ecosystem services in the pilot provinces will be mapped, including LDN trends and drivers leading to identifying priority areas for action. Additionally, a list of the threatened species of Iraq will be published along with an action plan for the conservation of priority species within this list. The institutional landscape, stakeholders and the existing roles and capacities of both public and private sector will be mapped for biodiversity and sustainable land management related policy areas in the pilot provinces, with core sectoral policies being amended or developed. Finally, a training and capacity development programme will be developed and implemented for local and national institutions, as well as local smallholders, resource users, and the private sector, so as to broaden the receptiveness for implementing and replicating SLM approaches. The component will build knowledge and capacity of men and women. Furthermore, the project will improve access of women to decision-making processes and ways to build capacity to engage more independently. Men and women land users will support in the research and implement restoration and SLM actions to localize existing good practices.

Component 2 Measures avoiding degradation and biodiversity loss and land rehabilitation to improve ecosystem functions and services: The project will support the declaration of additional protected areas as part of the PA designed

network and ensure that declaration of these new sites follow the process and criteria as agreed and designed within the PAN project. The sites (Razzaza Lake, Lake Sawa, North Ibn Najm and Ibn Najm) will follow an official declaration by the National Committee for Protected Areas in Iraq. A detailed management plan as well as an ecotourism plan will be developed and implemented for each site. The eco-tourism for new PAs also offers another area for partnering with the private sector. Capacity building targeting small business will be done through the development of needs-based skills training programs. An effective management plan requires continous assessment of the status of biodiversity, established priorities and objectives for management. The implementation of this plan needs information on whether management actions are achieving their objectives. In order to achieve this, the project will support the development of a habitat and biological monitoring system that will be aligned with the Integrated Conservation Management Framework. Given the pressure of agricultural activities on ecosystems, it is critical that the monitoring system comprises sustainable management objectives and indicators. The system will include mapping of erosion and vulnerability assessment to support the implementation of local measures to prevent changes in the characteristics of soil, wind erosion, salinization and loss of natural fertility taking existing practices into account. The project will assist development of a climate-resilient protected area system by factoring climate resilience in the management plans. Men and women land users will support in the research and implement conservation, restoration and SLM actions to localize existing good practices. Community mobilization and local awareness raising (lessons learned) on local adaptation practices for management and resilience of the PAs particularly women's knowledge and experience will be critical during execution of the Project.

Component 3 Demonstration of more sustainable flow of agro-ecosystem services through implementing nature-based solutions in Middle Euphrates Landscape: The project aims at achieving a landscape level uptake of SLM measures in 20,000 ha of agricultural arable land in Middle Euphrates to reduce land degradation, deliver ecosystem and development benefits. Under this component, the project will focus on ecosystem vulnerability assessments and identification of key land degradation drivers which will be necessary for decision making for community-adaptive LDN measures. According to the Iraq's Integrated Drought Risk Management plan, the long-term trend in precipitation shows that all governorates are considered drought prone areas. The activities under this component will be designed to support the implementation of the national drought plan. The Project will specifically focus on the community level actions provided in the drought plan. The project will promote measures enhancing water conservation and sustainable land management (soil, wind erosion, salinization and loss of natural fertility of soil) and other sustainable land management techniques and approaches and will test the agreed practices on 20,000 ha of agricultural land around the periphery of the four PAs to be established under component 2. In order to scale the uptake of the practices further, the component will implement a capacity development programme for farmers, farmer cooperatives and agricultural associations in collaboration with the Office of Agricultural Extension Services and Training. The capacity development programme will carefully consider gender disparities, empowering women in decision-making processes and improving gender equality. Through this component, a training for local stakeholders will take place enhancing capacity-building. This effort will target farmers, men and women land users, agricultural associations, PA managers, among others, on best practices for agro-biodiversity, water conservation and climate smart agriculture. Key decision-makers will be introduced to best international principles and practices, strengthening implementation of LDN and enhancing food security through nature-based solutions. The Project will enhance collaboration with the private sector by building capacity of Iraqi financial institutions by training the local banks in the Middle Euphrates landscape on sustainable finance. Private sector stakeholders will be involved during the project design phase to identify options for financial incentives that will facilitate the adoption of SLM practices and the decoupling of economic activities from unsustainable use of natural resources.

Component 4 Capacity building and knowledge management: All stakeholders must have the capacities, knowledge, resources, and support from enabling policies to plan and manage land use for sustainability and resilience to climate change. Under this component, an information/knowledge management system will be developed to capture, store and disseminate the lessons learned and best practices. Each stakeholders' information needs are different. Therefore a communication and awareness strategy will be developed that will consider gender sensitivities as well as gender users of the land. The dissemination and awareness raising activities will be based on the best practices identified under Component 2 and 3. The dissemination products will be in local languages and will be designed as training materials so that these knowledge products will be used for training of local resource managers, farmers, landowners and

communities. The project will strengthen capacities to engage men and women in sustainable land management and restoration practices and will engage with policy makers to ensure that policies are supportive of identified approaches.

The project will ensure that biodiversity and LDN targets are being met facilitating the work and identifying any proven methodologies or activities to meet both Ministry's strategic objectives. The proposed project is directly in line with the objectives of the Iraqi National Environmental Strategy. The Strategy has identified a number of priority objectives regarding environmental protection, which include controlling land degradation, combating desertification and preserving biodiversity. This project is consistent with some of the main purposes under the objective: 1) inclusive planning of soil resources, 2) minimized expansion of sand dunes, 3) addressed desertification, and 4) reviewed and updated agricultural and environmental laws. The project is also in line with the Ministry of Agriculture's Strategy for 2015-2025.

The NBSAP clearly highlights sustainable management and the use of natural ecosystems and resources as well as ecosystem restoration as priority areas. The Strategy identified 23 strategic targets and 35 actions. Several of these targets are in line with the proposed project; particularly:

- Target 5 focuses on habitat loss. The project seeks to establish an integrated biodiversity conservation framework.
- Target 9 sets out the threat of invasive alien species on biodiversity, hence the project will meet this target with the establishment of IAS Management Strategy
- Target 15 which states that by 2020, ten new Protected Areas have been established, which falls in line with the creation of a new PA.

Iraq identified and set its national Land Degradation Neutrality Targets. These targets aim at improving productivity and soil organic carbon (SOC) stocks in 80,000 ha of annual crops; converting 100,000 ha of bare land to pasture lands; reducing salinization rate in 10,000 ha of cropland and plantation lands; and converting 150,000 ha of sand dune land to grasslands by 2035. It is expected that this project will support Iraq in achieving LDN targets by helping to improve land productivity and SOC stocks and hence achieving target 1 and 2; to support sustainable flow of agro-ecosystem through implementing nature based solutions and therefore helping to meet target 3; minimize salinization, which will ultimately help meet target 4; and last but not least minimize sand dune expansion (target 5).

1.4) ALIGNMENT WITH GEF FOCAL AREA AND/OR IMPACT PROGRAM STRATEGIES

Overall, the project is expected to enhance policy, legal and institutional frameworks in support of SLM and biodiversity considerations, develop sub-national strategies for the sustainable management of ecosystems to supply important ecosystem services and develop LDN targets for the pilot provinces. Specifically the project will support the following program objectives:

Biodiversity: In line with GEF 7 biodiversity objective 2 (BD-2-7), the project will promote Improving Financial Sustainability, Effective Management, and Ecosystem Coverage of the Global Protected Area Estate by supporting:

- Establishment of 4 new protected areas;
- Development and implementation of management plans for the new 4 PAs
- Development of community based adaptation strategies for community participation in PA management.

Land degradation: In supporting the GEF 7 objective 1 (LD-1-1), the project will promote sustainable land management (SLM) practices aiming at an improved flow of agro-ecosystem services, reduction of land degradation and sustaining food productoin, by supporting:

- Degraded agricultural land, grasslands and drylands restored and under integrated management with rehabilitated or restored ecosystem services;
- On-the-ground implementation of sustainable land management, soil erosion control measures, diversification of crop and livestock systems across farm holdings;

- An enabling environment for better land use management and practices

1.5) INCREMENTAL COST REASONING AND EXPECTED BASELINE CONTRIBUTIONS FROM THE BASELINE, THE GEFTF AND CO-FINANCING

Scenario without the GEF investment: The baseline for the project rationale is mainly founded on efforts and actions implemented by the line ministries in cooperation with international funds and agencies. Without the GEF investment: national and local policies and strategies regarding biodiversity conservation, protected area management, land degradation and management will not be harmonized and strengthened in the medium term. In addition, over the short/medium term, national plans such as National Environmental Strategy and Action Plan, Iraq's National Biodiversity Strategy and Action Plan (NBSAP), Iraq's national Land Degradation Neutrality Targets, agriculture management plans, and watershed and irrigation system management plans will not have led to establishment of new Protected Areas and support SLM practices. The staff of Ministry of Health and Environment and the staff in Governorates will not have sufficient capacity to expand Protected area network and implement SLM practices that support LDN targets. The Ministry will not be able to collect scientific information needed to establish the new PA and expand PA network. The community will have limited awareness on the benefits of well managed network of PA. As a result of these shortfalls, biodiversity will be lost, key ecosystems that sustain biodiversity and livelihoods will deteriorate, and soil quality will continue to degrade due to uncontrolled and inadequate land use, and the social and economic consequences of land degradation will continue to adversely impact the livelihood of people in Iraq.

Scenario with the GEF investment: This project will help Iraq meet multiple environmental targets set in the National Development Plan. GEF funds will serve as catalyst to develop a coherent and coordinated approach to reduce pressures on biodiversity and land, through development and implementation of cross sectoral and multi-level 'Integrated Conservation Management Framework' in Iraq. More specifically, the GEF investment will facilitate strengthened policy, legal and regulatory frameworks, assessment of socio-economic impacts of establishing new integrated conservation management on local population. The Project will expand the network of PAs, establish four new protected areas and develop and implement the management plans of these new four areas. The Project will support Iraq's national Land Degradation Neutrality Targets by assessing and surveying of key land degradation drivers, developing decision support tools for locally adaptive LDN measures. In addition, the project will develop and demonstrate local measures enhancing water conservation and preventing loss of soil and its fertility. The project also will result in improved institutional and technical capacities at the ministerial and governorate level, and increased awareness among stakeholders at all institutional levels and the wider public on the importance of establishment and management of protected areas, sustainable land use and soil conservation measures. By the end of the project, project stakeholders will have increased access to environmental information and will be participating more widely in decision-making in Iraq.

1.6. GLOBAL ENVIRONMENTAL BENEFITS

The project will indirectly supports the whole population of 5,252,275 million (as 2,468,569 are Male and 2,783,706 are Female), of which 65% live in urban areas while 35% live in rural areas. The age group (0-18 years) represents the most dominant age group of Middle Euphrates population (51% of total population in the region). The average income of the families in the Middle Euphrates is US$ 1,120, which is lower than the average income of families in Baghdad (US$ 1,270). The project will play an important role in enhancing food production and livelihood improvement for about 300,000 people in the selected areas in Middle Euphrates. 300,000 farmers with equal numbers of men and women and local communities will directly benefit from the Project interventions and move to more sustainable agricultural production with the support of this project. The project will contribute to food security & sustainable livelihoods, creating new jobs in rural areas.

Component 1 will see the update of policies, frameworks, and capacities relative to Sustainable Land Management, Invasive Alien Species Management, Biodiversity and Protected Areas Management. These outcomes will help meet the challenge identified by the Government of Iraq of the lack of clear environmental legislations.

The proposed project will meet biodiversity targets by contributing towards the protection and safeguard of globally threatened and significant species and ecosystems that occur only in the country, such as the endangered Basra Reed Warbler (*Acrocephalus griseldis*) whose unique breeding area is located within the country. Indeed, the protection of the habitats and species will contribute in the conservation status of those species listed under the CITES convention, such as the endangered Dalmatian Pelican (*Pelecanus crispus*), the Spiny-tailed lizard (*Uromastix aegyptia*) or the Cheetah (*Acinonyx jubatus*). Furthurmore, Component 2 will support the Government of Iraq on the establishment of new Protected Areas covering up to 182,081 ha. The targeted new PAs (Razzaza Lake, Lake Sawa, North Ibn Najm and Ibn Najm) are KBAs. By factoring the new PAs resilience to climate change in PA management plans, the Project will contribute to country's Adaptations initiatives.

Furthermore, Component 3 focuses on more sustainable flow of agro-ecosystem services through implementing nature-based solutions to landscape restoration at the local level on 20,000 ha of agricultural arable land in order to strengthen implementation of LDN and enhance food security. Indeed, LDN target was established in the country in 2017 with the aim to minimize the effects of land degradation, combat desertification and conserve land resource productivity to meet food demands. Therefore, it is apparent that these targets have a direct correlation with the project's specifications and outcomes. The implementation of project programs & activities, urging the use of the methodology of proper land & water resources management in a manner that leads to the sustainability of the project, reducing the use of chemical fertilizers & pesticides that lead to pollution of soil & water, reduction of greenhouse gas emissions through increasing vegetation cover, as well as optimal use of agricultural products by the consumer & avoid excessive use. The project will introduce different restoration strategies to restore degraded ecosystems & reverse negative impacts on biodiversity & ecosystem services, including the provision of freshwater, food, & water quality, & climate regulation, while supporting the production aspects of the landscape (Component 3).

This project will provide further evidence & important transformation in a post-conflict country case by enhancing lands' productivity & farmers' capacity. The Project will also support restoration of ecosystems, which will help restore ecosystems & improve pastoralism & address poverty & prevent further displacement which occurred due to ecosystem deterioration.

1.7. INNOVATIVENESS, SUSTAINABILITY AND POTENTIAL FOR SCALING UP

Scaling Up The project has significant prospect to be sustained and scaled-up. First, it will revise the enabling environment with respect to policies, regulations as well as capacity and knowledge building; which will ultimately improve the management of biodiversity conservation in the country. In addition, the project will focus on declaring additional protected areas, which will expand the protected area network in Iraq. Indeed, this emphasizes the potential of amplifying the project in the future at a higher scale. It can be stated that with the enabling environment and practical experience, the government of Iraq will have the necessary skills to replicate this approach to all PAs in the national system.

Features of this project do not solely cover the Middle Euphrates Landscape needs, but elsewhere in the country and in the region. Therefore, with the support from the GEF, these successful outcomes can be replicated. Finally, the project will focus on ecosystem vulnerability assessments and surveys of key land degradation leading to locally adaptive LDN measures, allowing for the establishment of a strong baseline to protect the rich biodiversity of Iraq. The integrated landscape approach to SLM and BD conservation across degraded landscapes developed in this project can serve as a good practice model for other projects seeking to balance biodiversity conservation and long-term productivity.

Sustainability The current COVID-19 pandemic poses a significant 'global risk' on sustainability of all projects, and this Project is not shielded from this risk. Furthermore, Iraq's capacity to sustain project outcomes at the moment is limited due to the prevailing security situations, limited number of skilled manpower and new and complex institutions. However, our current experience in the Protected Area Network project demonstrates that there is strong interest and willingness to develop the capacity as well as ameliorate its environmental institutions. Furthermore, the country's young population has a critical role towards sustainable development and shaping the future, being active architects of development. In order to sustain Project outcomes, key design considerations have been considered for better durability. These issues will be revisited at the PPG phase for achieving enduring outcomes. The project emphasizes multi-

stakeholder processes, supporting the involvement and motivation of stakeholders. As summarized in the stakeholders' section, the Ministry of Health and Environment and UNEP organized an intensive discussion with various stakeholders to identify the local needs. The local needs will be supported with strategic capacity assessments and capacity building activities tailored to local culture and targeted to develop champions and build trust and ownership. Capacity building and training activities targeting farmers will be conduction in collaboration with the Office of Agricultural Extension Services and Training. Gender empowerment is at the forefront of the project, with the establishment of a capacity and knowledge building programme targeting women. The project outcomes and outputs will be sustained, and the impacts on the lives of the local communities will be maintained through demonstration of SLM and biodiversity conservation practices with locally adapted measures supporting distributional outcomes, which will be possible for the target community to sustain. The Project is targeting to remove major barriers causing biodiversity loss and degradation of land. Creation and managing knowledge are key to achieve sustained impact of the project. By building on the currently ongoing projects, the Project is benefiting from the created new knowledge. With a dedicated component on knowledge management, the Project embeds knowledge creation into the project cycle. The capacity and knowledge development programme seek to strengthen local know-how, which equips the communities with the right skills to pave their own paths in a sustainable manner.

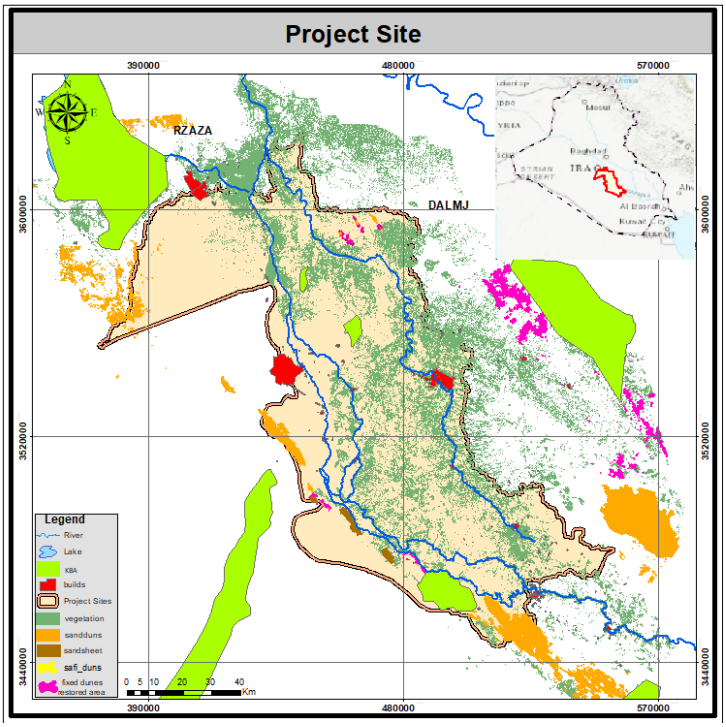
Innovativeness: The project has been tailored to combat Iraq's biodiversity threats in an innovative way. First, the project will develop an Integrated Conservation Management Framework which has yet to be established in Iraq. Biodiversity conservation and land degradation neutrality are necessary for the ecosystem, human and animal health, prosperity and livelihoods. This will be achieved after the identification of legal, policy, and institutional gaps. Furthermore, capacity building is an indispensable effort, engaging experts and local communities in biodiversity conservation, smart agriculture, land management and nature-based solutions.

Although some efforts have been made by the MoHE towards biodiversity conservation, with the establishment of protected areas, these lack management and a long-term monitoring programme. Therefore, the programme will innovatively improve management capacity for effectiveness of protected areas and biodiversity conservation and highlight gender roles in conservation and management.

Finally, the post-war situation and international sanctions, as well as the growing land degradation challenges have resulted in an underdeveloped institutional capacity and governance structure in the environment sector. To this end, advances in SLM, and ecosystem conservation have not been the main priorities of the government. Therefore, this unique situation of Iraq, present innovative opportunities to combat the many threat the biodiversity is facing.

Iraq is in urgent need for environmentally sustainable food systems and political will is strong for a successful and transformational change for a sustainable food and land management. On the other hand, armed conflict converted more than one third of agricultural lands into non-productive lands. These areas have started to be restored gradually. This project will provide further evidence and important transformation in a post-conflict country case by enhancing lands' productivity and farmers' capacity, through partnerships and active engagement on the ground.

1b. *Project Map and Coordinates.* Please provide geo-referenced information and map where the project interventions will take place.



2. *Stakeholders.* Select the stakeholders that have participated in consultations during the project identification phase:

- ☒ **Indigenous Peoples and Local Communities;**
- ☒ **Civil Society Organizations;**
- ☒ **Private Sector Entities;**
- ☐ **If None of the above, please explain why.**
- **In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.**

For the period, May-September 2019, an intensive discussion and meeting with Ministry of Health and Environment and Ministry of Agriculture to discuss and prepare for the PIF were held. Moreover, the local directorates of environment in the selected governorates were included in PIF preparation to identify the local needs and priorities in land management and biodiversity conservation. Also, during the multiple meetings with the National Committee for Protected Areas in Iraq that were conducted within Protected Area Network (PAN) project, the committee presented their priorities and intention to expand the protected area network especially in the Middle Euphrates for its rich biodiversity and the impact on the local people.

Furthermore, consultations with the local stakeholders, including local NGOs, farmers, academia and local communities, will be organized to intensively cover the proposed activities to enhance the project impact at local level. Facilitation between local communities and governments will be in place to ensure continuous exchange of experience and data among the stakeholders which will have an impact on the project planning and implementation.

Stakeholder	Current Mandate / Responsibilities	Expected Role in Project Preparation

United Nations Environment Programme (UNEP)	UNEP is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the UN system, and serves as an authoritative advocate for the global environment. UNEP is currently the lead agency on a project initiating the development of a National Protected Areas Network in Iraq. UNEP is also leading the Arab Group in UNCCD negotiations in preparation for COP14.	Lead agency
Ministry of Environment and Health (MoHE)	As the highest government entity responsible for environmental protection and in charge of overseeing land management and protected areas, MoHE will be the executing entity of the proposed project. MoHE is responsible for the development of protected areas within Iraq, with the aim of safeguarding species and habitats through policy and regulations.	Executing entity
Ministry of Agriculture (MoA)	As the ministry responsible for management of public and private agriculture, with an ongoing project aimed at implementing the national Land Degradation Neutrality (LDN) targets, MoA will provide support and assistance on the design of the program for SLM capacity development and awareness raising on sustainable agricultural practices. Moreover, MoA will support farmers and land users in improving the technology used for agricultural production and livestock keeping, with the aim of increasing capacity for sustainable land management.	Executing partner
Ministry of Water Resources (MoWR)	The Ministry of Water Resources is responsible for water resources management, including assessment, monitoring, and supply of water resources; irrigation and drainage projects to eliminate soil salinity and reclaim agricultural land; water provision in the desert areas for public and agricultural use; and ensures environmental requirements including ecosystem restoration. The Ministry has multiple general directorates, many field offices, and centers (National centers for Water Resources Management, Studies, and Engineering Design, and Al Ahwar Rehabilitation Centers) three national companies.	Executing partner
Governorates of Babil, Karbala, Najaf, and Al-Qadisiyah provinces	Government authority for Babil, Karbala, Najaf, and Al-Qadisiyah governorate. Governorates have the authority to prepare provincial development plans, as well as to design and implement capital projects to improve service delivery conditions.	Executing partner
Ministry of Culture, tourism and antiquities	As the government ministry responsible for the promotion of ecotourism, Ministry of Culture, Tourism and Antiquities will promote ecotourism by linking the natural attractions with surrounding historical and cultural attractions, such as the ancient city of Babylon which was selected as an UNESCO World Heritage Site in 2019, which is in close proximity to the selected pilot governorate Babil.	Executing partner
Local farmers and farmer associations	Farmers and other local residents and the officers of associations that represent them will be invited to participate in the project design, including participation at the PPG planning and validation workshops ensuring the consideration of the role women in rural communities and their important contributions to the agricultural economy as well as the livelihoods of their households.	Beneficiary
Shahrazad	The association will take the lead in developing the baseline gender analysis during the PPG phase with involvement of gender national expert. The results will form the basis for appropriate plans, activities, monitoring, and safeguards to be defined in the project document.	Executing partner

3. Gender Equality and Women's Empowerment. Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis). Does the project expect to include any gender-

responsive measures to address gender gaps or promote gender equality and women empowerment? yes ☒ /no ☐ / tbd ☐ ; If possible, indicate in which results area(s) the project is expected to contribute to gender equality:
☒ closing gender gaps in access to and control over natural resources;
☒ improving women's participation and decision-making; and/or
☒ generating socio-economic benefits or services for women.
Will the project's results framework or logical framework include gender-sensitive indicators? yes☒ /no ☐ / tbd ☐

The post-war situation has heavily affected women in Iraq, being the most vulnerable and most dependent on critical ecosystem services. This project will take into account the needs of women and design its activities as gender-sensitive as possible. Women play an important role in SLM and biodiversity conservation practices and this project will respond to this need. Stronger gender responsive governance arrangements and more secure tenure will provide a more stable platform for investment and for developing local rules and regulations for land management. The project will strengthen capacities to engage men and women from communities in sustainable land management and restoration practices and will engage with policy makers to ensure that policies are supportive of identified SLM approaches.

The project is aware of the fact that women have particularly important roles in rural communities and economies, although these roles and women's important contributions to the agricultural economy as well as the livelihoods of their households are often underrepresented, particularly in structurally conservative and patriarchal societies. The various conflicts affecting Iraq over the last decades have intensified this segregation as the percentage of women-led households has strongly increased due to the wars or surviving husbands migrating in search for work. The project strategy therefore places particular importance on engaging with women and in designing its activities as gender-sensitive as possible. Demonstrating SLM and biodiversity conservation practices at local level need to take local needs and circumstances into account, so that they not only particularly target women and their specific needs, but to also include measures for broadening livelihood opportunities or improving nutritional status in line with BD and LD targets. This is done to ensure the project's sustainability at the same time through strengthening incentive systems favoring SLM and conservation measures as well as increasing the rural population's intrinsic motivation. Reaching out to women is often challenging in patriarchal societies and organizing inclusive training or demonstration activities not always possible. The project will nevertheless aim in this direction and also pay attention to hiring women as part of the project staff and extension personnel to being able to address rural women to the extent possible and necessary. During the PPG phase, a full gender analysis and gender segregated assessment will be undertaken to determine: the number of female resource users, women headed households, impacts of land degradation, climate change, and drought on women and girls, strategies for mainstreaming gender into natural resource management, strategies for optimizing the participation of women in workshops and trainings.

In addition to gender-sensitivity in applying SLM and BD conservation at local demonstration sites, the project will use its leverage in working with governorate and national agencies for amending and establishing policies that explicitly refer to gender-differentiated roles and responsibilities for agriculture, SLM and species conservation. Similarly, both monitoring systems and capacity development strategies in component 3 will strive to maintain a gender-differentiated perspective, so as to enhance opportunities in socio-economic participation and decision making for the entire sural population the project is targeting. Case studies will also be developed to highlight the role of women in conservation and sustainable land management. Communication materials and knowledge management tools will have gender specific materials.

4. Private sector engagement. Will there be private sector engagement in the project? (yes ☒ /no ☐). Please briefly explain the rationale behind your answer.

Both private sector landowners and operators (farmers) are stakeholders in the project as it affects their land use and development practices. Biodiversity and sustainable land management will be mainstreamed into their operations as they work within the guidance provided by integrated conservation management plan that will be developed for the Middle Euphrates landscape and they will be part of the joint working groups that will be formed under Output 1.1.4. It is expected that the private sector exponents will include farmers, landowners, as well as tourism, food and retail operators, etc. There is a significant benefit for private sector, who invests in in sustainable land management. These

come through improved yields of goods, new business opportunities and novel markets, and creating and ensuring social "licenses to operate". The private sector can position themselves to take advantage of potential benefits, including; 1) new products and markets that are resource-use efficient and are suited to restoration and rehabilitation sites; and, 2) improvements in existing markets by increasing production and adding value. Private sector stakeholders will be involved during the project design phase to identify options for financial incentives that will facilitate the adoption of SLM practices and the decoupling of economic activities from unsustainable use of natural resources. Many companies are already recognizing the need for greater environmental accountability and gain competitive advantages by doing do. The eco-tourism for new PAs also offers another area for cooperation and collaboration with the private sector. Capacity building targeting small business will be done through the development of needs-based skills training programs for identifying needs and enhancing the capacity of both existing and potential small businesses to promote biodiversity and sustainable land management.

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

Risk	**Level of Impact**	**Mitigation Measures**
Insecurity and political unrest may result in considerable delays and postponement of project implementation	Medium	The current political situation in Iraq is relatively stable, but the potential for a spontaneous upsurge in violence is possible. The project team will provide continuous monitoring of the security and political situation in the country and update the project board on a regular basis, so there is sufficient lead time for adequate response actions and adjustment in project strategy.
Insufficient knowledge about modern technologies and technical approaches, such as GIS, remote sensing, computer modelling, environmental valuation, cost-benefit analysis, and social impact assessment	Medium	The project will support training and coordination with the Ministries in order to support the introduction and use of new technology, as well as the transfer of knowledge and skills from the extension services of the Ministries to the staff. In addition, the project will pursue coordination and development of training modules with other on-going projects, such as the Protected Area Network project.
Reaching out to women is often challenging in patriarchal societies	Medium	Develop appropriate startegies to ensure women will be able to participate in trainings and workshops.
Rehabilitation of disused and abandoned land surfaces may encounter resistance from landowners (public and private) and political figures	Low	The project will work to reduce the likelihood of this risk occurring by ensuring that initiatives will be designed and implemented with the full participation of stakeholders from the public sector, namely governorates and from the private sector, fostering an understanding of the need for striking the right balance between planned and occurring land use and safeguarding of ecosystems for the services they provide. If the risk arises, the project will stress the economic case for sustainable natural resource use versus the development of certain sectors in sensitive areas delivering critical ecosystem services. It will also put into effect an effective communication strategy and stakeholder involvement plan which is expected to lead to an appreciation, and defence, of what the project is proposing.
Unclear roles of stakeholders in the execution of the project may result in lack of commitment from local communities and therefore may result in failure of demonstration projects	Low	A stakeholder engagement plan will be drawn up which defines the roles of the stakeholders at the early stage of the project. During project implementation, the project will actively engage local communities and will raise awareness through communication campaigns.
Climate change impacts (e.g. more severe droughts; forest fires; increased flooding) may negatively affect project activities for ecosystem restoration and effective SLM practices	Low	Integrated land use plans will include hazard mitigation measures to minimize the impacts of droughts (e.g. through better water management and adoption of drought tolerant crops), to reduce the risk of forest fires (through education and improved enforcement regarding the intentional setting of fires), and to reduce the threat of flooding (through improved land

		management and retention / restoration of vegetative cover).
Disruption of or impediments for project activities due to the ongoing COVID 19-pandemic. Reallocation of committed co-financing from the government to COVID related initiatives.	Medium	The Project has activities that can be executed during a lockdown period. Meetings and activities that can be done remotely will be prioritized as a precautionary measure. However, some key activities of the project include field activities and stakeholder engagement, which will require face-to-face meetings. The project will adhere to the standardized measures to reduce infection risks (social distancing, masks, disinfectant lotion). Analytical work, capacity development and production of knowledge management materials will be conducted as deskwork, in virtually connected teams or in small groups to reduce COVID 19 infection risks. Co-finance is one of the key components of the project success. This is always a risk especially if the Government budget is further affected with future oil price changes. We will work with the government partners on the sources of co-finance and will establish some lead indicators measuring the flow of co-finance. As a back-up plan, we will identify key donors supporting Iraq and we will keep them aware about the Project starting from the PPG phase.

6. Coordination. Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

The Ministry of Health and Environment of Iraq is the governmental institution to provide political and institutional supervision and act as the National Executing Entity/Responsible Partner. The overall responsibility for the project execution and implementation by MoHE implies the timely and verifiable attainment of project objectives and outcomes. The project will identify key stakeholders and partners on the ground that can help and support in the implementation of the agreed and approved workplan.

The Project will seek to generate synergy with the GEF funded Project 'Initial Steps for the Establishment of the National Protected Areas Network' (GEF id 5392), which aims to develop and start implementing the plan for the establishment of a national Network of Protected Areas in Iraq.

The Project will coordinate with the GEF Project 'Establishing a Functional Environmental Information System for the Synergistic Implementation of Multilateral Environmental Agreements (MEAs) for Iraq' (GEF id 9744), which is implemented by UNEP.

Furthermore, the Project will coordinate with the GEF Project 'Sustainable Land Management for Improved Livelihoods in Degraded Areas of Iraq' (GEF id 9742), implemented by FAO and aims to reverse land degradation processes, conserve and sustainably manage land and water resources in degraded marshland ecosystems in Southern Iraq for greater access to services from resilient ecosystems and improved livelihoods.

7. Consistency with National Priorities. Is the project consistent with the National strategies and plans or reports and assessements under relevant conventions? (yes ☒ /no ☐). If yes, which ones and how:

At the national level a series of policies, plans and strategies have been established integrating biodiversity and sustainable land management as a priority in the country. With respect to national strategies and development programmes, the project falls in line with the following programmes and plans which are considered the most salient:

National Development Plan 2018 – 2022 (NDP): The Ministry of Planning has developed a NDP which includes the general framework for the development plan of Iraq. One of the main areas of focus of the NDP is Environmental Sustainability, with the objective of protecting, restoring and sustaining the use of terrestrial ecosystems, which is in line with this project. The outcomes under the objective include 1) reducing land degradation and combating

desertification, 2) preserving the biodiversity, and 3) evolution of the use of alternative materials in agriculture and the trend towards clean agriculture. The project falls in line with these targets with the development of an Integrated Biodiversity Conservation Management Framework, the establishment of a new PA, as well as the implementation of climate-smart conservation practices and reduced impact severity of erosion, salinization and fertility of soils in affected ecosystems.

The National Environmental Strategy and Action Plan: The proposed project is directly in line with the objectives of the Iraqi National Environmental Strategy. The Strategy has identified a number of priority objectives regarding environmental protection, which include controlling land degradation, combating desertification and preserving biodiversity. This project is consistent with some of the main purposes under the objective: 1) inclusive planning of soil resources, 2) minimized expansion of sand dunes, 3) addressed desertification, and 4) reviewed and updated agricultural and environmental laws.

Iraq's National Biodiversity Strategy and Action Plan (NBSAP) and the Iraq Sixth National Report (December 2018): The NBSAP clearly highlights sustainable management and the use of natural ecosystems and resources as well as ecosystem restoration as priority areas. The Strategy identified 23 strategic targets and 35 actions. Several of these targets are in line with the proposed project.
Target 5 focuses on habitat loss. The project seeks to establish an integrated biodiversity conservation framework. Target 9 sets out the threat of invasive alien species on biodiversity, hence the project will meet this target with the establishment of IAS Management Strategy. Finally Target 15 states that by 2020, ten new Protected Areas have been established, which falls in line with the creation of a new PA.

Iraq identified and set its national Land Degradation Neutrality Targets. These targets aim at improving productivity and soil organic carbon (SOC) stocks in 80,000 ha of annual crops; converting 100,000 ha of bare land to pasture lands; reducing salinization rate in 10,000 ha of cropland and plantation lands; and converting 150,000 ha of sand dune land to grasslands by 2035. It is expected that this project will support Iraq in achieving LDN targets by helping to improve land productivity and SOC stocks and hence achieving target 1 and 2; to support sustainable flow of agro-ecosystem services through implementing nature based solutions and therefore helping to meet target 3; minimize salinization, which will ultimately help meet target 4; and last but not least minimize sand dune expansion (target 5).

8. Knowledge Management. Outline the "Knowledge Management Approach" for the project and how it will contribute to the project's overall impact, including plans to learn from relevant projects, initiatives and evaluations.

The project places particular emphasis on knowledge management and therefore has an entire component focusing on related issues of capacity, monitoring and knowledge management. Biodiversity conservation and SLM approaches at landscape scale are fairly new to many of the stakeholders and national or governorate agencies involved in this project, and it is therefore particularly difficult for them to establish clear links between such integrated approaches and changes and successes in the field. Thus, emphasis will be on aligning knowledge management tools with governorate and national planning processes, so as to strengthen the enabling environment for SLM and species conservation and to sustain these efforts. Further, project-inherent is the notion that enhanced capacity and the use of monitoring, assessment and evaluation will provide a good data baseline for informed policy and decision making that takes such lessons learned into account for amendments and reforms that will also set the stage for expanding on successful practices. The project's knowledge management strategy will therefore also support the development of best practices for discussions and networking to promote PA management, biodiversity conservation and SLM practices, successes and lessons learned beyond the project's area. Building upon the experiences of the UNEP-driven PAM project and the FAO-led agricultural project in the Marshlands in Iraq, and collaborating with these, the proposed project aims at establishing knowledge management tools for and with both local stakeholders and governorate decision makers.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S)

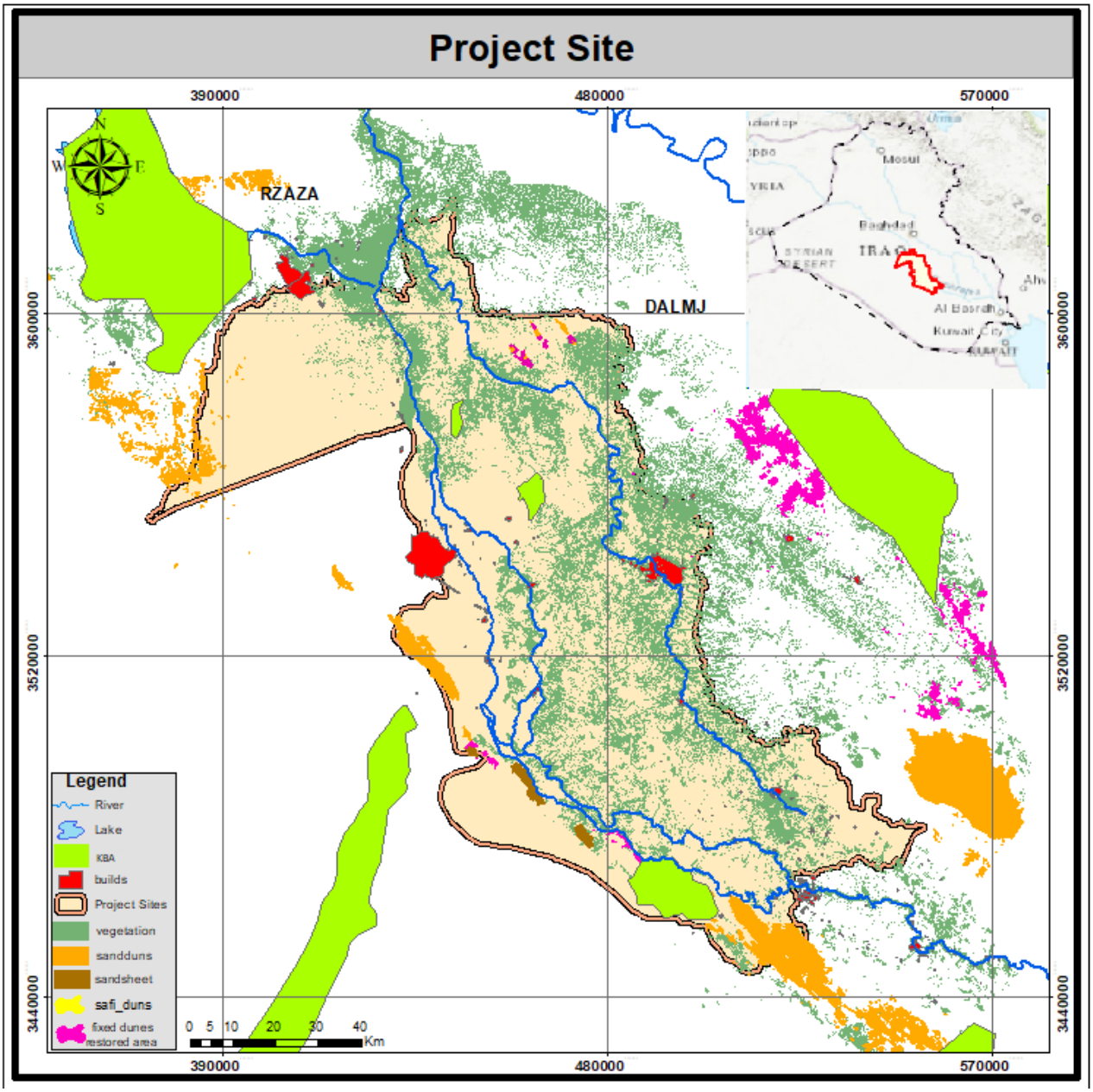
A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):
(Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this SGP OFP endorsement letter).

NAME	**POSITION**	**MINISTRY**	**DATE** *(MM/dd/yyyy)*
Dr. Jasim Abdulazeez Humadi ALMOHAMADI	Deputy Minister for Environmental Affairs	**MINISTRY OF HEALTH AND ENVIRONMENT**	**09/10/2020**

Annex A

PROGRAM/PROJECT MAP AND GEOGRAPHIC COORDINATES

(when possible)



Annex B

GEF 7 Core Indicator Worksheet

Use this Worksheet to compute those indicator values as required in Part I, item F to the extent applicable to your proposed project. Progress in programming against these targets for the project will be aggregated and reported at anytime during the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Core Indicator 1	**Terrestrial protected areas created or under improved management for conservation and sustainable use**						***(Hectares)***
			Hectares (1.1+1.2)				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
Indicator 1.1	Terrestrial protected areas newly created						
Name of Protected Area	WDPA ID	IUCN category	Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
Razzaza Lake		IV	156,234				
Lake Sawa,		IV	*20,058*				
North Ibn Najm		IV	*1,789*				
Ibn Najm		IV	4,000				
		Sum	182,081				
Indicator 1.2	Terrestrial protected areas under improved management effectiveness						
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score			
				Baseline		Achieved	
					Endorsement	MTR	TE
		(select)					
		(select)					
		Sum					
Core Indicator 2	**Marine protected areas created or under improved management for conservation and sustainable use**						***(Hectares)***
			Hectares (2.1+2.2)				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	*TE*	
Indicator 2.1	Marine protected areas newly created						
Name of Protected Area	WDPA ID	IUCN category	Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
		(select)					
		(select)					
		Sum					
Indicator 2.2	Marine protected areas under improved management effectiveness						
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score (Scale 1-3)			
				Baseline		Achieved	
				PIF stage	Endorsement	MTR	TE
		(select)					
		(select)					
		Sum					
Core Indicator 3	**Area of land restored**						***(Hectares)***
			Hectares (3.1+3.2+3.3+3.4)				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
Indicator 3.1	Area of degraded agricultural land restored						

			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 3.2	Area of forest and forest land restored					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 3.3	Area of natural grass and shrublands restored					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 3.4	Area of wetlands (including estuaries, mangroves) restored					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 4	**Area of landscapes under improved practices (hectares; excluding protected areas)**					***(Hectares)***
		Hectares (4.1+4.2+4.3+4.4)				
		Expected		Expected		
		PIF stage	Endorsement	MTR	TE	
Indicator 4.1	Area of landscapes under improved management to benefit biodiversity					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 4.2	Area of landscapes that meet national or international third-party certification that incorporates biodiversity considerations					
Third party certification(s):			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 4.3	Area of landscapes under sustainable land management in production systems					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		SLM in Middle Euphrates Lowlands Landscape	*20,000*			
			20,000			
Indicator 4.4	Area of High Conservation Value Forest (HCVF) loss avoided					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 5	**Area of marine habitat under improved practices to benefit biodiversity**					***(Hectares)***
Indicator 5.1	Number of fisheries that meet national or international third-party certification that incorporates biodiversity considerations					
Third party certification(s):			Number			

			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 5.2	Number of large marine ecosystems (LMEs) with reduced pollution and hypoxial					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 6	**Greenhouse gas emission mitigated**					***(Tons)***
			Tons (6.1+6.2)			
			Entered		Entered	
			PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)					
	Expected CO2e (indirect)					
Indicator 6.1	Carbon sequestered or emissions avoided in the AFOLU sector					
			Tons			
			Entered		Entered	
			PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)					
	Expected CO2e (indirect)					
	Anticipated Year					
Indicator 6.2	Emissions avoided					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)					
	Expected CO2e (indirect)					
	Anticipated Year					
Indicator 6.3	Energy saved					
			MJ			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 6.4	Increase in installed renewable energy capacity per technology					
		Technology	Capacity (MW)			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		(select)				
		(select)				
Core Indicator 7	**Number of shared water ecosystems (fresh or marine) under new or improved cooperative management**					***(Number)***
Indicator 7.1	Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.2	Level of Regional Legal Agreements and Regional Management Institutions to support its implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.3	Level of National/Local reforms and active participation of Inter-Ministerial Committees					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE

Indicator 7.4	Level of engagement in IWLEARN through participation and delivery of key products					
		Shared water ecosystem	Rating (scale 1-4)			
			Rating		Rating	
			PIF stage	Endorsement	MTR	TE
Core Indicator 8	**Globally over-exploited fisheries Moved to more sustainable levels**					***(Tons)***
			Metric Tons			
			PIF stage	Endorsement	MTR	TE
Core Indicator 9	**Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products**					***(Tons)***
			Metric Tons (9.1+9.2+9.3)			
			Expected		Achieved	
			PIF stage	PIF stage	MTR	TE
Indicator 9.1	Solid and liquid Persistent Organic Pollutants (POPs) and POPs containing materials and products removed or disposed					
POPs type			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
(select)	(select)	(select)				
(select)	(select)	(select)				
(select)	(select)	(select)				
Indicator 9.2	Quantity of mercury reduced					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.3	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.4	Number of low-chemical/non-chemical systems implemented particularly in food production, manufacturing and cities					
		Technology	Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 10	**Reduction, avoidance of emissions of POPs to air from point and non-point sources**					***(Grams)***
Indicator 10.1	Number of countries with legislation and policy implemented to control emissions of POPs to air					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 10.2	Number of emission control technologies/practices implemented					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 10.3	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			

			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 11	**Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment**					***(Number)***
					Number Achieved	
				PIF	MTR	TE
			Female	150,000		
			Male	150,000		
			Total	*300,000*		

Annex C

Project Taxonomy Worksheet

Use this Worksheet to list down the taxonomic information required under Part I, item G by ticking the most relevant keywords/ topics/themes that best describe this project.

Level 1	Level 2	Level 3	Level 4
☒**Influencing models**			
	☐**Transform policy and regulatory environments**		
	☒**Strengthen institutional capacity and decision-making**		
	☐**Convene multi-stakeholder alliances**		
	☐**Demonstrate innovative approaches**		
	☐**Deploy innovative financial instruments**		
☒**Stakeholders**			
	☐**Indigenous Peoples**		
	☐**Private Sector**		
		☐Capital providers	
		☐Financial intermediaries and market facilitators	
		☐Large corporations	
		☐SMEs	
		☐Individuals/Entrepreneurs	
		☐Non-Grant Pilot	
		☐Project Reflow	
	☒**Beneficiaries**		
	☒**Local Communities**		
	☐**Civil Society**		
		☐Community Based Organization	
		☐Non-Governmental Organization	
		☐Academia	
		☐Trade Unions and Workers Unions	
	☐**Type of Engagement**		
		☐Information Dissemination	
		☐Partnership	
		☐Consultation	
		☐Participation	
	☒**Communications**		
		☒Awareness Raising	
		☐Education	
		☐Public Campaigns	
		☐Behavior Change	
☒**Capacity, Knowledge and Research**			
	☐**Enabling Activities**		
	☒**Capacity Development**		
	☐**Knowledge Generation and Exchange**		
	☐**Targeted Research**		
	☐**Learning**		
		☐Theory of Change	
		☐Adaptive Management	
		☐Indicators to Measure Change	
	☐**Innovation**		
	☒**Knowledge and Learning**		
		☐Knowledge Management	
		☐Innovation	
		☒Capacity Development	
		☐Learning	
	☐**Stakeholder Engagement Plan**		

☒**Gender Equality**			
	☒**Gender Mainstreaming**		
		☒Beneficiaries	
		☐Women groups	
		☐Sex-disaggregated indicators	
		☐Gender-sensitive indicators	
	☐**Gender results areas**		
		☐Access and control over natural resources	
		☐Participation and leadership	
		☐Access to benefits and services	
		☒Capacity development	
		☐Awareness raising	
		☐Knowledge generation	
☒**Focal Areas/Theme**			
	☐**Integrated Programs**		
		☐Commodity Supply Chains ([10]Good Growth Partnership)	
			☐Sustainable Commodities Production
			☐Deforestation-free Sourcing
			☐Financial Screening Tools
			☐High Conservation Value Forests
			☐High Carbon Stocks Forests
			☐Soybean Supply Chain
			☐Oil Palm Supply Chain
			☐Beef Supply Chain
			☐Smallholder Farmers
			☐Adaptive Management
		☐Food Security in Sub-Sahara Africa	
			☐Resilience (climate and shocks)
			☐Sustainable Production Systems
			☐Agroecosystems
			☐Land and Soil Health
			☐Diversified Farming
			☐Integrated Land and Water Management
			☐Smallholder Farming
			☐Small and Medium Enterprises
			☐Crop Genetic Diversity
			☐Food Value Chains
			☐Gender Dimensions
			☐Multi-stakeholder Platforms
		☐Food Systems, Land Use and Restoration	
			☐Sustainable Food Systems
			☐Landscape Restoration
			☐Sustainable Commodity Production
			☐Comprehensive Land Use Planning
			☐Integrated Landscapes
			☐Food Value Chains
			☐Deforestation-free Sourcing
			☐Smallholder Farmers
		☐Sustainable Cities	
			☐Integrated urban planning
			☐Urban sustainability framework
			☐Transport and Mobility
			☐Buildings
			☐Municipal waste management
			☐Green space
			☐Urban Biodiversity
			☐Urban Food Systems
			☐Energy efficiency
			☐Municipal Financing

10

			☐ Global Platform for Sustainable Cities
			☐ Urban Resilience
	☒ **Biodiversity**		
		☒ Protected Areas and Landscapes	
			☒ Terrestrial Protected Areas
			☐ Coastal and Marine Protected Areas
			☐ Productive Landscapes
			☐ Productive Seascapes
			☐ Community Based Natural Resource Management
		☐ Mainstreaming	
			☐ Extractive Industries (oil, gas, mining)
			☐ Forestry (Including HCVF and REDD+)
			☐ Tourism
			☐ Agriculture & agrobiodiversity
			☐ Fisheries
			☐ Infrastructure
			☐ Certification (National Standards)
			☐ Certification (International Standards)
		☐ Species	
			☐ Illegal Wildlife Trade
			☐ Threatened Species
			☐ Wildlife for Sustainable Development
			☐ Crop Wild Relatives
			☐ Plant Genetic Resources
			☐ Animal Genetic Resources
			☐ Livestock Wild Relatives
			☐ Invasive Alien Species (IAS)
		☐ Biomes	
			☐ Mangroves
			☐ Coral Reefs
			☐ Sea Grasses
			☐ Wetlands
			☐ Rivers
			☐ Lakes
			☐ Tropical Rain Forests
			☐ Tropical Dry Forests
			☐ Temperate Forests
			☐ Grasslands
			☐ Paramo
			☐ Desert
		☐ Financial and Accounting	
			☐ Payment for Ecosystem Services
			☐ Natural Capital Assessment and Accounting
			☐ Conservation Trust Funds
			☐ Conservation Finance
		☐ Supplementary Protocol to the CBD	
			☐ Biosafety
			☐ Access to Genetic Resources Benefit Sharing
	☐ **Forests**		
		☐ Forest and Landscape Restoration	
			☐ REDD/REDD+
		☐ Forest	
			☐ Amazon
			☐ Congo
			☐ Drylands
	☒ **Land Degradation**		
		☒ Sustainable Land Management	
			☐ Restoration and Rehabilitation of Degraded Lands
			☐ Ecosystem Approach

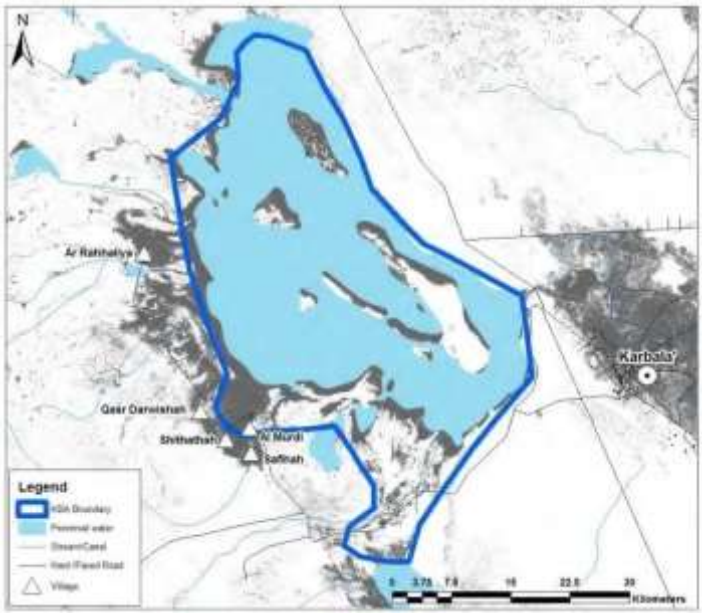
			☐ Integrated and Cross-sectoral approach
			☐ Community-Based NRM
			☐ Sustainable Livelihoods
			☐ Income Generating Activities
			☐ Sustainable Agriculture
			☐ Sustainable Pasture Management
			☐ Sustainable Forest/Woodland Management
			☐ Improved Soil and Water Management Techniques
			☐ Sustainable Fire Management
			☐ Drought Mitigation/Early Warning
		☒ Land Degradation Neutrality	
			☒ Land Productivity
			☐ Land Cover and Land cover change
			☐ Carbon stocks above or below ground
		☐ Food Security	
	☐ **International Waters**		
		☐ Ship	
		☐ Coastal	
		☐ Freshwater	
			☐ Aquifer
			☐ River Basin
			☐ Lake Basin
		☐ Learning	
		☐ Fisheries	
		☐ Persistent toxic substances	
		☐ SIDS : Small Island Dev States	
		☐ Targeted Research	
		☐ Pollution	
			☐ Persistent toxic substances
			☐ Plastics
			☐ Nutrient pollution from all sectors except wastewater
			☐ Nutrient pollution from Wastewater
		☐ Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		☐ Strategic Action Plan Implementation	
		☐ Areas Beyond National Jurisdiction	
		☐ Large Marine Ecosystems	
		☐ Private Sector	
		☐ Aquaculture	
		☐ Marine Protected Area	
		☐ Biomes	
			☐ Mangrove
			☐ Coral Reefs
			☐ Seagrasses
			☐ Polar Ecosystems
			☐ Constructed Wetlands
	☐ **Chemicals and Waste**		
		☐ Mercury	
		☐ Artisanal and Scale Gold Mining	
		☐ Coal Fired Power Plants	
		☐ Coal Fired Industrial Boilers	
		☐ Cement	
		☐ Non-Ferrous Metals Production	
		☐ Ozone	
		☐ Persistent Organic Pollutants	
		☐ Unintentional Persistent Organic Pollutants	
		☐ Sound Management of chemicals and Waste	
		☐ Waste Management	
			☐ Hazardous Waste Management
			☐ Industrial Waste
			☐ e-Waste

		☐ Emissions	
		☐ Disposal	
		☐ New Persistent Organic Pollutants	
		☐ Polychlorinated Biphenyls	
		☐ Plastics	
		☐ Eco-Efficiency	
		☐ Pesticides	
		☐ DDT - Vector Management	
		☐ DDT - Other	
		☐ Industrial Emissions	
		☐ Open Burning	
		☐ Best Available Technology / Best Environmental Practices	
		☐ Green Chemistry	
	☒ **Climate Change**		
		☒ **Climate Change Adaptation**	
			☐ Climate Finance
			☐ Least Developed Countries
			☐ Small Island Developing States
			☐ Disaster Risk Management
			☐ Sea-level rise
			☒ Climate Resilience
			☐ Climate information
			☐ Ecosystem-based Adaptation
			☐ Adaptation Tech Transfer
			☐ National Adaptation Programme of Action
			☐ National Adaptation Plan
			☐ Mainstreaming Adaptation
			☐ Private Sector
			☐ Innovation
			☐ Complementarity
			☐ Community-based Adaptation
			☐ Livelihoods
		☐ **Climate Change Mitigation**	
			☐ Agriculture, Forestry, and other Land Use
			☐ Energy Efficiency
			☐ Sustainable Urban Systems and Transport
			☐ Technology Transfer
			☐ Renewable Energy
			☐ Financing
			☐ Enabling Activities
		☐ **Technology Transfer**	
			☐ Poznan Strategic Programme on Technology Transfer
			☐ Climate Technology Centre & Network (CTCN)
			☐ Endogenous technology
			☐ Technology Needs Assessment
			☐ Adaptation Tech Transfer
		☐ **United Nations Framework on Climate Change**	
			☐ Nationally Determined Contribution
		☐ **Climate Finance (Rio Markers)**	☐ Paris Agreement ☐ Sustainable Development Goals ☐ Climate Change Mitigation 1 ☐ Climate Change Mitigation 2 ☐ Climate Change Adaptation 1 ☐ Climate Change Adaptation 2

Annex D Description of Targeted KBAs

Razzaza Lake:

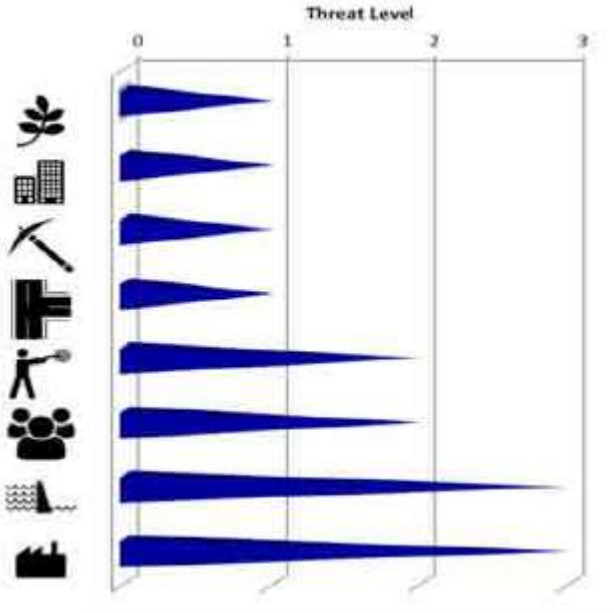
1	**PA Name**	Razaza Lake
2	**Location:**	Iraq – Anbar and Karbala governorate
3	**Status (proposed or designated)**	Proposed
4	**Designation type (National, regional …)**	National
5	**English Designation**	
6	**IUCN category**	(IV)
7	**Coordination**	N 32‟ 41” E 43‟ 40”
8	**Brief description:**	The closest big city to the site is Karbala, the Karbala province capital, which is actually very close to the area towards its southeastern end at a distance of about 10 Km. Ramadi, the capital city of Anbar province is located to the north of the area at an approximate distance of 50 Km from the northern edge of the lake. This freshwater lake was formed during the seventies as a second storage reservoir to control floods from the Euphrates and to take excess water from the Habbaniya lake. To the eastern side of the area along the Euphrates river there are some agricultural areas, while the rest of the wider area where Razaza is located features desert environment with flat salt lands. At the western side and southwestern corner the area is rich with date, palm orchards; however, there are some orchards at the southern parts. This region experiences a hot desert climate with extremely hot, dry summers and cool winters. Almost all of the yearly precipitation is received between November and April, though no month is truly wet. During the surveys 42 bird species were observed. Razaza Lake provides vast areas of mudflats that are suitable habitat for large numbers of migrant and wintering waterfowl and waders. There is a resident population of Greater Flamingo *Phoenicopterus roseus* that might use this wetland for breeding.

9	**The area of the protected area (if available)**	156,234 ha   location and map of the proposed PA Razaza Lake
10	**The groups of species that exist in PA (Mammals, birds, amphibians …etc), With its numbers**	Plants: 48 species Birds: 42 species Mammals: about 5 species
11	**The number of species, under each of IUCN RED LIST THREAT CATEGORY**	• Greater Spotted Eagle *Aquila clanga* (Vulnerable) • Marbled Duck *Marmaronetta angustirostris* (Vulnerable)

12 Nice pictures of the landscape

The eastern side of Razzaza Lake (Photo by Mudhafar A. Salim, 2009)

Conservation Issues: The main threat to Razzaza is the lack of water since the main source (from Habbaniya Lake via the Sin Al-Thibban Canal) is completely blocked. Additional water in Razzaza would improve the circulation of water, reduce salinity of the lake and provide more habitat for birds, plants and fish. Unfortunately recent information on longterm planning indicates that Razzaza will continue to receive less water not more over the coming years. Pollution to the lake comes from the drainage canal that collects sewage and agricultural wastewater from the adjacent areas and is currently one of the only water input sources for Razzaza. Human intrusion (especially during the bird breeding season), movement of trucks causing dust and disturbance, gravel mining and the hunting of birds (particularly waterfowl) and fishing are significant impacts though the last is now in decline due to the declining water and increasingly salinity of the lake.



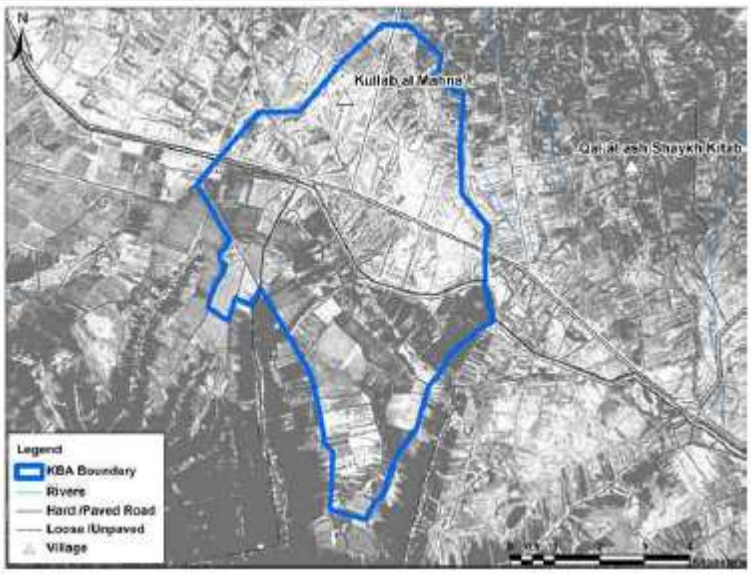
Sawa Lake:

1	**PA Name**	Sawa Lake
2	**Location:**	Iraq – Muthanna governorate
3	**Status (proposed or designated)**	Proposed as Ramsar site
4	**Designation type (National, regional …)**	National
5	**English Designation**	
6	**IUCN category**	
7	**Coordinatio n**	N 31º 18‟ 50” E 45º 00‟ 00”
8	**Brief description:**	Sawa Lake is located at the eastern edge of the southern desert close to the Euphrates River. This lake has no inlet or outlet and is fed by groundwater that originates from the higher western desert areas. The only plant cover is scattered low desert shrubs. Most of the delineated area consists of desert and semi-desert with scattered desert shrubs, while the lake itself forms a small portion of the site. Local people reported that the original size and depth of the lake were greater than currently, and this is likely due to declining underground waters in the region. There was a small area of construction for a recreational center on the southeastern corner of the lake but it appeared that this complex was abandoned by the time of the survey.
9	**The area of the protected area (if available)**	20,058 ha 

		 location and map of the proposed PA Sawa Lake
10	**The groups of species that exist in PA (Mammals, birds, amphibians …etc), With its numbers**	Reptile: 1 species Birds: 25 species Mammals: 4 species (not accurate)
11	**The number of species, under each of IUCN RED LIST THREAT CATEGOR Y**	Birds: 1- Marbled Teal (*Marmaronetta angustirostris)* (Vulnerable)
12	**Nice pictures of the landscape**	 View north at the western edge of Sawa Lake (Photo by Mudhafar A. Salim, 2010)

North Ibn Najm (IQ062):

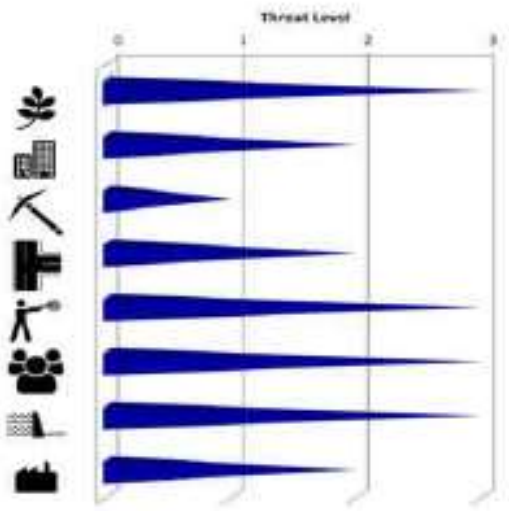
1	**PA Name**	North Ibn Najm (IQ062)
2	**Location:**	Iraq – Babil governorate
3	**Status (proposed or designated)**	Proposed
4	**Designation type (National, regional …)**	National
5	**English Designation**	
6	**IUCN category**	(IV)
7	**Coordination**	32.31528°N 44.40694°E
8	**Brief description:**	North Ibn Najm (locally known as Garrat Sayid Jafar) is a small, isolated marsh that receives water from the surrounding network of canals bringing drainage water from rice fields, farms and orchards that surround the site. The marsh (along with Ibn Najm IQ063) are the last remaining wetlands from the original Ibn Najm that covered a large area at the intersection of Najaf, Babil, and Qadissiya Governorates, which were described by Evans (1994) as a large freshwater marsh of possibly great importance for wintering waterbirds (IBA026). During the period of agricultural expansion between the 1970s-90s (particularly focused on rice production using local varieties) the original Ibn Najm was reduced to small patches among the rice fields and palm orchards. The geology of the area is Mesopotamian alluvium, mainly silts. Dense reed beds of Phragmites and Typha grow here, in addition to many species of aquatic plants, but the site also contains shrub woodlands with Tamrix sp. and Alhagi graecorum. Large numbers of ducks were observed during the survey. Major change happened in this marsh between the summer of 2009 and 2010. In 2010, the team found the area entirely dry except for some water patches in the canals and a few depressions. Most of the plant cover had died because of the lack of the water. The locals reported that because of the shortage of water in 2010, the Ministries of Agriculture and Water Resources did not allow the farmers to grow rice, which decreased the amount of water draining into the marsh.

9	**The area of the protected area (if available)**	1,789 ha   location and map of the proposed PA
10	**The groups of species that exist in PA (Mammals, birds, amphibians …etc), With its numbers**	A1. Globally threatened species Marbled Duck Marmaronetta angustirostris (Resident) A2. Restricted-range species Basra Reed Warbler Acrocephalus griseldis (Summer visitor) 10 pairs Iraq Babbler Turdoides altirostris (Resident) A4i. 1% or more of biogeographical population of a congregatory waterbird species Marbled Duck Marmronetta angustirostris
11	**The number of species, under each of IUCN RED LIST THREAT CATEGORY**	• Marbled Duck Marmaronetta angustirostris (Vulnerable) •

12 Nice pictures of the landscape	

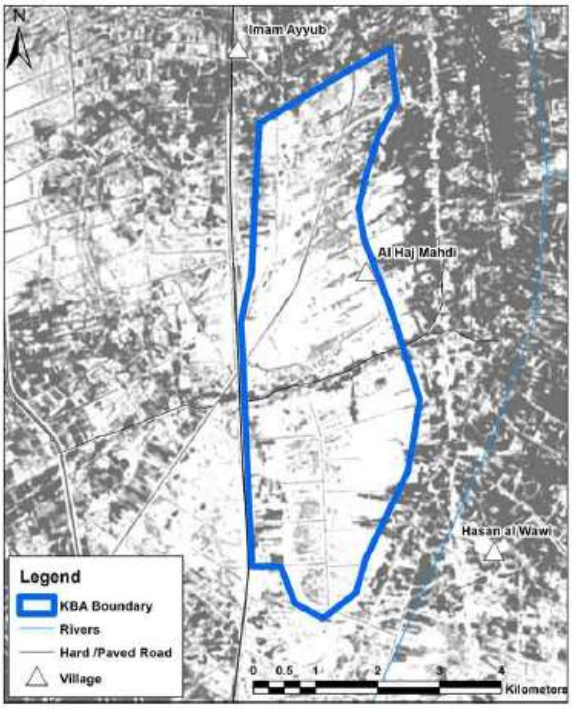
Conservation Issues: This site is highly variable due to often yearly changes in the water regime. But based on the results of these limited assessment visits, it appeared that the site can harbor threatened species such as Marmaronetta angustirostris and endemic species and subspecies such as Tachybaptus ruficollis iraquensis, Turdoides altirostris and Corvus cornix capellanus that breed regularly in or around this marsh. The lack of a stable supply to ensure adequate water levels and quality is the highest threat here. Also over-exploitation due to hunting and over-fishing (primarily through electro-fishing); human intrusion, especially during the breeding season, and agricultural expansion have a very high impact.

Pollution threats here mainly stem from smoke from the asphalt factory adjacent to this marsh, but are also the result of plastic waste and other rubbish brought in either by the wind or by visitors. An additional concern is the presence of the invasive Tilapia, which was reported by most of the fishermen in the area.



Ibn Najm (IQ063):

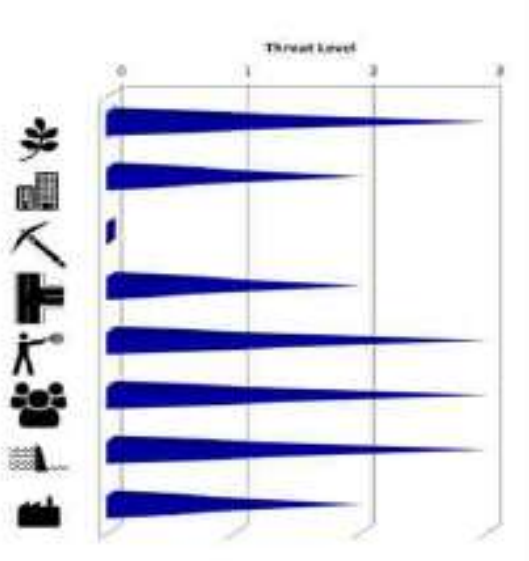
1	**PA Name**	Ibn Najm (IQ062)
2	**Location:**	Iraq – Babil and Najaf governorate
3	**Status (proposed or designated)**	Proposed
4	**Designation type (National, regional …)**	National
5	**English Designation**	
6	**IUCN category**	(IV)
7	**Coordination**	32.14917ºN 44.64167ºE
8	**Brief description:**	Site Description: Evans (1994) provided little information on this site (IBA026). It was described as a seasonal freshwater lake lying east of the Euphrates River and c. 130 km south of Baghdad, in Babel Governorate, in the triangle between Babel, Qadissiya, and Najaf but the original body of water at Hor Ibn Najm had shrunk to scattered pools and marshes. After a period of intense agricultural expansion, these lands were used as rice farms and date-palm orchards but irrigation water drains to areas of well-developed reedbeds of Phragmites and Typha in addition to submerged vegetation such as Hydrella verticillata, Myriophyllum verticillatum, and Ceratophyllum demersum and free-floating plants such as Lemna sp. There are also shrub woodlands within the site. The geology of the area is Mesopotamian alluvium, mainly silts. Some patches among the reedbeds form suitable habitat for birds to feed and shelter. During the summer 2008 survey, the marsh area was found to be almost dry (a network of canals and embankments has disfigured the original landscape) and the reed and Typha areas were generally dry, except close to the drainage canals. The site has been under severe threat of drought since a large drainage canal was dug in the middle of the area. No water has returned to the marsh since; it remains dry and the reed beds also started to dry up. It seems that a large regulator was under construction at the newly dug draining canal at the time of the summer 2010 visit, but no further information was gained after that survey.
9	**The area of the protected area (if available)**	4,000 ha 



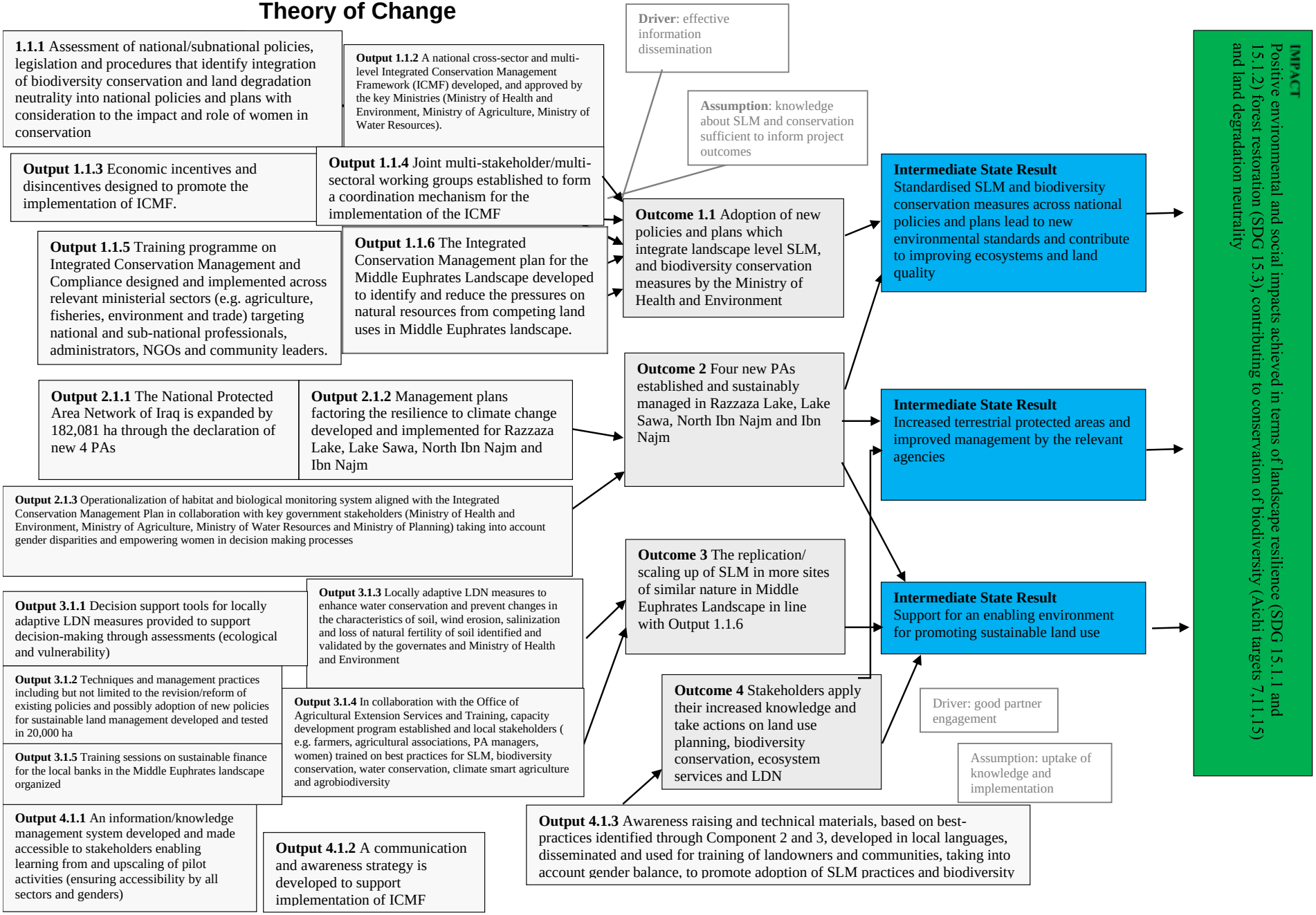
location and map of the proposed PA

10	**The groups of species that exist in PA (Mammals, birds, amphibians …etc), With its numbers**	
11	**The number of species, under each of IUCN RED LIST THREAT CATEGORY**	• Marbled Duck Marmaronetta angustirostris (Vulnerable) •
12	**Nice pictures of the landscape**	

Conservation Issues: This area was once a true marsh habitat that harbored a considerable diversity of birds including threatened and endemic species as well as quite large numbers of wintering waterfowl, waders and raptors. But this historic marsh has sadly been slowly eradicated as more and more of the area is converted for agriculture and human habitation. Continued efforts to drain the wetland for agricultural uses and the large drainage canal that cuts the area into two parts has severely affected the natural status of this wetland and may eventually turn it into a dry area. Unsustainable hunting and overfishing, human disturbances, especially during the breeding season, and agricultural expansion have a significant impact. The introduced invasive fish (Tilapia) was found in the area as well as frequently reported by locals.



Theory of Change



The project's theory of change is based on interplay amongst its four components: Outcome 1 will create an enabling environment to support transforming capacities to integrate sustainable conservation management into decision making policies and frameworks. Outcome 2 will ensure that policies and frameworks also include avoiding degradation and biodiversity loss to enable ecosystem functions to be restored. Outcome 3 will strengthen the transition of land management by widely disseminating information, lessons learned and demonstrations for nature based solutions in land management. Outcome 4 will ensure the project results can be scaled up through capacity building and knowledge management.