



GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: Least Developed Countries Fund

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PART I: PROJECT INFORMATION

Project Title:	Continental wetlands adaptation and resilience to climate change		
Country(ies):	Mauritania	GEF Project ID: ¹	8033
GEF Agency(ies):	IUCN (select) (select)	GEF Agency Project ID:	
Other Executing Partner(s):	Mauritania National Great Green Wall Agency, Direction des Aires Protégées et du Littoral	Submission Date:	2015-05-12
GEF Focal Area(s):	(select)	Project Duration (Months)	48
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of parent program:	[if applicable]	Agency Fee (\$)	412,845

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
(select) CCA-1 (select)	LDCF	4,449,541	4,500,000
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
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(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
Total Project Cost		4,449,541	4,500,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: Restoration of wetland ecosystem for climate change adaptation and resilience						
Project Components	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
Restoration and rehabilitation of wetlands	Inv	<p>The functions linked to wetland ecosystem services are restored</p> <p>Participatory management approaches are implemented.</p> <p>Capacity building of the key stakeholders facilitates the decentralized</p>	<p>Up to 3 wetlands sites are restored taking into account climate change threats</p> <p>Participatory management plans are established</p> <p>Key stakeholders at the Government and local communities level are trained to</p>	LDCF	2,500,000	2,500,000

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

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

³ Financing type can be either investment or technical assistance.

		management of the selected wetlands.	enable decentralized management of wetlands			
Improvement of the resilience and the capacity for adaptation of populations living near to wetlands	Inv	<p>Diversification of the income of local populations and support for activities generating income to benefit vulnerable groups, notably women and young people (small-scale irrigation, drip irrigation, improved fishing and fish transformation techniques on a village scale, fodder production, beekeeping, small-scale renewable energy installations).</p> <p>Local populations and stakeholders are aware of the degradation of wetlands, the causes of this degradation, the effect of climate change on wetlands and conservation measures to counter it.</p> <p>Building the capacity of village communities.</p>	<p>Local communities benefit from management plans enabling the diversification of activities and more resilient livelihoods to climate change variations</p> <p>Key stakeholders in local communities are trained to diversified activities</p> <p>Diversified income generating activities are disseminated and adopted by local communities</p>	LDCF	1,087,658	1,000,000
Wetland knowledge management and monitoring / assessment	TA	<p>Improved understanding of the status of and trends in the wetlands</p> <p>Use is made of an operational geographic information system and a database for Mauritanian wetlands.</p> <p>Increased understanding of the effects of climate change on wetland biodiversity and ecosystems</p>	<p>Database sensing all Mauritania wetlands and their key characteristics (including biodiversity status) is functional</p> <p>A geographical information system is established and functional</p> <p>Local communities and stakeholders are involved in training on disseminating climate change knowledge on wetlands</p>	LDCF	400,000	400,000

Project communication, monitoring and assessment	TA	Communication. Monitoring and assessment of the project and dissemination of the results.	At least a semestrial newsletter informing on project status is prepared and sent (# recipients to be determined) Monitoring and evaluation system is in place and updated with adequate indicators linked to both IUCN and GEF respective M&E tools	LDCF	250,000	300,000
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					4,237,658	4,200,000
Project Management Cost (PMC) ⁴				LDCF	211,884	300,000
Total Project Cost					4,449,542	4,500,000

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 AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Recipient Government	Ministère de l'environnement et du développement durable	In-kind	4,000,000
Others	Fondation MAVA	Grants	500,000
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
Total Co-financing			4,500,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS ^{a)}

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
IUCN	LDCF	Mauritania	Climate Change	(select as applicable)	4,449,542	400,458	4,850,000
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
Total GEF Resources					4,449,542	400,458	4,850,000

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

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

E. PROJECT PREPARATION GRANT (PPG)⁵

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

Project Preparation Grant amount requested: \$137,614					PPG Agency Fee: 12,386		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁶ (b)	Total c = a + b
IUCN	GEF TF	Mauritania	Climate Change	(select as applicable)	137,614	12,386	150,000
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
Total PPG Amount					137,614	12,386	150,000

⁵ PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁷

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	<i>Hectares</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>Hectares</i>
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	<i>Number of freshwater basins</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>Percent of fisheries, by volume</i>
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	<i>metric tons</i>
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	<i>metric tons</i>
	Reduction of 1000 tons of Mercury	<i>metric tons</i>
	Phase-out of 303.44 tons of ODP (HCFC)	<i>ODP tons</i>
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	<i>Number of Countries:</i>
	Functional environmental information systems are established to support decision-making in at least 10 countries	<i>Number of Countries:</i>

PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal area⁸ strategies, with a brief description of expected outcomes and components of the project, 4) [incremental/additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and [co-financing](#); 5) [global environmental benefits](#) (GEFTF) and/or [adaptation benefits](#) (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

1) The Global environment problems, root causes and barriers to be addressed

- The adaptation problem

Mauritanian inland wetlands are under threats. Significant reduction in the availability of water has been assessed over the years and as a result, these very specific and highly vulnerable ecosystems are at risk and even declining in terms of the ecosystem services they are supposed to provide. These wetlands are indeed havens of biodiversity due to the habitat they provide to both the fauna (aquatic, terrestrial and migratory) and flora found there. Mauritanian wetlands are of global importance for biodiversity resulting from the country's geographical location. These sites are

⁷ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

⁸ For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

of vital importance for the trans-Saharan migration of certain Palearctic migratory species. They are also important wintering areas for a number of rare threatened European species such as the Egyptian vulture and storks. The survival of relict populations of the West African crocodile and a number of other species of reptiles and large mammals, from the Sudanian domain, largely depends on the management of the wetlands. Over recent years, during which climate pressure on the wetlands increased, their biodiversity has been seen to decrease considerably, with the disappearance of several species. The reduction in water resources in wetlands, with the corresponding impact on biodiversity, leads to changes in the ecosystem of the entire region. This is illustrated by changes in bird migration, including Palearctic birds that use the continental Mauritanian wetlands as resting places during their migration from the Sahel region to Europe. All this is the direct result of climate pressures on these ecosystems, which in turn require adaptation measures.

In Mauritania, wetlands and pastoralist livelihoods are intimately related. A decline in the environment status of wetlands affects livelihoods. Since wetlands are a key determinant of pastoralist livelihoods, the decline of these ecosystems due to climate change has direct consequences on the life of pastoralists who are therefore extremely vulnerable to climate change. It is estimated that direct impact of climate change on pastoral resources includes a decrease in the production of fodder, which constitutes the basic cattle feed and is heavily dependent on climatic conditions, particularly on rainfall. Also, ponds may dry-up as a result and pose problems for livestock watering. Grasslands are likely to decrease and access to livestock feed may be difficult, due to pastures degradation and insufficiency. The indirect and socio-economic impacts of climate change on pastoral resources will be reflected by high cattle and meat prices resulting from reduced supply stemming from livestock mortalities caused by droughts/floods; the conversions of a large number of nomadic herders into settlers breeders; a decline in the incomes of stockbreeders; and a change in the composition of herds through the gradual replacement of cattle by small ruminants and camels. These impacts have to be added to other pressures and vulnerabilities that already characterize stock breeding in Mauritania such as the decrease in natural pastures by bushfires, the obstruction of livestock crossing routes and the disappearance of transhumance tracks in flooded areas, following growing competition between agricultural and pastoral lands; the shortening of the duration of transhumance with the prolonged concentration of livestock around permanent water points, displacement of pastoral lands from the North toward the more favorable Sahelian and River Valley areas of the South, following the recession of grasslands and of fodder trees owing to the high concentration of livestock in already weakened areas; and the search for new pastures, which often result in conflicts with farmers.

- Root causes

Climate variability is a key element of the decline of inland wetlands in Mauritania. The main direct and indirect impacts of climate variability and change on Mauritania's major development sectors were identified during the vulnerability and adaptation studies conducted as part of the preparation of the CNI, PANA, SCN and TCN (May 2014). These impacts were identified through the combination of objective and factual observations, consultations and information sources from local knowledge in the field and a few presumptions of causality backed by current scientific knowledge. All these studies and analyses have confirmed that although Mauritania has potentially significant surface water and groundwater resources, some of the current handicaps and weaknesses could be compounded by the effects of climate change. The following aspects are of particular concern:

- Poor spatial and temporal distribution of the above mentioned water resources;
- Considerable evaporation of surface waters owing to high temperatures and winds;
- Very limited harnessing of water resources;
- Continued deterioration of water quality due to the silting up of rivers and pollution of some others;
- A drop in the level of groundwater as well as an increase in runoff and water erosion;
- A decrease in water quality and quantity;
- Increasingly low flows at the level of the waterways (early drying of water points such as ponds, wells, etc...); and
- Lags in the commencement and ending of the rainy season, pockets of drought during the rainy season, decrease in the length of both the rainy season and farming season, rural exodus.
- The proliferation of floating plants (water salad, hyacinth, typha, etc...) affecting flow speed of waterways, changes in their temperature as well as the deterioration of the quality of water.

Climate change has resulted in a decline in the availability of water resources over the last few decades. This notably results in the drying up of wetlands, which are vital staging posts on the transhumance routes of pastoralists and their livestock and has negatively affected their biodiversity and natural resource potential. The increased scarcity of water resources forces pastoral populations to change their way of life and to adopt more sedentary lifestyles.

Pressures induced by climate change on wetlands are expected to continue as science demonstrates through various climate models that both rainfall and temperatures are likely to follow trends which will translate in increased pressure for wetlands and their related livelihoods and biodiversity. In respect to temperatures, some pessimistic models predict by 2050 a general temperature increase of approximately 2°C while more optimistic models predict a temperature rise of between 1.5 to 2°C. Consequently, and if no action is taken in a timely manner, climate change is expected to continue to jeopardize the services provided by wetlands such as water as a key resource for biodiversity conservation and pastoral livelihoods.

Anthropic pressures are also at the origin of wetlands decline. It is also recognized that these pressures may be the consequence of climate variability and the reduced water availability. However, these are the consequence of an inappropriate spatial planning exacerbated by climate change effects, which has resulted in increased population around wetlands. Over time, it has been observed that populations living in wetlands areas have adopted more sedentary practices. This has also been encouraged by certain water management techniques and the building of hydraulic infrastructure such as dams which have diverted the water flows. As a result, populations have adopted some water-intensive agriculture in wetlands area, with direct impact on water availability.

Wetlands are also sources of attraction of some migratory flux and increased population. Wetlands have become attraction points for settlers who were traditionally not pastoralists but have developed a sedentary type of livestock keeping as well as for mobile livestock keepers from other areas, even from outside Mauritania. The populations' transition towards a more sedentary way of life, which is happening without adequate planning, also leads to pollution of the wetlands, thereby increasing their vulnerability.

Given the modification of livelihoods towards a more sedentary way of living, it is expected that climate change pressure on agriculture will continue to affect negatively wetlands and their natural resources. In fact, climate change is expected to directly impact agriculture (which is heavily dependent on rainfall) through a change in the seasonality of rainy seasons leading to increased fluctuations. Such fluctuations may affect the plants' growth cycles, with a direct effect on harvest and agriculture and food production. The modification of the distribution of surface water will induce changes in the surface area of arable land with a potential acceleration of deforestation. Finally, water resource availability changing due to climate change will generate a decline in crop yields with direct consequence on food insecurity.

In a nutshell, wetlands ecosystems are facing increased vulnerability to climate variation because of climate variability itself and anthropic pressures. This generates a vicious circle towards the decline of wetlands and increased vulnerability for the related ecosystem and livelihoods. An appropriate response will include an approach encompassing both the restoration of wetlands ecosystem and activities that will reduce the vulnerability of livelihoods.

- *Barriers to be addressed*

Participatory management plans: One key barrier to the preservation of wetlands in Mauritania, and in particular for inland sites, is the absence of management plans which are inclusive of relevant stakeholders. Such plans should enable to plan and effectively manage in a sustainable way the use and access to natural resources such as wetlands. This project will directly address this barrier under component 1. Planning and sustainable management (regulations)

Knowledge and information: although a number of studies and research have been undertaken in respect to wetlands, there is no clear database that can help monitor the status of wetlands and ensure that relevant indicators are made available over time for decision making on wetlands.

Technical and financial capacity: lack of resources both in terms of technical and financial capacity is a barrier to successful conservation and resilience of wetlands ecosystems and related livelihoods. This will be addressed by this project under component 1, 2 and 3 in particular. The fact that decision making is very centralized can be an issue as highlighted in various works undertaken by GIZ, Ramsar Convention on Wetlands and IUCN. This project will aim at ensuring that some decisions on the management of wetlands natural resources is coordinated at the local level with relevant stakeholders.

Non-diversified livelihoods: Reality around wetlands is that livelihoods are heavily dependent on agriculture and pastoral activity, which are heavily demanding for water and forestry resources in particular. This leads to some environment degradation, which hampers wetlands expected co-benefits.

2) The baseline scenario or any associated baseline projects

The problematic of climate change threats on wetlands must be studied within a context in which many wetland restoration and conservation projects have been carried out on the coast of Mauritania over the last two decades. Diawling National Park, for example, has become a protected area in which biodiversity has been restored considerably. Moreover, work is being carried out to combat the effects of climate change along the Atlantic coastline, where the rise in sea levels is threatening the Mauritanian capital, Nouakchott. However, very little action has been taken inland. This is due to change following the approval on 4 December 2014 of the Action Plan and Strategy for the implementation of the Great Green Wall in Mauritania. This program, which is a regional initiative involving all African countries on a path defined from the Atlantic coast in Senegal to the red sea on the Djibouti coast after crossing Mauritania, Mali, Burkina Faso, Niger, Nigeria, Chad, Sudan, Eritrea and Ethiopia. This initiative aims to stop the desert advancing by carrying out specific development projects. For Mauritania, the planned route of the Great Green Wall is described in Annex 1 of this PIF. The Great Green Wall in Mauritania will be financed through an Action Plan, which the overall budget has been outlined in Annex 2 of this PIF. This action plan represents the main baseline of the LDCF project.

In this context, the Government of Mauritania has established the National Great Green Wall Agency, which started operations in 2015, and will be dedicated to implementing the Mauritania Great Green Wall Action Plan. The activities of the National Great Green Wall Agency for Mauritania are considered the main baseline of this project. The National Great Green wall Agency is funded through the Government budget. For its first year of operation in 2015, the Agency has been allocated a USD 1.9 million budget. Main activities that are expected to be implemented are related to the establishment of the Agency itself with the recruitment of key staff. The Agency is also starting the implementation of its work plan with:

- Agroforestry production improvement in 10 villages with the establishment of nurseries for indigenous species, the planting of protecting hedges and restoration of specific degraded forests ecosystems.
- The restoration of land in order to support agriculture development
- Natural forest restoration on 200 hectares
- The promotion of good governance of natural resources on the Great Green Wall route
- The creation of income generating activities for communities established on the Great Green Wall route

The Agency's budget will be approved by the Government each year in alignment with the strategic priorities of the Mauritania Great Green Wall Initiative Action Plan (see budget in Annex 2). The budget will be renewed on a yearly basis until 2018 at least. Based on this, the Government co-financing eligible to the LDCF project is estimated to USD 4 million, which corresponds to the National Great Green Wall Agency investments during the period 2016-2018.

It is also expected that the MAVA Foundation will contribute to the co-financing of this project. The MAVA funding will be targeted to some specific wetlands that will build on some of the work to be undertaken under the LDCF project (e.g: through the component 2 which will enhance the understanding of wetlands ecosystems).

This LDCF project will be developed within the framework of the implementation of the national strategy for the conservation of wetlands, prepared thanks to the programmed support from the Ramsar Convention on Wetlands and approved by the Government in October 2014. In particular, this project addresses the problem of the disappearance of certain continental wetlands of international or regional importance, with the associated destruction of unique biodiversity and ecosystems that are vital on a global level. Moreover, and also within the framework of the strategy for the conservation of wetlands in Mauritania, the project will be co-funded by a project organized by IUCN and the MAVA Foundation, which will contribute their over 20 years of experience in wetlands conservation in Mauritania. Focusing on inland wetlands and a related climate change adaptation response, this project will provide a nation-wide approach to this issue, and not just a coastal one. This thus constitutes a real added value created by the project.

3) Additional reasoning and expected contributions to the baseline

The baseline for this project is made of the investments that will be financed by the Mauritania Great Green Wall Agency described in paragraph 2 above, as part of the Great Green wall Action Plan for Mauritania. These investments are all targeted towards forestry and agro-forestry or biodiversity conservation and no climate change adaptation response is proposed. This LDCF project is additional as it represents a response to climate change in wetlands. Without this specific response from the LDCF project and its approach on climate change adaptation – and therefore conservation - of specific ecosystem such as inland wetlands, infrastructure development would continue to be the main response to desertification. The project's focus on wetlands will contribute to ensure that these ecosystems are maintained through some specific activities as a response to the climate change threats they are subject to. The project is also additional to the work on wetlands in Mauritania overall (inland and continental) where the response to climate change is limited and concentrated to coastal areas. Without the project, there would be no responses to climate change threats in inland Mauritania.

4) The proposed alternative scenario and brief description of expected outcomes and projects components

The project will promote an approach that will respond to the two types of causes highlighted above. It will respond to climate change by i) restoring the services wetlands provide to the environment with a special focus on the water resource, and ii) increasing the adaptive capacity of populations and livelihoods. The resilience of the wetlands themselves will provide co-benefits such as the conservation of biodiversity. This resilience of wetlands, which will allow for the maintenance and restoration of a biodiversity vital to a regional ecosystem, will help increase the resilience of pastoral populations and their capacity for adaptation. However, in order to achieve this, it is essential to regulate the use of wetlands by means of the appropriate participatory management plans, which involve all stakeholders concerned.

In order to attain these goals, the project will be implemented through four (4) main components:

Component 1: Restoration and rehabilitation of continental wetlands

The aim of the project is to make wetlands, the related ecosystem and livelihoods more resilient to climate change through an ecosystem based approach as a specific response to climate change threats. The sites will be defined during the project's preparatory phase, in accordance with their surface area and their influence on biodiversity conservation in Mauritania. They will be selected from those that have already been identified jointly by the Government and IUCN within the framework of the preparation of this PIF and are described in the following table 1 below.

Site name	Wilaya	Locality	Locality's population	Site area	Estimated basin area
Maale	Brakna	Maale	33 301	1300ha	6400km ²
Bougary	Assaba	Aghoratte	18 358		tbc
Mahmouda	H. Chargui	Beribavatt	3 845	16200 ha	4000km ²

Gounguel	H. Gharbi	Benamane	3 045	530 ha	132km ²
Keur Mour	Trarza	J'Dir Mohguen	6 700	485ha	River supplied
Widim	Brakna	MBagne	11 859	1240 ha	River supplied
Talli	H. Gharbi	Koboni	11 833	900 ha	88km ²
Tamourt En Naaj	Tagant	N'Beika	20 766	95 00 ha	10 000km ²
Ch'lim	H. Gharbi		14 187	360 ha	48km ²
Total			123 894		

Table 1: Pre-selected wetlands sites

In the context of this project, sites will be selected according to their vulnerability to the adverse effects of climate change, and Mauritania's adaptation priorities. Sites will be selected if:

- Pluviometry level is low and/or has been decreasing over years;
- Sites are subjected to desertification effects such as silting, sedimentation and decreased retention capacity;
- Sites are facing high anthropic pressures (eg: land carrying capacity has been exhausted)
- Sites where population level is high, livelihoods are highly dependent on natural resources and level of organization at the community/local level is low.

Through this component, measures will be put in place to allow for the restoration of water levels where necessary. Other measures will be taken to reduce silting up and erosion (e.g. cleaning out silted up areas with the participation of local populations) and to stabilize dunes. Finally, based on IUCN's work, in particular the Red List of Threatened Species and actions undertaken elsewhere in Mauritania (Diawling National Park) and in the Sahel region, actions will be carried out aimed at regenerating flora and plant cover by means of the reintroduction of local, indigenous plants to wetlands, and afforestation with local species, which are more resilient to climate change. Moreover, this first component will not only allow a participatory wetland management system to be set up with validated development plans and for it to be implemented in the selected sites (zoning, setting up of decision-making bodies, local regulations, management measures to deal with wetland use conflict), but also allow the introduction of a legislative framework regulating wetlands on a national level (establishing that each zone should have its own development plan), whilst increasing the local stakeholders' capacity and knowledge of wetland management. Particular attention will be given to the need for a decentralized management of continental wetlands. In this context, various communities will play their own particular roles and specific mechanisms will be put in place to allow for this decentralized management. Technical assistance from the appropriate authorities and partners will be vital in this respect.

Component 2: Improvement of the resilience and the capacity for adaptation of populations living near to wetlands

In order to reduce the pressure of the surrounding communities in the wetlands, this component promotes the diversification of income for the local communities as well as the promotion of sustainable practices related to the management and use of forest and water resources specifically. This component will help implement activities leading to the diversification of income for local populations through support for income-generating activities through the promotion of alternative production (market gardening, poultry farming, renewable energy for the micro-economy, etc.) and the improvement of other traditional crops, the enhancement and development of local products (e.g.: timber products, market garden produce, fish, the promotion of ecotourism, etc.) and local crafts (local production of improved cooking stoves), the organization of local stakeholders, the promotion of improved cooking stoves in order to reduce the use of firewood and thus the pressure on forest cover, which is a factor in the conservation of water resources. This component will also help raise the awareness of local populations and stakeholders about the degradation of wetlands, the causes of this degradation and conservation measures (involving local populations and know-how), in order to create a citizen movement in favour of the sustainable use of wetlands in Mauritania. These activities will be implemented in the sites selected as per the criteria set above (in component 1).

Component 3: Management of knowledge on wetlands

This component will allow for the creation of a geographic information system and a database for Mauritanian wetlands. This component will also help improve people's understanding of the status and trends of wetlands, focusing in particular on the effects of climate change. An exhaustive, detailed inventory of the wetlands will be carried out and a database will be created. In addition to studies of the changes of biodiversity in wetlands as well as climate change, socio-economic studies will be performed in order to reveal changes in the lives of the local populations. These outcomes will be used to guide wetlands conservation actions at the country level through this project and future ones to take place in the country. Finally, the environmental data will be compared with the socio-economic data in order to highlight any possible correlations.

Component 4: Communication, monitoring and assessment of the project

Throughout the implementation of the project, information will be provided on the activities being carried out and also on the results obtained. Given that resources are limited, details will be given only on the successes, and the lessons learned from the implementation of actions on other wetlands in Mauritania and in the subregion. In more general terms, the project will also provide information on the role of wetlands in combating desertification, within the framework of the Great Green Wall initiative. These communications will be issued not only on the basis of specific actions forming part of the project, in other words activities related to wetland conservation and restoration, but also thanks to the database and geographic information system that it is hoped will become a benchmark in this field after the project finishes.

This project is innovative insofar as it allows for a truly integrated approach to wetland conservation as a means of adaptation to the effects of climate change. The project proposes the establishment of measures for the adaptation of the ecosystem and populations to the effects of climate change via developmental and regulatory measures, aimed at restoring the biodiversity and ecosystem services of wetlands. By doing this, the project will create a virtuous circle aimed at conserving the biodiversity of wetlands through measures to facilitate adaptation to climate change.

This project is in line with a long-term strategy for sustainability, since it forms part of a government action plan implemented by a government agency (the National Agency for the Great Green Wall [Agence Nationale de la Grande Muraille Verte]). Given the threats faced by the countless continental wetlands across the country, the project will set up measures that can be replicated outside the scope of the Great Green Wall initiative.

5) Innovation, sustainability and potential for scale-up

This project, focusing on inland wetlands adaptation and resilience, is innovative as no other project focuses on these unique ecosystems. The project is also innovative for the region in the perspective that it considers biodiversity and ecosystem conservation in order to generate adaptation benefits. In fact, maintaining water flows in wetlands is essential for biodiversity conservation. This biodiversity is essential to ensure co-benefits to local communities and their livelihoods. However, the conservation of biodiversity in these wetlands ecosystem is substantially threatened by climate change, and therefore their conservation depends from their climate change adaptation and resilience capacity.

The sustainability of the project is triggered by the fact that it will consider a decentralized approach to the management of wetlands through the involvement of local communities and stakeholders.

The potential for scale-up is significant given the number of wetlands of significant importance in Mauritania and the role they play for pastoralist livelihood, which is dominant in inland Mauritania. It is in this context that the MAVA Foundation (<http://fr.mava-foundation.org/>) intends to participate in the initiative by contributing to the financing of the conservation of the other inland wetlands that are totally independent from the Great Green Wall route. MAVA aims to building upon the outcomes provided by the LDCF project in terms of the census of the wetlands at the national level and the measurement of the impact climate change has on these ecosystems in order to design appropriate biodiversity conservation measures with the objective of adapting to climate change. This will be confirmed during the LDCF project preparation phase.

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

IUCN aims to involve civil society in all the projects that it implements. Within the framework of this project, IUCN and the Government's executive agency – the National Agency for the Great Green Wall - have already held consultation meetings with the livestock keepers' associations in eastern Mauritania, nature conservation NGOs that have particular expertise on wetlands, and technicians from organizations for development and cooperation as well as universities. Since one of the project's objectives was the definition and implementation of a participatory wetland management plan, the involvement of populations living around wetlands and pastoral populations in particular, is a condition for the success of this project. IUCN recognizes the need to involve NGOs and civil society in ecosystem restoration, conservation and management measures. IUCN and the executive agency appointed by the Government for this project agreed on the involvement of NGOs recognized in Mauritania for wetland management. IUCN will also involve Mauritania's civil society through these technical networks (in the field of ecosystem management, or social policies and practices) that cover West Africa. Further information on the civil society actors who may become partners in the project's implementation, will be listed during the project preparation stage, with a view to sending a request for their endorsement to the CEO of the Global Environment Facility (GEF).

IUCN is a membership institution and builds on its wide network to design and implement projects. This project has been initiated by the Government of Mauritania – through the Ministry of Environment and sustainable development – which is a member of the Union. Other members relevant to this project and established in Mauritania have been informed and consulted on this project and will be involved as appropriate.

3. *Gender Considerations.* Are [gender considerations](#) taken into account? (yes ☐ /no ☐). If yes, briefly describe how gender considerations will be mainstreamed into project preparation, taken into account the differences, needs, roles and priorities of men and women.

The project will be defined and implemented in line with the gender integration procedures used by IUCN in all its projects and activities. The project will be prepared by analyzing the needs of all the men and women involved in the implementation of the project. The actions implemented are aimed at favouring equality between men and women, both with regard to the project's expected benefits and in its implementation on a daily basis. Numerous consultations will be carried out in order to define the characteristics and requirements that will need to be taken into account to ensure gender equality in this project.

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

Risk	Mitigation measure
Low level of involvement by local groups	The executive agency has already mobilized the livestock keepers' associations in the consultation process forming part of the preparation of this project. Moreover, the local groups and livestock farmers' associations will be involved in the preparatory process and the implementation of the project through its components 1 (within the framework of the establishment of the participatory wetland management methods) and 2 (within the framework of the measures to diversify income and raise awareness about the degradation of wetlands).

Local partners' low technical capacity	Since the National Agency for the Great Green Wall has only just been established, it was agreed with the Ministry of the Environment that a management structure closely involving IUCN would be implemented. The presence of the local IUCN office in Nouakchott since 2001 reveals the close relationship between the Government and the Union and how much the Government trusts the latter.
Lack of a reliable baseline scenario in determining the project's initial objectives	Specific work to identify the data essential for monitoring the project will be carried out during the project preparation and endorsement request stage. Component 3 on the management of wetland knowledge will allow indicators on the data to be generated as quickly as possible, in order to allow the evolution of wetlands to be monitored.
Conflict between the various players in the wetland area (traditional pastoralism versus non-traditional livestock keepers))	The measures for the regulation and use of wetland ecosystem services risk generating frustration in some users. This is why the contracting party units on the selected sites will be established for the duration of the project, in order to facilitate liaison in the implementation of the measures defined during the project preparation stage.
Ownership of the GIS database	The establishment of a GIS on wetlands in Mauritania is a very innovative feature of the project. The ownership of the database will be a key determinant of the project success. Specific capacity building activities will be implemented to ensure that the database is maintained adequately.
The restoration of the wetlands is expected to enhance the services they provide to the environment itself but also to human related activities. This may generate of risk of increased migration towards wetlands and therefore increased pressure.	Component 1 specifically will enable the creation of management plans that are specific to the management and use of wetlands. Such management plans will integrate this risk into their recommendations and will contribute to ensuring that use and access to wetlands is managed according to relevant stakeholders' need and considering environmental limits and the socio-economy of the zone.

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

The project will be prepared and implemented through a three pronged approach as described in the following paragraph:

1) Coordination with other development partners

IUCN is a full time active member of the Environment and Sustainable Development Thematic Group [Groupe Thématique Environnement et Développement Durable, GTEDD] coordinated by GIZ. IUCN's participation in GTEDD, which meets each month, will guarantee that it remains informed and is able to identify synergies with future programs. The project concept has already been presented and discussed with the GTEDD members who welcome the initiative. Consultations will be held regularly with the Group in respect to each stage of advancement of this project.

2) Coordination with key stakeholders on the ground, projects and initiatives

Coordination will also be held with relevant projects active in areas related to wetland conservation and management. First, project activities will be coordinated with all the wetland protection and conservation

projects implemented on the Mauritanian coastline (Banc d'Arguin National Park, Diawling National Park, Chott Boul wetland, Baie de l'Etoile Reserve), as well as all the technical and financial partners working on the wetlands or on a subject that has an impact on their evolution. This will help ensure that the appropriate procedures are put in place for dealing with the coastal and continental wetlands in an integrated manner. This coordination among coastal and inland initiative will contribute to ensure that species conservation through the enhanced resilience of wetlands ecosystems to climate change is made in coherent manner.

Also, the project will also be prepared in collaboration with the following projects: Development of an improved and innovative delivery system for climate resilient livelihoods (LDCF/UNEP): as this project involves rangeland management and , Improving climate resilience of water sector investments with appropriate climate adaptive activities for pastoral and forestry resources in Southern Mauritania (LDCF/AfDB), Support to the adaptation of vulnerable agricultural production systems in Mauritania (LDCF/IFAD), the Mauritania Sustainable Land, water and forest management project (GEF/World Bank).

Close coordination will be established between the project and the MAVA Foundation, which is one of the Mauritanian Government's key partners in the conservation of the biodiversity of these wetlands, in particular those located on the coastline. The MAVA Foundation will be associated with the project through a specific initiative on sustainable management and conservation of the biodiversity of continental wetlands. This initiative will be described in more detail during the project preparation and endorsement request process

3) Project coordination

The project will be managed through the Mauritania National Great Green Wall Agency (NGGWA) as it is part of the implementation of the Great Green Wall strategy and action plan in Mauritania. However, it has been agreed that the NGGWA will be closely supported by IUCN in the execution of the project in order to facilitate the delivery of the projects outcomes. The project will be managed on a day to day basis by a project management unit under the overall guidance of a steering committee. The steering committee will be composed of Ministry of Environment represented by the NGGWA Director and IUCN represented by its country representative based in Nouakchott on a permanent basis. The project steering committee will be responsible for overseeing the work of the project management unit. Liaison offices will be established on all sites in order to ensure close coordination and collaboration with local communities and beneficiaries.

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

As mentioned, this project will be developed within the framework of the implementation of the national strategy for the conservation of wetlands, prepared thanks to the programmed support from the Ramsar Convention on Wetlands and approved by the Government in October 2014.

This project is aligned with the priorities defined in the National Adaptation Programme of Action (NAPA), which lists the restoration and integrated management of lowlands and wetlands. Moreover, the project is directly linked to the following activities and priority adaptation measures: promotion of water-saving techniques in oasis zones, the dissemination of drip irrigation technology in the river valley and oasis zones, promotion of livestock mobility, reorganization of populations adversely affected by climate change, promotion and development of domestic poultry, substitution of firewood, participatory reforestation for energy and agro-forestry in agricultural zones, and the protection of the diversity of fish populations.

In particular, this project is aligned with the following key recommendations for NAPA implementation:

- Ground water management, in particular the integrated management of low lands and wetlands;
- Improve livelihoods by making them more resilient to climate change;
- Increase climate change resilience of natural resources through their conservation and restoration

This project is fully aligned with the strategy and action plan for the implementation of the Great Green Wall Initiative in Mauritania [Initiative de la Grande Muraille Verte en Mauritanie, IGMVM]. The project will help achieve the strategy's main objective, which is to improve the resilience of human and natural systems in Sahelo-Saharan zones to climate change, through the proper management of ecosystems and the sustainable use and development of natural resources (water, land, plants, fauna, flora), the protection of the country's tangible and intangible rural heritage, the creation of rural production and sustainable development centres, and the improvement of living conditions and livelihood of the populations living in these areas.

Finally, this project is in line with the national strategy for the conservation of wetlands in Mauritania approved in October 2014. It will be the first project to be approved within the framework of this strategy.

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

The project will make it possible to improve the knowledge and dissemination of relevant information on Mauritania's inland wetlands through the creation of databases on Mauritania's wetlands. IUCN specific expertise on the management of biodiversity and conservation related database (ex: the red list of threatened species) An action and financing plan will also be defined, in order to guarantee the sustainability of this activity. This will be done in partnership with Mauritanian and foreign universities carrying out research into wetlands. This component will make it possible to share the results and lessons learned from the project. Moreover, it will help generate data that will make it possible to monitor the status and trends in Mauritania's wetlands from both the socio-economic and the environmental (biodiversity) points of view. Particular attention will be given to comparing these data on the evolution of wetlands with the more specific data linked to climate change and its effects.

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

A. RECORD OF ENDORSEMENT⁹ 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. Mohamed -Yahya LAFDAL CHAH	Chargé de mission and GEF Operational Focal Point	MINISTRY OF ENVIRONMENT AND SUSTAINABLE DEVELOPMENT	07/20/2014

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies¹⁰ and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

⁹ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

¹⁰ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Jean-Yves PIROT, IUCN		05/12/2015	Mohamed Lemine Baba	+22222157667	MohamedLemine.OULDBABA@iucn.org

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

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

Date: 14 April 2015

To: The GEF Secretariat
Washington, DC 20433

Subject: GEF Project Agency Certification of Ceiling Information

Per requirement for newly accredited GEF Project Agency, I am pleased to inform you that a)- the largest project implemented (or executed) by IUCN to date is USD 27.4 million¹¹ as of the end of the last fiscal year (FY 2013), and b)- the total amount of all the projects currently under implementation is USD 379 million as of the end of the last fiscal year (FY 2013).

I certify that the value of the project “*Continental wetlands adaptation and resilience to climate change*” in **Mauritania** being submitted to GEF for USD 4,449,541 (excluding agency fees and Project Preparation Grant) is smaller in terms of US dollars, than the largest project that IUCN has implemented (or executed) to date. I further certify that the total US dollar value of GEF financing currently under implementation by IUCN, including the requested GEF financing for this project, does not exceed 20% of the US dollar value of total projects that IUCN currently has under implementation¹².

Sincerely,

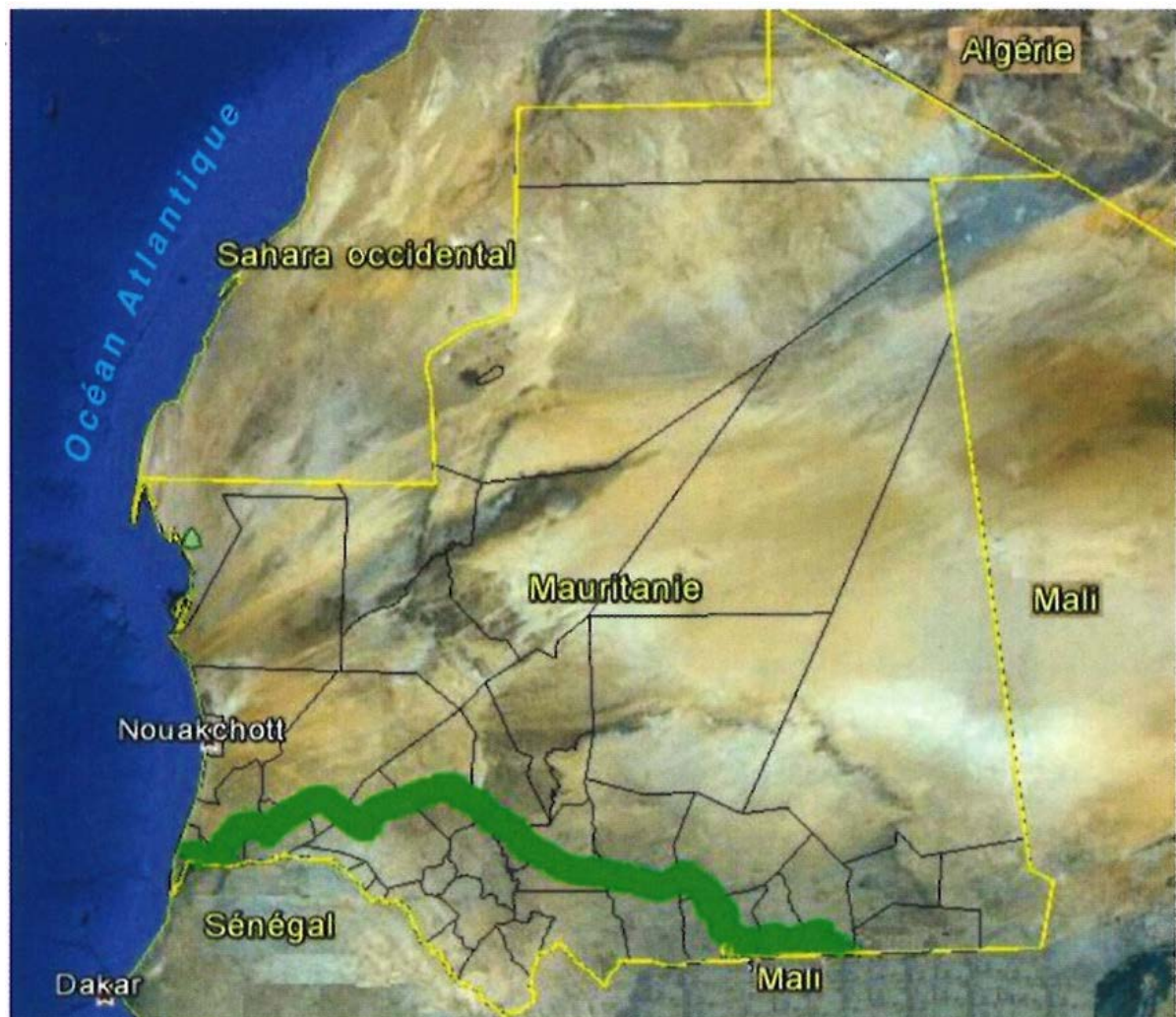


Jean-Yves Pirot
GEF Project Agency Coordinator
IUCN – International Union for
Conservation of Nature

¹¹ This amount excludes co-financing.

¹² In support of the above statements, a copy of the (a) signed loan/grant agreement for the largest project IUCN has implemented (or executed) to date, and (b) a list of all projects (together with their amounts in US dollars) currently under implementation will be sent via email under a separate cover to the GEF Secretariat's account at NEW_AGENCY_SERVICE_ACCOUNT@theGEF.org with the understanding that these supporting documents will be treated with utmost confidentiality and will not be shared with any parties external to the GEF Secretariat. 17

Annex 1: Mauritania Great green wall



Annex 2 – Mauritania Great Green Wall Action Plan

Strategic activity	Programme	Budget (USD)	Sub-total (USD)
1. Food security is improved through the sustainable management of production systems	1.1 Agroforestry production improved	45,757,930	
	1.2 Development of agriculture and pastoralists systems	19,283,699	
	1.3 Restoration of degraded lands	34,404,459	
	1.4 Natural resources regeneration (agro-forestry)	10,390,147	
	1.5 Supply and sustainable management of water resources	8,360,283	
			118,196,518
2. Improved governance and local development	2.1 Promotion of good governance	498,865	
	2.2 Basic infrastructure development	3,801,693	
			4,300,557
3. Income generating activities development	3.1 Specific agro-forestry supply chains are developed	1,506,915	
	3.2 Development of income generating activities	2,339,503	
			3,846,418
4. Accompanying research and knowledge management	4.1 Accompanying research	722,494	
	4.2 Knowledge management	412,854	
			1,135,347
5. Capacity building of stakeholders	5.1 Organization and structuring of stakeholders	240,831	
	5.2 strengthening capacities of producers	2,975,986	
			3,216,817
6. Coordination and monitoring and evaluation	6.1 Programme coordination	3,165,210	
	6.2 Monitoring and evaluation	1,204,156	
			4,369,366
TOTAL			135,065,024