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Программа Организации Объединенных Наций по окружающей среде برنامج الأمم المتحدة للبيئة

联合国环境规划署



PROJECT DOCUMENT

SECTION 1: PROJECT IDENTIFICATION

1.1 Project title:	Development of an improved and innovative management system for sustainable climate-resilient livelihoods in Mauritania.		
1.2 Project number:	GFL/ PMS: 5580		
1.3 Project type:	FSP		
1.4 Trust Fund:	LDCF		
1.5 Strategic objectives:			
GEF strategic long-term objective:	CCA		
1.6 UNEP priority:	Climate Change Adaptation		
1.7 Geographical scope:	National		
1.8 Mode of execution:	External		
1.9 Project executing organization:	Ministry of Environment and Sustainable Development (MEDD)		
1.10 Duration of project:	48 months Commencing: Technical completion:		
Validity of legal instrument:	54 months		
1.11 Cost of project	US\$	%	
Cost to the GEF Trust Fund	5,000,000	37	
Co-financing			
Cash			
Government of Mauritania's annual budget	500,000	4	
In-kind			
Government of Mauritania's Annual Programme against Bushfires in Mauritania (APCBF)	8,000,000	59	
Total	8,500,000		

1.12

1.12 Project summary

1. Rural communities in Mauritania are heavily dependent on natural and agropastoral ecosystems for their livelihoods. Forests and rangelands provide *inter alia* pastoral resources, woodfuel, food and medicinal products. The combined effects of rapid population growth and widespread reliance on ecosystem goods and services has resulted in overexploitation and degradation of natural resources. In particular, the increased demand for wood and agricultural land has reduced forest cover from 415,000 hectares in 1990 to 242,000 hectares in 2010. Additionally, overgrazing by livestock has resulted in degradation and reduced productivity of rangelands. The frequent occurrence of bushfires also results in the reduced availability of pastoral resources and other negative effects on ecosystems including reduced soil quality. Because of the unsustainable management of natural resources and the reliance of rural communities on ecosystem goods and services, Mauritania experiences chronic food shortages and nutritional insecurities.

2. Mauritania's problems, discussed above, are exacerbated by changes in climate pattern experienced since 1960, including reduced annual precipitation, longer drought periods, increased average annual temperature and increased occurrence of extreme weather events. Additionally, future projections of climate change predict that the situation will be increasingly difficult in the coming decades. By 2050, precipitation is expected to decrease by 5–20% and air temperatures are expected to increase by 1.5–2°C compared with the period 1961–1990. The predicted effects of climate change include *inter alia*: i) decreased levels of surface and ground water; ii) increased occurrence of bushfires; iii) increased soil erosion; and iv) increased mobility of sand dunes. Consequently, climate change will have a negative effect on agricultural activities through reduced productivity of crops. Similarly, pastoralism will be affected by climate change through decreased availability of fodder, and reduced number and volume of water points. The socio-economic effects of climate change will include an increased price of meat, reduced income of livestock breeders and decreased crop yields. Therefore, climate change is expected to cause greater ecosystem degradation and increased poverty and food insecurity for Mauritania's growing population.

3. Currently, the capacity to address the negative effects of climate change is inadequate in national (e.g. Ministries of Environment, Livestock husbandry, Agriculture, Hydraulic and Sanitation), provincial (e.g. regional delegation such as DREDDs) and local (e.g. municipalities) government, and rural communities. Limitations in qualified staff, operational structures and evidence bases on appropriate adaptation practices hinder the effective implementation of a national response for adaptation to climate change. Furthermore, coordination and knowledge sharing between and within sectors is limited. If the institutional and technical capacity of government and communities is not increased, rural communities in Mauritania will remain vulnerable to the negative effects of climate change.

4. The Least Developed Countries Fund (LDCF) project will increase the institutional and technical capacity of government stakeholders to enable the systematic planning and implementation of best adaptation practices including EbA. Interventions based on both scientific and traditional knowledge will address the effects of climate change through targeted restoration, engineering and sustainable management of beneficial ecosystems. Rural communities will implement the project's EbA interventions with the support of NGOs, and communal and provincial authorities. This support will include extensive institutional and technical capacity building for community members. The on-the-ground interventions of the

proposed project will be implemented in the forest and rangeland ecosystems within four wilayas (i.e. provinces), namely Guidimaka, Assaba¹ (specifically the Moughataa of Kankossa), Hodh El Gharbi and Hodh El Chargui.

5. The main activities that will be implemented under the LDCF project (Budget: US\$5,000,000) include: i) strengthening the government's institutional framework to guide adaptation planning and promote the EbA approach; ii) increasing the capacity for adaptation planning using EbA at the sub-national scale including training of regional delegations, creating development plans at the communal level and establishing local management associations to support the management of natural resources by rural communities; iii) implementing EbA interventions and promoting climate-resilient livelihoods; iv) raising national awareness on climate change and adaptation options including EbA; and v) increasing the availability of evidence based on best adaptation practices such as EbA in Mauritania.

6. As part of the EbA interventions, climate-resilient, multi-use and indigenous plant species will be prioritised for restoration and revegetation of forests and rangelands. Consequently, restored ecosystems that are resilient to climate change will provide valuable goods and services and opportunities for the development of climate-resilient livelihoods that are diverse and sustainable such as the production gum arabic. These income-generating activities will generate direct incentives for rural communities to maintain the health and integrity of ecosystems in the long term. As a result, ecosystem restoration through EbA interventions will facilitate poverty reduction, increased food security and improved population health under climate change conditions.

7. The project will build on ongoing baseline and associated projects, namely (i) the Annual Programme against Bushfires in Mauritania (APCBF); and (ii) the Programme for the Management of Natural Resources (ProGRN). The project will seek synergy with two other initiatives: (i) National Programme for Integrated Support to Decentralisation, Social Development and Youth Employment (PNIDDLE), and (ii) the PARSACC. Specific opportunities for complementarity between the interventions of these three projects and the LDCF project have been identified. Strong collaboration with APCBF will be built particularly for the design and implementation of green firebreaks in the targeted wilayas. The LDCF project will benefit from the experience of GIZ gained under the ProGRN project and its new ACCMR (Alliance for Climate Change in Rural Area) project for the establishment and operationalisation of Local Collective Association for the Management of Natural Resources (AGLCs) through regular consultations. It will also complement ACCMR through increasing knowledge on the EbA approach. Furthermore, the LDCF project will complement PNIDDLE by including the management of natural resources at the communal scale into the development planning to be strengthened under PNIDDLE interventions. APCBF and PNIDDLE intervention sites will consequently be selected as a priority for the implementation of on-the-ground interventions. The management teams of the baseline and associated projects will be regularly consulted during the implementation phase of the LDCF project so as to maximise complementarity.

¹ Throughout the Project Document, reference is made to the project activities being implemented in four wilayas. It should be noted that activities within the wilaya of Assaba will be focused only in the Moughataa of Kankossa.

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ACRONYMS AND ABBREVIATIONS

Acronym	English	French
ACCMR	Project to increase Capacity for Adaptation to Climate Change in Rural Areas	Projet d'Augmentation des Capacités pour l'Adaptation au Changement Climatique en Milieu Rural
ADC	Local Development Association	Association de Développement Communautaire
AfDB	African Development Bank	Banque Africaine de Développement
AFO	Administration and Financial Officer	Responsable Administratif et Financier
AGLC	Local Collective Association for the Management of Natural Resources	Association de Gestion Locale Collective des Ressources Naturelles
AMAT	Adaptation Monitoring and Assessment Tool	Outil de Suivi et d'évaluation de l'adaptation
AP	Pastoral Association	Association Pastorale
APCBF	Annual Programme to Combat Bushfires in Mauritania	Programme Annuel de Lutte Contre les Feux de Brousse
CCPNCC	Coordinating Unit of the National Programme of Climate Change	Cellule de Coordination du Programme National Changement Climatique
CDP	Communal Development Plans	Plans Communaux de Développement
CNEDD	National Council for Sustainable Development	Conseil National Environnement et Développement Durable.
CNRADA	National Centre for Research on Agronomics and Agricultural Development	Centre National de Recherche Agronomique et de Développement Agricole
CNRE	National Centre of Water Resources	Centre National des Ressources en Eau
CREDD	Regional Council for Environment and Sustainable Development	Conseil Régionale Environnement et Développement Durable.
CSLP	Strategic Framework to Combat Poverty	Cadre Stratégique de Lutte contre la Pauvreté
NTA	National Technical Advisor	Conseiller Technique National
DH	Department of Hydraulics	Le Département de l'Hydraulique
DPN	Direction for Nature Protection	Direction de la Protection de la Nature
DRA	Regional Delegation of the Ministry of Agriculture	Delegation Régionale de l'Agriculture
DRE	Regional Delegation of the Ministry of Livestock Farming	Delegation Régionale de l'Elevage
DREDD	Regional Delegation of the Ministry of Environment and Sustainable Development	Délégation Régionale de l'Environnement et du Développement Durable
DRHA	Regional Delegation of the Ministry of Hydraulics and Sanitation	Delegation Régionale de l'Hydrolique
ENFVA	National School for Agricultural Training and Extension	Ecole Nationale pour la Formation et la Vulgarisation Agricole
EPCV	Permanent Survey of Living Conditions of households in Mauritania	Enquête Permanente sur les Conditions de Vie des ménages en Mauritanie
FAO	Food and Agriculture Organisation	Organisation pour l'Alimentation et l'Agriculture
FSP	Full-size Project	Projet de grande taille

FST	Faculty of Sciences and Technology	Faculté des Sciences et Techniques
GEF	Global Environmental Facility	Fonds de l'Environnement Mondial - FEM
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit	Société allemande pour la coopération internationale ou Coopération Technique Allemande
GoM	Government of Mauritania	Gouvernement Mauritanien
HDI	Human Development Index	Indice de développement humain
IEA	Integrated Ecosystem Assessment	Evaluation intégrée de l'écosystème
IEDD	Inspector of Environment and Sustainable Development	Inspecteur de l'Environnement et du Développement Durable
IMIS	Integrated Management Information System	Système intégré de gestion de l'information
ISSET	Institute for Higher Technological Education	Institut Supérieur d'Enseignement Technologique
IUCN	International Union for the Conservation of Nature	Union internationale pour la conservation de la nature
IWRM	Integrated Water Resources Management	Gestion intégrée des ressources en eau
LCE	Master Plan for the Environment	Loi Cadre de l'Environnement
LDCF	Least Developed Countries Fund	Fonds des Pays les Moins Avancés
LDP	Local Development Plan	Plan de développement local
LMP	Local Management Plan	Plan de gestion locale
M&E	Monitoring and Evaluation	Suivi et évaluation
MAg	Ministry of Agriculture	Ministère de l'Agriculture
MA	Management Area	Zone de gestion
MAED	Ministry of Economic Matters and Development	Ministère des Affaires Economiques et du Développement
MASEF	Ministry of Social Matters, Childhood and Family	Ministère des Affaires Sociales, de l'Enfance et de la Famille
MDG	Millenium Development Goal	Objectif du millénaire pour le développement
MDRE	Ministry of Rural Development and the Environment	Ministère du Développement Rural et de l'Environnement
ME	Ministry of Livestock Farming	Ministère de l'Élevage
MEDD	Ministry of Environment and Sustainable Development	Ministère de l'Environnement et du Développement Durable
MHA	Ministry of Hydraulics and Sanitation	Ministère de l'Hydraulique et de l'Assainissement
MIDEC	Ministry of the Interior and Decentralisation	Ministère de l'Intérieur et de la Décentralisation
MSLMP	Mauritania Sustainable Landscape Management Project	Projet Mauritanien de gestion durable des paysages
MTE	Mid-term Evaluation	Evaluation à mi-parcours
MTR	Mid-term Review	Revue à mi-parcours
NAP	National Adaptation Plan	Plan National d'Adaptation
NAPA	National Adaptation Programme of Action	Plan d'Action National d'Adaptation
NEA	National Executing Agency	Agence nationale d'exécution
NTA	National Technical Assistant	Assistant Technique National
NTFP	Non-Timber Forest Products	Produits forestiers non-ligneux

PANE	National Action Plan for Environment and Sustainable Development	Plan d'Action National pour l'Environnement et le Développement Durable
PAN-GRC	National Action Plan for Disaster Risk Management	Plan d'Action National pour la Gestion des Risques et Catastrophes
PAN-LCD	National Action Plan to Combat Desertification	Plan d'Action National de lutte Contre la Désertification
PES	Payment for Ecosystem Services	Païement des services environnementaux - PSE
PIR	Project Implementation Review	Examen de l'exécution du projet
PM	Project Manager	Coordinateur du projet
PNIDDLE	The National Programme for Integrated Support to Decentralisation, Social Development and Youth Employment	Programme National Intégré d'appui à la Décentralisation, au Développement Local et à l'Emploi des jeunes
PPG	Project Preparation Grant	Subvention pour la préparation du projet
PRASP	Regional Project to Support Pastoralism in the Sahel	Projet Régionale d'Appui au Pastoralisme au Sahel
PARSACC	Enhancing Resilience of Communities to the Adverse Effects of Climate Change on Food Security in Mauritania	Projet d'Amélioration de la Résilience des communautés et de leur Sécurité Alimentaire face au Changement Climatique
PRLP	Regional Plans against Poverty	Plans Régionaux contre la Pauvreté
ProGRN	Programme for the Management of Natural Resources	Projet de Gestion des Ressources Naturelles
PSC	Project Steering Committee	Comité de pilotage du projet
REVUWI	Project for Improvement of the Investments in the Water Sector to Increase the Resilience of Pastoral and Forest Resources in the Southern Regions of Mauritania	Projet d'amélioration des investissements du secteur de l'eau destinés à la résilience des ressources pastorales et forestières des régions méridionales de Mauritanie
RISE/Regi onale	Regional Institutional Framework for the Environmental Sector	Revue Institutionnelle du Système de l'Environnement en Mauritanie
SAWAP	Sahel and West Africa Programme in support of the Great Green Wall Initiative	Subvention pour la Préparation du projet
SCAPP	National Strategy for Accelerated Growth and Shared Prosperity	Stratégie de Croissance et de Prospérité Participative
SCCF	Special Climate Change Fund	Fonds spécial pour les changements climatiques
SDSEA	Development Strategy of the Water and Sanitation Sector	Stratégie de Développement du Secteur Eau et Assainissement
SDSR	Development Strategy for the Rural Sector	Stratégie de Développement pour le Secteur Rural
SFP	Sectoral Focal Points	Point Focal Sectoriel
SEPANE	Monitoring and Evaluation System of the National Action Plan for the Environment	Système de Suivi-Evaluation du Plan d'Action National pour l'Environnement
SNA	National Strategy for Adaptation	Stratégie Nationale d'Adaptation
SNDD	National Strategy for Sustainable Development	Stratégie Nationale de Développement Durable
SNIG	National Gender Strategy	Stratégie Nationale d'Institutionnalisation du Genre

SNLP	National Strategy against Poverty	Stratégie Nationale de Lutte contre la Pauvreté
SNSA	National Strategy for Food Security	Stratégie Nationale pour la Sécurité Alimentaire
SPANB	National Strategy and Action Plan for Biodiversity	Stratégie et Plan d'Action National sur la Biodiversité
TCN	Third National Communication	Troisième Communication Nationale
TE	Terminal Evaluation	Evaluation finale
TM	Task Manager	Coordonnateur
ToR	Terms of Reference	Termes de référence
UNDAF	United Nations Development Assistance Framework	Cadre de l'aide au développement des Nations Unies
UNDP	United Nations Development Programme	Programme des Nations Unies pour le Développement
UNEP	United Nations Environment Programme	Programme des Nations Unies pour l'Environnement
UNESCO	United Nations Educational, Scientific and Cultural Organisation	Organisation des Nations Unies pour l'Education, la Science et la Culture
UNFCCC	United Nations Framework Convention on Climate Change	Convention Cadre des Nations Unies pour le Changement Climatique
UoN	University of Nouakchott	Université de Nouakchott
WB	World Bank	Banque Mondiale
WWF	World Wildlife Fund	Fonds Mondial pour la Nature

SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)

2.1. Background and context

8. This proposal seeks funding from the Least Developed Countries Fund (LDCF) to implement the Full-Size Project (FSP) entitled: “Development of an improved and innovative management system for climate resilient livelihoods in Mauritania”. Hereafter, this FSP will be referred to as “the project” or “the LDCF project”.

9. The objective of the project is to reduce the vulnerability of Mauritanian authorities and local communities to the effects of climate change in the forests and rangelands of the Sahelian Acacia Savanna Ecoregion. This will be achieved by: i) strengthening the institutional and technical capacity to plan and implement best adaptation practices; ii) promoting sustainable and climate-resilient livelihoods; and iii) increasing awareness on EbA and climate-resilient livelihoods.

10. The project will demonstrate innovative approaches to increasing the climate-resilience of livelihoods in various ecosystem types in Mauritania. These ecosystems are: i) forests, including listed forests² and *Acacia* woodlands; and ii) rangelands, including grassland and shrubland. The locations of the proposed pilot intervention areas are shown in Figure 1.

11. Five of the 28 priorities identified under Mauritania’s National Adaptation Programme of Action (NAPA) will be addressed (see Section 3.6).

Geographical context

12. Mauritania is a coastal country in northwestern Africa. It is located between the northern latitudes of 15° and 27° and the western longitudes of 5° and 17°, with a total land surface of 1,030,700 km². Four countries border Mauritania: Morocco to the northwest, Algeria to the northeast, Mali to the east and southeast, and Senegal to the southwest (**Error! Reference source not found.**). The country is divided into three broad geographical zones, namely: i) the Saharan, covering a major part of the northern territory; ii) the coastal zone, bordering the Atlantic Ocean; and iii) the Sahelian in the far south. Mauritania has 12 provinces (wilayas) and one capital district (i.e. Nouakchott, divided in 2014 into three wilayas). The 12 wilayas are composed of 54 moughataas (i.e. departments) and 218 communes.

13. Approximately three quarters of Mauritania is desert or semi-desert. To the west – between the ocean and the interior plateaus – are areas of clay plains and shifting sand dunes. The sand dunes generally increase in size and mobility towards the north of the country. In the centre of the country, the plains are bisected by a series of escarpments oriented in a south-westerly direction. The escarpments also separate a series of sandstone plateaus – the highest of which is the Adrar Plateau with an elevation of 500 m. Spring-fed oases are found at the base of some of the escarpments. The Senegal River in the south is buffered by a belt of natural vegetation, including patches of tropical forest under a gradient

² There are 30 listed forest in Mauritania. They cover 48,000 hectares in total including 17,000 hectares in the targeted wilayas. According to the Law n° 97-007 of 20 January 1997, each listed forest should have a management plan to define land-use, exploitation rules and protection.

of *Acacia* savanna in the north of the Senegal valley. The river feeds into the Senegal River Valley – an area covering 75,500 km² – which has a population density of 10–20 people per km² and includes the majority (1,360 km²) of Mauritania's irrigable land.

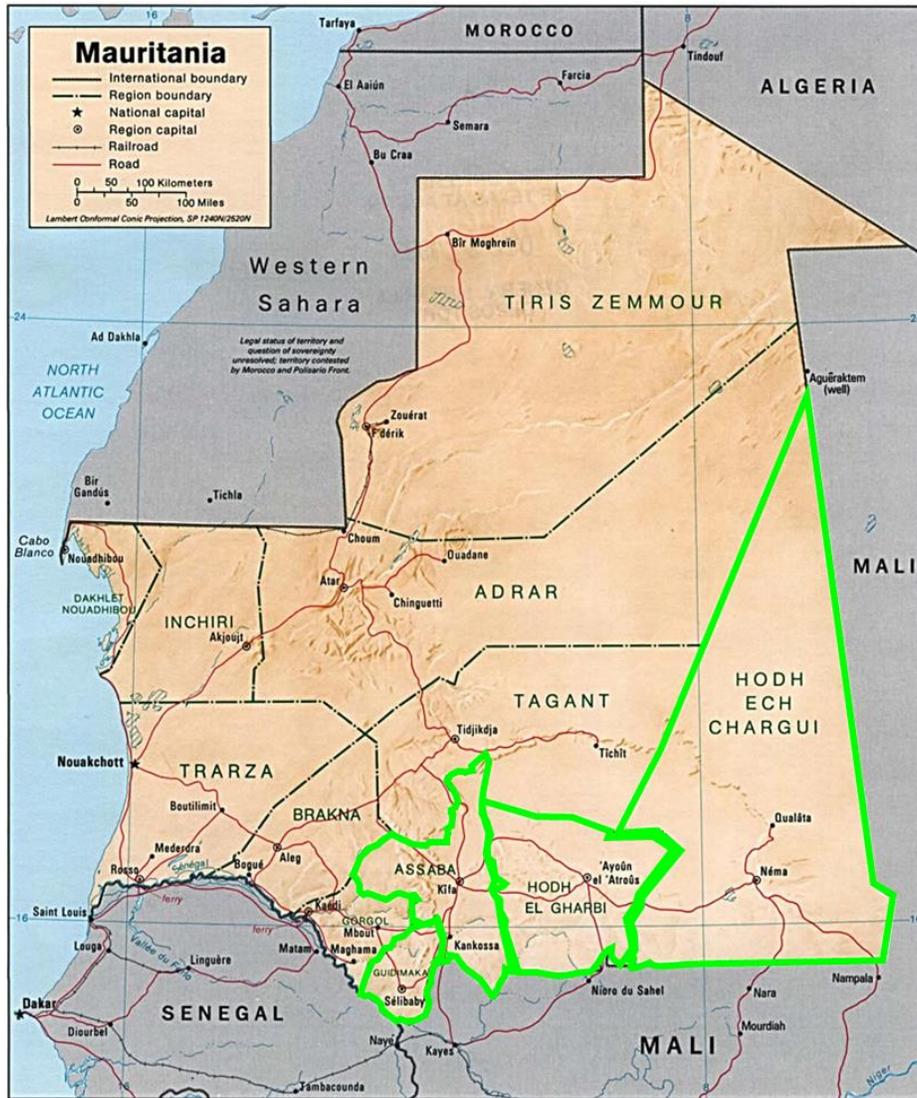


Figure 1. Geographical location of Mauritania² in West Africa and the targeted wilayas of the project. The limits of the project area are shown in green.

Political context

14. Mauritania achieved independence from France in 1960 and became an Islamic republic. An Islamic law – Shari‘ah – has been introduced in February 1980. Since 2008, the Islamic Republic of Mauritania has been governed by Mohamed Ould Abdel Aziz. The government comprises traditional ministries, special agencies and parastatal companies. The

³ <http://www.carte-du-monde.net/carte-48-mauritanie-1-afrique-sub-saharienne.html>. Accessed 08 March 2015.

Ministry of the Interior uses a model based on a decentralised administrative system to manage local authorities. This system includes Mauritania's 13 regions (wilayas). Parliament has two chambers: i) the National Assembly – consisting of 81 members elected for a five-year term; and ii) the Senate – consisting of 56 members elected for a six-year term. In 2006, a decree stipulated that one-fifth of the political party positions be reserved for women. In the same year, two women were appointed as governors for the first time.

Socio-economic context

Population

15. The population of Mauritania was estimated to be ~3.5 million in 2013⁴ with ~40% of the population below 14 years of age and an average annual population growth of ~2.3%. The average population density in the country is 3.4 people per km². The majority of the population is concentrated in the cities of Nouakchott and Nouadhibou and along the Senegal River in the southern part of the country⁵. Currently, ~45% of the population lives in cities and the urbanisation rate is increasing. For example, the estimated growth in Nouakchott's population was ~34% from 1990–2000 and was estimated at ~25% from 2000–2010⁶.

16. Mauritania's population growth is exceeding the rate of socio-economic development needed to maintain adequate living standards. Consequently, the country is challenged by socio-economic problems such as increased unemployment and competition for natural resources, resulting in widespread poverty. In 2014, Mauritania's Human Development Index (HDI) score was 0.48, ranking it 161 out of 187 countries⁷. This HDI score indicates that a large percentage of the population lives in poverty and has limited access to education.

17. Mauritania is Islamic and the official language is Arabic. Additionally, Fula, Soninke and Wolof are recognised national languages. The ethnic groups living in the country are ~40% black Moors, ~30% white Moors and ~30% black Africans.⁸

Economy

18. Approximately 65% of Mauritania's population works in rural areas. This is reflected by the fact that agriculture and livestock husbandry accounts for ~25% of the country's GDP⁹. In addition, Mauritania has abundant mineral resources such as iron ore, gold, copper, gypsum and phosphate rock. Extractive commodities make up ~75% of Mauritania's total exports and include uranium, crude oil and natural gas.

Transport and Infrastructure

19. The country's large size and extreme climatic conditions are a challenge to expansion and maintenance of infrastructure such as roads, and housing and hydraulic infrastructure. In general, road infrastructure in Mauritania is poor, particularly in the interior. These conditions

⁴ <https://www.cia.gov/library/publications/the-world-factbook/geos/mr.html>. Accessed on 23 October 2014.

⁵ <https://www.cia.gov/library/publications/the-world-factbook/geos/mr.html>. Accessed on 23 October 2014.

⁶ Choplin. A. 2009. Nouakchott: Au Carrefour de la Mauritanie et du monde. Karthala. Paris, France

⁷ http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/MRT.pdf Accessed on 14 November 2014.

⁸ <http://esa.un.org/unpd/wpp/index.htm> Accessed on 5 March 2015.

⁹ <http://www.worldbank.org/en/country/mauritania/overview> Accessed on 5 March 2015.

are exacerbated by roadway obstructions caused by drifting sand and animals. As a result, pack animals (such as camels in the north, oxen and donkeys in the south) remain an important form of transport¹⁰. Despite poor road conditions, some major international highways pass through Mauritania, including the Paris-Dakar Highway and the highway linking Tangier to Dakar. In addition, a road network connecting the capital city of Nouakchott to the port of Nouadhibou and to the majority of Moughataa-based capitals has been paved recently¹¹.

Education

20. Education is compulsory between the ages of 6 and 14. Although the fees of public schools are waived, many families still cannot afford to send their children to school. In addition, there are ongoing challenges to provide quality education such as: i) students frequently dropping out and repeating academic years; ii) inadequate curricula; and iii) an inadequate national infrastructure that prevents children from traveling to and from school¹². Consequently, literacy rate for adults was 59% in 2012 according to UNICEF. For youth (i.e. 15–24 years old), literacy rates were 72% for males and 66% for females.

Agriculture

21. The Sahelian Acacia Savanna Ecoregion provides resources for rural communities to keep livestock and farm crops. However, agriculture in Mauritania is constrained by aridity. The areas of land considered suitable for livestock and crops covers ~397,110 km², of which irrigable land is estimated to cover only 2,500 km² of Mauritania's total 1,030,700 km².¹³ The Senegal River valley in Mauritania – covering 75,500 km² with a population density of 10–20 people per km² – includes the majority (i.e. 1,360 km²) of this irrigable land.

22. Historically, livestock herding has always been an important economic activity in Mauritania and currently contributes ~15% of national GDP and 80% of the agricultural GDP. According to data from the Ministry of Agriculture (formerly called MDR), the estimated abundance of livestock in 2011 was ~1.7 million cows, ~13.8 million small ruminants, ~1.3 million camels, and ~880,000 donkeys and horses¹⁴. The national livestock sector is dependent on the sustained productivity of rangelands as a source of grazing. However, according to the Department of Livestock Husbandry, in 2006 the estimated livestock abundance (~3.5 million Livestock Standard Units [LSUs]) exceeded the carrying capacity of rangelands (i.e. 1.5–2.5 million LSUs) by 140–230%. This overstocking has led to reduced rangeland productivity. Furthermore, the relatively reliable 400–600 mm of rainfall per annum in the Senegal River valley has decreased. The combination of reduced rangelands productivity, reduced rainfall and increased frequency of bushfires (see below) has limited the extent of cattle herding and the irrigation of crops in Mauritania.

23. An additional threat to the livelihoods of agropastoral communities is the frequent occurrence of bushfires, which reduce the availability and productivity of pastoral

¹⁰ See: <http://www.britannica.com/EBchecked/topic/370109/Mauritania/55010/Transportation-and-telecommunications>. Accessed on 23 October 2014.

¹¹ See: http://en.wikipedia.org/wiki/Transport_in_Mauritania. Accessed on 23 October 2014.

¹² See: http://en.wikipedia.org/wiki/Education_in_Mauritania. Accessed on 23 October 2014.

¹³ See: <http://data.worldbank.org/topic/agriculture-and-rural-development>.

¹⁴ A census of livestock is currently under way.

resources¹⁵. Specifically, bushfires result in: i) reduced spatial extent, density and diversity of vegetation; ii) soil depletion through loss of nitrogen and organic carbon; iii) reduced nutrient cycling by deep-rooted trees and shrubs; and iv) reduced soil quality, particularly in terms of soil organic matter content. In addition, the excessive leaching of bare soils during the rainy season results in the loss of nutrients from the ashes of burned grass and animal manure. This leaching process leads to: i) reduced soil productivity; ii) reduced carrying capacity of grasslands; and iii) increased soil crusting¹⁶. Overall, the degradation of soil resources contributes to the chronic food and nutritional insecurities experienced in the Sahel. According to a nationwide study conducted in December 2011, ~25% of rural households (~700,000 people) in six of 13 wilayas (Hodh El-Chargui, Hodh el-Gharbi, Guidimaka, Tagant, Assaba, Gorgol) are food-insecure and ~15% of rural Sahelian households have insufficient food intake¹⁷.

24. Between 1968 and 1972, Mauritania was the second largest exporter of gum arabic in the world, with an average annual production of 5,700 tonnes. However, the overall production of gum arabic decreased during the droughts of the 1970's to less than 500 tonnes from 1976–1980¹⁸. Since 1987, gum arabic production in Mauritania has increased to ~1,500–2,000 tonnes per year. Currently, gum arabic production is limited by the following factors: i) reduced productivity as a result of overexploitation by local communities; ii) disorganised value-chain and marketing systems; and iii) inadequate knowledge and technical capacity to adopt site-specific practices for sustainable production.

Forestry

25. Forests provide several services and products for people living in rural areas in Mauritania. In addition to providing ecosystem services, forests are a source of livelihood for more than 80% of the population. As a result, these forests are subjected to increasing pressure from the rapidly growing human population, which results in an increased demand for: i) firewood; ii) medicinal plants; and iii) Non-Timber Forest Products (NTFPs). In the last two decades, forest cover in Mauritania decreased from 415,000 hectares in 1990 to 242,000 hectares in 2010 with an average deforestation rate of 5,000 hectares per year¹⁹. Bush encroachment of forest areas is caused mainly by the expansion of agricultural land and removal of vegetation for firewood. The degradation of forest and woodland areas is exacerbated by weather-related disturbances such as bushfires and droughts.

Energy

26. As described in the paragraph above, forests and woodlands are Mauritania's primary source of domestic energy in the form of firewood, particularly in rural areas. The

¹⁵ National Research Council. 1983. Environmental Change in the West African Sahel. National Academy Press, Washington, C.C.

¹⁶ Mills, A.J. & Fey, M.V. 2004. Frequent fires intensify soil crusting: physicochemical feedback in the pedoderm of long-term burn experiments in South Africa. *Geoderma* 121: 45–64.

¹⁷ Food Security and Nutrition Working Group. 2012. Strategic Document Version 2: Response plan addressing the food and nutrition crisis in the Sahel. Inter-Agency Standing Committee (IASC), Dakar.

¹⁸ FAO, 2010. Evaluation des ressources forestières mondiales. Rapport national pour la Mauritanie. Rome, Italie. FRA2010/129.

¹⁹ FAO, 2010. Evaluation des ressources forestières mondiales. Rapport national pour la Mauritanie. Rome, Italie. FRA2010/129.

overexploitation of wood to provide energy for cities inhibits the natural regeneration of forests and woodlands.

Water Resources

27. The Senegal River and its tributaries constitute the largest source of fresh water in southern and central Mauritania. In addition, underground water sources – or aquifers – provide fresh water to the southwestern, southern and southeastern parts of the country. Mauritania's renewable surface water resources are estimated at 11.1 km³ per year. The Senegal River, its tributaries and the dams located in Mauritania's southern and central territories constitute the majority of these water sources. Only 0.1 km³ of renewable surface water is generated in the interior of the country²⁰.

28. In 2005, Mauritania's per capita access to fresh water was 135 m³, compared with an average of 5,093 m³ for sub-Saharan Africa²¹. Inadequate access to fresh water results in ~2200 Mauritians – including ~1700 children younger than five years' old – dying from diarrhoeal disease annually²². The WHO estimates that of these deaths ~90% can be attributed to poor water quality, sanitation and inadequate hygiene. Since 1990, there has been an increase in urban sanitation coverage in Mauritania from 29% in 1990 to 51% in 2010. However, access to rural sanitation remains very limited at ~9% of the rural population²³. Based on the most recent estimates of sanitation coverage in 2010, Mauritania needs to increase sanitation coverage – from 51% to 65% in urban areas, and from 9% to 54% in rural areas – to meet the MDG sanitation target for 2015. In addition, access to drinking water needs to increase in coverage from 52% to 68% in urban areas and from 48% to 63% in rural areas.

Ecosystems and protected areas

29. Within the Sahel zone, the Senegal riverine zone and its tributaries create a wetland that is the richest and most productive ecosystem in the country^{24,25}. This zone provides the necessary resources for agriculture, pastoralism and commercial fishing. However, the Senegal riverine zone is threatened by unsustainable agricultural and pastoral practices, population growth and increased livestock concentration. Similarly, rangelands surrounding the Senegal River are important for the provision of: i) goods such as woodfuel, wild foods and medicinal plants; ii) cultural and social services such as recreation and tourism; iii) biotic processes such as pollination and waste decomposition; and iv) abiotic processes such as nutrient cycling, air and water purification and soil accretion. However, a rapidly growing population²⁶ has led to overexploitation of the Sahelian Acacia Savanna in Mauritania²⁷.

²⁰ USAID, 2007. 118/119 Biodiversity and Tropical Forest Assessment for Mauritania.

²¹ United Nations Environmental Programme. 2002. Africa environment and outlook: past, present and future perspectives. Available at: <http://www.unep.org/dewa/Africa/publications/AEO-1/148.htm>. Accessed on 2 December 2014.

²² <http://apps.who.int/gho/data/node.country.country-MRT> Accessed on 5 March 2015.

²³ World Health Organization and United Nations Children's Fund Joint Monitoring Programme (JMP) for Water Supply and Sanitation. 2010. Coverage estimates for 2010.

²⁴ Hamerlynck, O. & Duval, S. 2003. The rehabilitation of the delta of the Senegal River in Mauritania. IUCN, Mauritania.

²⁵ Tappan, G.G., Sall, M., Wood, E.C. & Cushing, M. 2004. Ecoregions and land cover trends in Senegal. *Journal of Arid Environments* 59: 427–462.

²⁶ Population growth is 2.29% in Mauritania: <https://www.cia.gov/library/publications/the-world-factbook/geos/mr.html>.

Conservation

30. Mauritania's biodiversity – although threatened by natural phenomena such as desertification and droughts – holds areas of considerable interest. For example, protected areas cover more than 2,487,000 hectares. The two declared National Parks, the “Parc National du Banc d’Arguin” and the “Parc National du Diawling” are listed as Ramsar sites. The Banc D’Arguin National Park was declared a World Heritage Site in 1989. In addition, the protected area network includes 30 forest reserves covering an extent of ~48,000 hectares. However, protected area management in Mauritania is challenged by: i) inadequate financial and technical resources; ii) limited participation of local populations; iii) scarcity of data; and iv) inadequate diversity of arid and semi-arid ecosystems included in protected areas²⁸.

General climatic conditions

31. The climate in Mauritania is characterised by high temperatures and irregular rainfall. These arid conditions are exacerbated by a northeastern trade wind, the harmattan – a hot, dry wind that originates in the Sahara and persists throughout the long dry season. The harmattan is the most prevalent wind in Mauritania, except within the narrow coastal zone, which also experiences southwestern trade winds. Most rain falls during the short rainy season (hivernage) in the period from July to September. The duration of the rainy season and the total annual amount of precipitation diminishes progressively from south to north. For example, average annual precipitation varies from 500–600 mm in the far south to less than 100 mm in the northern two-thirds of the country.

32. In the summer months, temperatures exceed 30°C in most areas and may be as warm as 40°C in the interior of the country. In winter months, average temperatures can exceed 20°C and peak at ~25°C.

33. As a result of the combination of a dry climate and high temperatures, bushfires are prevalent in the rangelands of Mauritania^{29,30}. For example, every year 100–165 bushfires damage ~400,000 hectares of forest and rangelands³¹. In 2007, bushfires occurred over 905,564 hectares³², equivalent to ~2% of the land suitable for livestock and crops³³. The frequency and intensity of bushfires is exacerbated by observed effects of climate change, specifically an increased quantity of dry vegetation, which provides a greater fuel load for

²⁷ Sahelian Acacia Savanna. See: <http://worldwildlife.org/ecoregions/at0713>.

²⁸ <http://www.cbd.int/countries/profile/default.shtml?country=mr#status>. Accessed 24 October 2014.

²⁹ Direction Protection de la Nature. 2011. Programme National de Protection des pâturages et de lutte contre les feux de brousse (2010-2011). Ministère Délégué Auprès du Premier Ministre Chargé De L’Environnement et du Développement Durable.

³⁰ Ethmane Ould Boubacar. 2011. Rapport National: Forêts, Pâturages et Changement Climatique en Mauritanie. Direction Protection de la Nature. Ministère Délégué Auprès du Premier Ministre Chargé De L’Environnement et du Développement Durable.

³¹ Ethmane Ould Boubacar. 2011. Rapport National: Forêts, Pâturages et Changement Climatique en Mauritanie. Direction Protection de la Nature. Ministère Délégué Auprès du Premier Ministre Chargé De L’Environnement et du Développement Durable.

³² Bruzon, V., Blinker, L.R. Bleu, D. & Bruny I. 2013. Profil Environnemental de la Mauritanie: Rapport Final Provisoire. Contrat cadre BENEf 2009 - EuropeAid/127054/C/SER/Multi Lot 6: Environnement.

³³ World Bank. 2008. Mauritania: Environment at a Glance. World Development Indicators, World Bank: Washington DC. See: www.worldbank.org/environment/data.

bushfires (detailed further below). Bushfires decrease the generation of goods and services that benefit local communities living in rangelands. Consequently, bushfires are among the nine major threats prioritised by the Mauritania National Action Plan for Disaster Risk Management (PAN-GRC³⁴). Others include droughts, floods, epidemics and insect infestation.

Observed and predicted climate change

Observed climate change

34. Between 1961 and 1990, the main climate-induced changes that have been observed in Mauritania include: i) reduced precipitation by 0.5–2 mm per year with a concomitant increase in drought periods of ~10–15 days per decade in the targeted wilayas; ii) increased average annual temperature of 0.9°C³⁵; iii) increased frequency of extreme weather events such as wind, rain, hail and flash floods; and iv) increased desertification, resulting in a southward shift of climatic regions near the Senegal River. The above effects have resulted in Mauritania's climate becoming more arid and the desert region expanding by ~150,000 km²^{36,37}.

Predicted climate change

35. Several models were built by the UK Met Office and the European Centre of Hambourg (based on data from 1961–1990) to project the change in rainfall and temperature in Mauritania by 2050 and 2100. In 2050, the amount of rainfall could decrease by 5–10% (optimistic model) or 20% (pessimistic model). Similarly, air temperatures are expected to increase by 1.5–2 °C. By 2100, based on the most recent models described in the Third National Communication (TCN³⁸), the predicted effects of climate change are: i) a decrease in mean annual precipitation³⁹ of ~30% compared with the period 1961–1990; and ii) an increase in air temperatures of between 2–3°C. These predicted changes will have adverse effects on Mauritania's population and important economic sectors such as agriculture.

Observed and predicted effects of climate change

Observed effects of climate change

36. Current biophysical effects of climate change are:

- southward shifts in the distribution of arable land further south;

³⁴ Plan d'Action National pour la Gestion des Risques et Catastrophes

³⁵ Hulme, M., Doherty, R., Ngara, T., New, M. And Lister, D. 2001. African Climate Change: 1900 – 2100. Climate Research Vol 17: 145-168.

³⁶ Boko, M., I. Niang, A. Nyong, C. Vogel, A. Githeko, M. Medany, B. Osman-Elasha, R. Tabo and P. Yanda, 2007: Africa. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge UK, 433-467.

³⁷ OECD2006. The ecologically vulnerable zones of Sahelian Countries. Atlas on regional integration in West Africa. Available from: <http://www.oecd.org/swac/publications/38409502.pdf>.

³⁸ Abréviation : TCN (Troisième communication nationale sur les changements climatiques).

³⁹ Boko, M., I. Niang, A. Nyong, C. Vogel, A. Githeko, M. Medany, B. Osman-Elasha, R. Tabo and P. Yanda, 2007: Africa. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge UK, 433-467.

- reduced vegetation growth rate in natural ecosystems and agricultural landscapes;
 - increased occurrence and intensity of bushfires;
 - reduced biodiversity and land productivity;
 - reduced infiltration rate, increased water runoff and erosion;
 - increased water evaporation rates and decreased aquifer levels;
 - decreased water quality and increased proliferation of floating vegetation – such as water hyacinth (*Eichhornia crassipes*) and water lettuce (*Pistia stratiotes*) – in water points;
 - increased mobility of sand dunes; and
 - ecosystem degradation.
37. Current socio-economic effects of climate change include:
- overgrazing of agricultural lands – which causes conflicts between community members practicing agriculture and pastoralism, respectively;
 - increasing concentration of pastoralists around water points and settlement of pastoralists in urban areas;
 - increasing implementation of emergency plans to support agropastoralists during droughts;
 - clearing of woodlands for the expansion of irrigated agriculture in the targeted wilayas and accrued pressure on the ecosystem; and
 - increasing exploitation of forestry resources.

Predicted effects of climate change

38. The link between climate change and increased intensity and frequency of bushfires is well-established in the scientific literature^{40,41,42}. In the Sahel region in general – and in Mauritania specifically – bushfires are expected to become a more serious threat under conditions of climate change⁴³. This is because: i) intense rainfall events are likely to cause spurts of rapid vegetation growth, thereby increasing the fuel load; and ii) increasing ambient temperatures will lead to drier fuel loads that ignite more easily and burn at greater intensity⁴⁴. Consequently, under the scenarios of future climate change, the occurrence and intensity of bushfires will increase. This will result in reduced soil productivity and livestock carrying capacity, both of which will exacerbate food insecurity.

39. In the **agricultural sector**, climate change is anticipated to result in: i) increased changes in crop growth cycles as a result of variation in the start of the wet season; ii) reduced viability of rain-fed crops (e.g. dates, millet, sorghum, rice, corn); iii) increased rates

⁴⁰ IPCC. 2012. Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, UK, and New York, NY, USA, 582 pp.

⁴¹ Stephens, S. L., Agee, J.K., Fulé, P.Z., North, M.P., Romme, W.H., Swetnam, T.W. & Turner., M.G. 2013. Managing Forests and Fire in Changing Climates. *Science*, Vol. 342, 41–42.

⁴² Dale, V.H., Joyce, L.A., McNulty, S., Neilson, R.P., Ayres, M.P., Flannigan, M.D., Hanson, P.J., Irland, L.C., Lugo, A.E., Petterson, C.J., Simberloff, D., Swanson, F.J., Stocks, B.J. & Wotton, B.M. 2001. Climate Change and Forest Disturbances. *BioScience*, Vol. 51 No. 9, 723–734.

⁴³ Ministère Délégué Auprès du Premier Ministre Chargé De L'Environnement et du Développement Durable. 2008. *Seconde Communication Nationale sur les Changements Climatiques*.

⁴⁴ Direction Protection de la Nature. 2011. *Programme National de Protection des pâturages et de lutte contre les feux de brousse (2010-2011)*. Ministère Délégué Auprès du Premier Ministre Chargé De L'Environnement et du Développement Durable.

of soil-water evaporation and plant transpiration; and iv) increased soil erosion caused by declining vegetation cover and intense rainfall.

40. **Livestock husbandry** will also be affected by climate change through: i) decreased production of fodder; ii) reduction in the number and volume of water points; and iii) degradation of rangelands. In addition to the biophysical effects, the socio-economic effects of climate change on the agricultural sector are: i) increased price of meat as a result of drought- and flood-induced livestock mortality; ii) reduced income of livestock breeders as a result of reduced livestock numbers; iii) decreased crop yields; iv) shifted livelihoods as nomadic herders become sedentary agropastoralists, leading to increased localised pressure on arable land; and v) southward migration of nomadic livestock herders as a result of reduced quality of grazing in the north. As a result, poverty and food insecurity for Mauritania's growing population is expected to increase.

41. In the **forestry sector**, the effects of climate change are expected to threaten forest resources through: i) increased demand for cultivated land; ii) increased exploitation of timber for woodfuel to meet domestic energy demands; and iii) increased frequency and intensity of bushfires as a result of prolonged drought. The reduced density and extent of vegetation cover in forest areas will result in further reduction of water infiltration rates, as well as increased erosion and degradation of soils.

42. In the **energy sector**, reduced forest coverage will lead to reduced availability of woodfuel to meet domestic energy needs. This will increase the average distance travelled to collect wood – a task generally undertaken by women⁴⁵ – and will increase the financial burden on households through additional purchase of alternative fuels. In addition, climate change is likely to result in negative effects in the energy sector through reduced generation of hydro-electricity from dams such as the Manantali dam in Mali. Reduced rainfall or increased frequency of drought will reduce the volume and seasonal availability of surface water, while the degradation of watershed ecosystems will lead to increased siltation of dams and the degradation of hydro-electrical infrastructure.

43. For the **water sector**, the effects of climate change will result in the following: i) decreased levels of surface water; ii) decreased infiltration rate for water storage; iii) increased evapotranspiration of surface water as a result of increased temperatures and wind; iv) reduced water quality and availability of drinking water; and v) changes in spatial-temporal distribution of water. In addition, intense rains are likely to damage infrastructure for water supply.

44. The predicted effects of climate change will affect the **health sector** and will lead to: i) increased incidence of malnutrition in both humans and livestock; ii) increased incidence of water-borne diseases such as cholera, typhoid and diarrhoea; and iii) greater distribution of vector-borne diseases such as malaria and leishmaniasis.

National climate change adaptation capacity

45. In 2009, Mauritania completed a planning framework (CSLP II) that includes a vision on climate change with a plan of action considering the risks of climate change and a

⁴⁵ World Bank Atlas. 1994. Fact sheet: Mauritania – women, agriculture and rural development. World Bank, Washington DC.

monitoring system (SEPANE 2⁴⁶)⁴⁷. In addition, Mauritania developed a National Programme on Climate Change coordinating unit piloted within the Department of Environment and Sustainable Development (CCPNCC).

46. Despite the efforts and strategies developed to address climate change, Mauritania still faces a number of challenges including: i) limited number of qualified staff and inadequate operational structures to implement effective adaptation strategies to climate change, including within the newly created Ministry of Environment and Sustainable Development as well as other sectors; but yet, ii) MEDD has just launched in 2015 following a government decision a coordination network on climate change by creating sectoral focal points in each department; this network has shown its effectiveness in preparing Mauritania's INDC for Paris Climate Agreement and to adopt the required multi-sectoral approach, particularly with reference to medium- and long-term adaptation to climate change.

The problems to be addressed by the project

47. The main problem that the project will address is that local communities in the forests and rangelands of the Sahelian Acacia Savanna ecoregion are vulnerable to the current and future effects of climate change. This vulnerability is exacerbated by: i) widespread poverty; ii) widespread ecosystem degradation; iii) continued limited capacity of national and local institutions to address the effects of climate change; and iv) rapid population growth.

2.2. Global significance

48. Ecosystem restoration using EbA in Mauritania will contribute toward reducing the global problem with desertification in the Sahelian region. The interventions of the project in the listed forests, *Acacia* woodlands, rangelands and watersheds will focus on restoring and reducing the degradation of natural resources surrounding the Senegal River. This will include the planting of ~400,000 trees. As a result of the project's interventions, erosion will be reduced and water infiltration will be increased. Consequently, the interventions of the project will contribute to increased water quality in the river, which will generate benefits for other countries connected to the Senegal River and associated tributaries – namely, Senegal, Mali and Guinea.

49. Because of increased human activities in Mauritania – such as poaching, inappropriate agricultural practices and bushfires – several of the country's fauna and flora species are now threatened. These species include the Dorcas gazelle (*Gazella dorcas*), Addax (*Addax nasomaculatus*), Roan Antelope (*Hippotragus equinus*), ostrich (*Struthio camelus*), Nile crocodile (*Crocodylus niloticus*) and manatee (*Trichechus senegalensis*). The activities of the project will support the conservation of Mauritania's biodiversity by focusing on one of the most diverse ecosystems in the country, namely the Sahelian Acacia Savanna Ecoregion⁴⁸.

2.3. Threats, root causes and barrier analysis

⁴⁶ Système de Suivi-Evaluation du Plan d'Action National pour l'Environnement.

⁴⁷ PANE, 2011–2015.

⁴⁸ <https://www.worldwildlife.org/ecoregions/at0713>. Accessed 6 March 2015.

50. The baseline context underpinning the problems induced by climate change in Mauritania is described in Section 2.1. The principal threats not related to climate change in the country are described below.

Non-climate change related threats

Unsustainable use of natural resources

51. The degradation of Mauritania's ecosystems is mainly rooted to two anthropogenic factors: i) the widespread dependence of rural communities on the savanna ecosystem for their livelihoods; and ii) the increasing population size in Mauritania. Consequently, ecosystems such as forests and rangelands are becoming increasingly degraded. Three main human-induced factors contribute to the degradation of the Sahelian Acacia Savanna ecosystem. Firstly, trees are harvested to meet the demand for woodfuel (in 2006, timber supplied ~70% of household energy needs). Secondly, forests are cleared for the expansion of agricultural land (see Section 2.1). Thirdly, the increased demand for pastoral resources leads to overgrazing (see Section 2.1). The degradation of these ecosystems is characterised by negative effects such as increased soil erosion, decreased infiltration of water and decreased availability of fodder for livestock.

Threats causing soil erosion and reduced water infiltration

52. Degradation of rangelands results in increased soil erosion and reduced water infiltration through the process described below:

- Reduced vegetation cover exposes soil to the impact of raindrops. On bare soil, the impact of a raindrops causes splash erosion thereby detaching soil particles and altering soil structure, resulting in formation of a crust at the soil surface.
- Removal of vegetation cover also reduces the extent of root systems, thereby reducing the stabilisation of soil structure by plant roots.
- Degradation of surface soils results in a reduced rate of rainwater infiltration. Consequently, surface run-off of rainwater increases, which further exacerbates soil erosion and increases the intensity of flooding during the rainy season.
- Desertification and removal of vegetation cover results in an increased vulnerability to wind erosion, wind-blown sand and encroachment of sand dunes.
- Prolonged periods of drought contributes to the anthropogenic causes of desertification and degradation.

Threats causing a reduction in food availability

53. Degradation of rangelands causes a reduction in food availability through the following process:

- Availability of water for agriculture is reduced as a result of the decreased infiltration and increased evaporation of rainwater on degraded soils.
- Rural communities become increasingly dependent on ecosystems as a source of food as a result of decreased agricultural production. This dependence leads to further degradation of these ecosystems, thereby further contributing to decreased food availability.
- The reduced availability of water and fodder in degraded rangeland areas results in decreased productivity and increased mortality of livestock.

Additional threats

Dependence on pastoral and agricultural resources

54. Pastoral resources are dependent on rainwater and are consequently vulnerable to drought. The current observed variability in rainfall, including longer drought periods and reduced rainfall, limits the regeneration of pastoral resources. In addition, local farmers do not have the resources or expertise to reduce their dependence on vulnerable pastoral areas or increase the efficiency of land use. Furthermore, the decreased productivity of agriculture and livestock results in an increased burden of debts on vulnerable farmers under the metayage system⁴⁹.

Poverty and resulting food insecurity

55. The current level of poverty in Mauritania is considerable with 42% of the population living in poverty and 26% of the population living in extreme poverty⁵⁰. In the wilayas targeted by the project, poverty presents four groups⁵¹. In addition, the international increase in basic food prices since 2008 has increased the cost of living in Mauritania. Furthermore, since poor and marginalised people have limited finances, technology and knowledge to adapt, they are particularly vulnerable to the negative effects of climate change.

Preferred solution

56. The preferred solution is to reduce the vulnerability to climate change of communities living in the Sahelian Acacia Savanna rangelands of Mauritania. This would be achieved through two approaches, namely: i) increasing the institutional and technical capacity of government sectors to plan for adaptation and promote the implementation of best adaptation practices throughout the country; and ii) guiding rural communities to adopt sustainable, climate-resilient livelihoods through the development of an innovative system for the sustainable management of natural resources. The main elements of the preferred solution are described below.

Strengthened capacity at national and local level to adapt to climate change using EbA

57. The preferred solution includes the institutional and technical capacity of government authorities strengthened to enable the systematic planning and implementation of best adaptation practices, including EbA. These EbA interventions will apply a combination of scientific and traditional knowledge to address the effects of climate change through targeted restoration, protection and engineering of beneficial ecosystems. The project's EbA

⁴⁹ Cultivation of land where a proprietor enable someone to cultivate his land in exchange of a proportion of the production.

⁵⁰ EPCV / ONS, 2014, the national population defined as poor stood at 31% (i.e. 1,096,584 inhabitants); 16.6% among this population were living below the extreme poverty line (ie 587,203 inhabitants). The poverty and extreme poverty were estimated respectively per person per year to the equivalent of US\$488 and US\$363.

⁵¹ EPCV / ONS, 2014: Group 1 : the poorest wilaya (Guidimaka), which is most affected by both the severity of poverty that the depth and even impact with the indices 9.7%, respectively, 18.8% and 49.1%; Group 2 the wilayas where poverty is accentuated (Trarza), with a severity of poverty in the range of 6-7% and depth of poverty between 11.5% and 14.5%; Group 3: wilayas where the poor are on average less affected than the first two (Hodh El Gharbi and Gorgol) to the extent that the severity of poverty is between 4% and 5% and the depth is between 10% and 13%; (and Group 4 ::less affected than the third (Hodh Chargui) with a severity of between 2.5% and 4% and a depth of between 7% and 10%

interventions will be implemented by local communities with the support of national and local authorities, the private sector and NGOs and will include extensive capacity building of community members.

EbA integrated into relevant legislation, policies and strategies at all levels of government to adapt to climate change

58. The preferred solution will include the integration of adaptation to climate change, including the use of EbA, into relevant legislation, policies and strategies at all levels of government. The revision of these documents will contribute to the advancement of the National Adaptation Planning (NAP) process by promoting the mainstreaming of adaptation to climate change throughout all sectors. These policies should include those economic sectors that are vulnerable to climate change – such as the agricultural, forestry and water sectors – and should encourage cross-sectoral collaboration. In addition, these revised policies and strategies will support the country to meet the development objectives defined under national strategies, MDGs and SDGs (see Section 2.4) for sustainable socio-economic development in Mauritania. Furthermore, the revised legislation, policies and strategies of Mauritania will be aligned with global and regional conventions on sustainable development, climate change, biodiversity and land degradation/desertification.

Activities implemented to restore degraded ecosystems and develop climate-resilient livelihoods

59. The preferred solution will also include the implementation of EbA across diverse ecosystems in Mauritania including forests, rangelands, wetlands and watersheds. The EbA interventions will prioritise the use of climate-resilient, multi-use and indigenous plant species for restoration and revegetation of degraded ecosystems. The restoration of degraded ecosystems will increase the generation of valuable ecosystem services such as water infiltration, soil stabilisation and fodder production. In addition, the development of diverse and sustainable climate-resilient livelihoods in local communities would be supported by: (i) the organisation of rural communities into official institutions for the sustainable management of natural resources; (ii) the increased production of economically valuable goods generated by restored ecosystems; and (iii) providing appropriate training on best practices for the sustainable management of natural resources. The direct provision of income-generating resources by natural and agropastoral ecosystems will provide local communities with clear incentives to maintain the health and integrity of ecosystems in the long term. Consequently, ecosystem restoration through EbA interventions would enable poverty reduction, increased food security and improved population health under the scenario of climate change.

Barriers to implementing the preferred solution and measures to overcome the barriers

60. As a result of multiple technical, institutional and financial barriers, the preferred solution is not feasible at the national scale in the short term. However, the project will support the implementation of the preferred solution at the local scale and contribute to building the required institutional and technical capacity at the national scale. This will enable the implementation of the preferred solution in the near future. The barriers and how the project will overcome them are described below.

Barrier 1. Limited knowledge on the value of ecosystem services and the effects of EbA

61. Currently, government authorities have limited knowledge of the importance of viable ecosystems for sustainable economic development under the scenario of climate change. Additionally, rural communities have a limited understanding of the climate change effects and the importance of viable ecosystems to their livelihoods and health. Consequently, there are limited incentives to increase the protection of vulnerable ecosystems in Mauritania. Limited knowledge and extreme poverty result in the overexploitation of natural resources. The unsustainable rates of resource use may satisfy immediate household needs but also results in medium- and long-term ecosystem degradation that will lead to multiple negative consequences for rural communities.

62. The implementation of EbA is hampered by a limited proof-of-concept of the EbA approach in Mauritania. EbA interventions have never been implemented, restoration interventions are scarce and their effects are not appropriately monitored. As a result, there is limited evidence to demonstrate the benefits of EbA to local communities and policy- and decision-makers. Without this evidence base, planners are less likely to integrate EbA into plans and strategies, and local communities are unlikely to take ownership and maintain the interventions.

63. The interventions of the project will generate evidence-based information on: (i) the socio-economic and environmental value of EbA; and (ii) EbA-based livelihoods. Adaptation interventions trialled by other ongoing projects will also be monitored rigorously to enable the comparison and identification of site-specific practices in different agro-ecological and socio-economic environments in Mauritania. The monitoring of the impact of adaptation interventions will be supported by the establishment of a rigorous system for long-term collection, analysis and archiving of data. Furthermore, the raw data collected from this system will be made accessible for use by the national and international scientific community. This will enable the accumulation of knowledge on EbA practices in Mauritania – including the production of literature reviews – and will strengthen the evidence base for the planning of future interventions. Last, the project will increase public awareness on the role of viable ecosystems and on the EbA approach using diverse tools and media such as TV, radio, Internet and art. This will be achieved under Outcomes 2 and 3.

Barrier 2. Limited institutional and technical capacity of national and local government to support local communities to implement EbA in rangelands

64. Mauritania has an adequate legal framework to guide the sustainable use of natural resources, including the Master Plan for the Environment⁵² (LCE), the Forestry Law and the Pastoral Law (see Section 2.4). However, there is limited institutional capacity to implement and enforce the existing legislation. For example, the recently established regional delegations of the MEDD (DREDDs) have inadequate capacity and equipment to fulfil their mandates (see Section 2.6). In addition, there are no appropriate communication or outreach strategies for data sharing between stakeholders, both across sectors and within sectors at different levels. This limited institutional capacity is exacerbated by *inter alia*: (i) limited smooth coordination between government departments; and (ii) empirical technology addressing technical management of natural resources effectively (see Section 2.6). Consequently, local authorities and communities still use empirical adaptation know-how but not have adequate capacity or information to implement activities based on EbA associated to GCM data. Without this capacity, government authorities need support to train local

⁵² Loi Cadre Environnementale.

communities to implement best EbA practices. As a result, technical capacity to design and implement EbA activities cannot be transferred effectively from government authorities to local communities.

65. The project will strengthen the institutional and technical capacity of the government authorities in Mauritania to support local communities to implement EbA. The project will provide training on: i) planning and implementing EbA interventions to government authorities and NGOs; ii) monitoring the efficacy of adaptation practices to national and provincial authorities; and iii) awareness-raising of local communities on the effects of climate change and adaptation options to provincial and local authorities.

Barrier 3. Limited funding available to implement EbA

66. The minimal integration of adaptation to climate change (particularly EbA) within national strategies, plans and laws at the cross-sectoral and sectoral levels limits the allocation of national budget for the implementation of EbA interventions. Consequently, all budgets allocated to adaptation is provided by external organisations within initiatives that are implemented over short timeframes, e.g. REVUWI, SAWAP, PRASP (see Section 2.7). The integration of adaptation to climate change including EbA into the national institutional framework, and the production of evidence-based knowledge on best adaptation practices, will contribute to advancing the NAP process and promote the allocation of national funds to EbA interventions for sustainable development in Mauritania⁵³.

Barrier 4. Limited technical capacity of local communities to adopt climate-resilient livelihood strategies

67. There is an increasing level of awareness in Mauritania that the success and sustainability of environment-related interventions is reliant on a sense of ownership of the project by local communities. Consequently, several environmental projects have adopted the approach of implementation through local community associations, including projects implemented by the German Agency for International Cooperation (GIZ). However, these community-based interventions remain localised and communities often do not receive sufficient technical training to maintain the benefits of the interventions beyond the project's lifespan. In addition, the technical capacity of local communities for adaptation to climate change is minimal outside of the intervention sites of the aforementioned environment-related projects. Consequently, local communities cannot implement ecosystem restoration initiatives using an EbA approach to strengthen and diversify their livelihoods, particularly pastoralism and agriculture, against the negative effects of climate change.

68. The interventions of the project will promote the implementation of ecosystem restoration and the adoption of climate-resilient livelihoods by local communities. Community members will be involved in every step of the decision-making process to promote support of, ownership of and willingness to sustain the interventions of the project. To support the effective participation of community members, the project will provide intensive training. Firstly, the beneficiaries of the project will be trained on restoration techniques and on the implementation and maintenance of climate-resilient, income-generating activities. Secondly, operational AGLCs will be established to maintain the benefits of the interventions on the medium- and long-term. Lastly, local authorities will be trained to support local community

⁵³ Similar to the yearly allocation of funds to APCBF since 2011 (see Section 2.6).

members in sustaining their climate-resilient livelihoods. This will be achieved under Outcome 2.

2.4. Institutional, sectoral and policy context

69. The GoM has ratified the following International conventions:

- Convention on the Protection of Cultural and Natural World Heritage (i.e. World Heritage Convention) in 1981;
- Convention on Wetlands (i.e. Ramsar Convention) in 1983;
- Convention on the International Trade of Endangered Species of Fauna and Flora (CITES) in 1998;
- Convention on the Migration of Species (CMS) in 1998;
- United Nations Framework on the Convention of Climate Change (UNFCCC) in 1994;
- United Nations Convention to Combat Desertification (UNCCD) in 1996;
- Convention on Biological Diversity (CBD) in 2005; and
- Kyoto Protocol to the United Nations Convention on Climate Change (UNFCCC) in 2005.

70. In addition to the above International conventions, Mauritania is a signatory to the following Regional Conventions:

- African Convention on the Conservation of Nature and Natural Resources in 1968; and
- Convention on the Cooperation of the Protection and the Valuation of the Marine Environment and Coastal Zones of West and Central Africa in 1981.

Institutional context

71. The government departments that are responsible for the management of natural resources, the effects of climate change, agriculture, pastoralism and rural development are described below.

72. The **Ministry of Environment and Sustainable Development (MEDD)** is responsible for the design, implementation and monitoring & evaluation of the policies, strategies, plans and tools for the sustainable management of natural resources. The MEDD is the government agency responsible for managing the national response to climate change, including responsibility for the implementation and monitoring of the NAPA and the UNFCCC. Additionally, MEDD is coordinating the NAP process in the country in collaboration with GIZ. Within the MEDD, the DPN and the Coordination Unit for the National Climate Change Programme (CCPNCC⁵⁴) will play a central role in the implementation, maintenance and monitoring of the project's interventions. This will include monitoring: i) the effects of adaptation interventions; ii) the resilience of rural livelihoods; and iii) ecosystem resilience.

73. The **Ministry of Hydraulics and Sanitation (MHA)** manages and regulates the use of water resources. The Department of Hydraulics (DH) is responsible for the management of surface and ground water. Under MHA, the National Centre of Resources and Water (CNRE) is responsible for monitoring water resources.

74. The **Ministry of Agriculture (MA)** is responsible for the development of the agricultural sector and the management of water resources for irrigation. Under MA, the

⁵⁴ Cellule de Coordination du Programme National Changement Climatique.

Department of Rural Planning is responsible for the construction and maintenance of hard infrastructure to collect rainwater.

75. The **Ministry of Social Matters, Childhood and Family (MASEF)** is responsible for the integration of gender equality into sectoral policies. The MASEF plays a cross-sectoral role and focuses on improving the livelihoods of women, the elderly and youth, often in close participation with communities.

76. The **Ministry of Livestock Farming (ME)** is a new ministry responsible for developing and implementing governance in the country's pastoralism and animal health sectors. The ministry has a major role in the management and use of pastoral and forest resources.

77. The **Ministry of Rural Development and the Environment (MDRE⁵⁵)** is in charge of coordinating and preventing duplication between the initiatives related to poverty reduction at the provincial level. This includes technical coordination, implementing and monitoring of the Regional Plans against Poverty (PRLP⁵⁶).

78. The **Ministry of the Interior and Decentralisation (MIDEC)** falls under the supervision of the regional administration and covers all the communes in Mauritania. At the sub-national level, the role of the MIDEC includes: i) enforcement of national laws; ii) arbitration of local conflicts related to the use of natural resources; and iii) validation and supervision of development programmes.

79. The **Ministry of Economic Matters and Development (MAED⁵⁷)** has three main roles. Firstly, the MAED is responsible for the implementation of the National Policy for Economic and Social Development. Secondly, the MAED promotes the development of private sector investments and other funding sources to support the implementation of various national plans and programmes. Thirdly, the MAED is responsible for the implementation the National Strategy against Poverty (SNLP⁵⁸) through the integration of ongoing initiatives into national planning.

Legislative Framework

80. The country has adopted legislation that favours the protection of nature and sustainable management of natural resource. The following laws in particular pertain to the management of pastures and livestock:

81. **No. 2000/045 of 26/7/2000 on the Environmental Law** establishes foundational principles for aligning environmental protection with sustainable economic and social development. This Act builds on Decree No° 20004-094 of 4 November 1994, modified per Decree No° 2007-105 of 13 April 2007. This Decree defines the judicial regime of the EIE provided for the law on the Environmental Act. These Decrees classify the activities likely to affect the environment negatively.

⁵⁵ Ministère du Développement Rural et de l'Environnement.

⁵⁶ Plan Régional de Lutte contre la Pauvreté.

⁵⁷ Ministère des Affaires Economiques et du Développement.

⁵⁸ Stratégie Nationale de Lutte contre la Pauvreté.

82. **No. 2007/055 of 20/01/2007 on the Forestry Law** provides a framework for the management and protection of forests. This text was revised to be aligned with the international conventions to which Mauritania adheres. As part of these revisions, the concepts of decentralisation and participatory approach for the sustainable management of natural resources were introduced. The revised Forestry Law includes: i) an outline of the regulations on the sustainable use of forest products; ii) the classification of national forest types; iii) a list of species and areas that receive special protection; iv) specifies rules regarding bushfires; and v) detailed fines for transgressing regulations.

83. **No. 2000/044 of 26/7/2000 on the Pastoral Law** provides a framework for the sustainable use of rangelands and the coordination of pastoral and agricultural activities. This Law stipulates the rights of herders and their animals and provides mechanisms for the resolution of conflicts. Importantly, the Pastoral Law guarantees the rights of herders to move and access pastoral resources, including surface and ground water, throughout the country.

84. **No. 83/127 of 5/6/1983 on the Property Rights and Land Reorganisation Decree.** This decree defines the conditions under which Mauritians can access land property rights. The property rights are only attributed after a private individual has successfully and continuously exploited the land for 10 years.

85. **No. 2001/050 of 25/7/2001 on the Law against Poverty** provides a framework for Mauritians to access basic social services including education, health, drinking water, food, housing, employment and communication. This law supports the implementation of the Strategic Framework to Combat Poverty (CSLP).

National Policies, Strategies and Plans

86. Within the relevant sectors are a number of legislative documents, plans and strategies. The project is aligned with the following sectoral and cross-sectoral strategies that are related to climate change, natural resource management agriculture and pastoralism (for further details on these strategies, policies and programmes refer to Section 3.6):

- **Strategic Framework to Combat Poverty (CSLP⁵⁹III)** (2011–2015);
- **National Strategy for Sustainable Development (SNDD⁶⁰)** (2006–2015) and **National Action Plan for Environment and Sustainable Development (PANE⁶¹)**;
- **Strategy for Rural Development (SDSR⁶²)** (2013–2025);
- **National Action Plan to Combat Desertification (PAN-LCD⁶³)** (1987);
- **The National Strategy and Action Plan for Biodiversity (SPANB⁶⁴)** (1999);
- **National Strategy for Food Security (SNSA⁶⁵)** (2012–2015);
- **National Gender Strategy (SNIG⁶⁶)** (2006);
- **Development Strategy of the Water and Sanitation Sector (SDSEA⁶⁷)** (2009);

⁵⁹ Cadre Stratégique de Lutte contre la Pauvreté.

⁶⁰ Stratégie Nationale de Développement Durable.

⁶¹ Plan d'Action National pour l'Environnement.

⁶² Stratégie National de Développement Rural.

⁶³ Plan d'Action National de Lutte contre la Désertification.

⁶⁴ Stratégie et Plan d'Action National sur la Biodiversité.

⁶⁵ Stratégie Nationale de Sécurité Alimentaire.

⁶⁶ Stratégie Nationale d'Institutionnalisation du Genre.

⁶⁷ Stratégie de Développement du Secteur de l'Eau et de l'Assainissement.

- **National Action Plan for Disaster Risk Management (PAN-GRC)** (2007); and
- **Mauritania's United Nations Development Assistance Framework (UNDAF)** (2012-2016).

2.5. Stakeholder mapping and analysis

87. The project was developed through extensive consultation with national stakeholders from various sectors of the GoM and provincial stakeholders of the MEDD. Consequently, the project was designed to build on existing initiatives in the country and address priority needs for adaptation in the targeted areas. Consultations with stakeholders included: i) the inception workshop held on 20 August 2014 (see Appendix 21); ii) the validation workshop held on 18 December 2014 (see Appendix 21); and iii) multiple meetings with individual stakeholders on 15–20 August 2014 and on 14–21 December 2014. The purpose of these consultations was to: (i) identify the interventions of ongoing and future projects in the targeted wilayas; (ii) select baseline projects to build on; (iii) identify the most appropriate interventions, determined by experience gained under previous initiatives and vulnerabilities of local communities in the targeted wilayas; (iv) set up realistic indicators and targets for these interventions; and (v) develop a list of specific criteria, based on GEF-LDCF criteria for the selection of the intervention sites within the targeted wilayas during the inception phase of the project. Additionally, the principles of GEF-LDCF projects, the development process for these projects and the EbA approach were explained to stakeholders during the workshops (see Appendix 21).

88. In addition to consultations held with the project developer, three national consultants collected further information for the development of the project through various consultations undertaken between August 2014 and January 2015. The objectives of these consultations were to: (i) further identify the priority needs in the targeted wilayas; and (ii) develop a detailed list of interventions for the project. Consultations included were undertaken to engage with stakeholders at the national, provincial and local levels and included site visits. At the provincial level, consultants met with: (i) the Walis and related staff from eight wilayas, including the target wilayas; and (ii) government staff from Regional Delegations in seven wilayas, including the targeted wilayas. At the local level, the consultants met with: (i) three mayors; (ii) members of local cooperatives; and (iii) additional relevant community members (see Appendices 21 and 22). Consequently, the activities of the project are well aligned with national and local requirements to adapt to climate change. The participatory approach with national, provincial and local stakeholders undertaken during the Project Preparation Grant (PPG) phase will be pursued throughout the project implementation phase.

89. The main stakeholders for the project include:

- MEDD, including the Climate Change Unit (CCPNCC); Directorate for Protection of Nature (DPN⁶⁸), Directorate for Programming, Intersectoral Coordination and Data (DPCID⁶⁹), Directorate for Environment Control (DCE⁷⁰) and Directorate of Regulation and Control of Legality (DRCL);
- Ministry of Livestock Husbandry (ME⁷¹): The Sectoral Focal Point

⁶⁸ Direction de la Protection de la Nature.

⁶⁹ Direction de la Programmation, de la Coordination Intersectorielle et des Données.

⁷⁰ Direction du Contrôle Environnemental.

⁷¹ Ministère de l'Élevage.

- Ministry of Hydraulics and Sanitation (MHA⁷²): The Sectoral Focal Point
- Ministry of Agriculture (MA⁷³): The Sectoral Focal Point
- Ministry of Social Matters, Childhood and Family (MASEF⁷⁴): The Sectoral Focal Point
- Ministry of Economic Matters and Development (MAED⁷⁵): The Sectoral Focal Point
- Ministry of the Interior and Decentralisation (MIDEC⁷⁶): The Sectoral Focal Point
- Institute for Higher Technological Education (ISET⁷⁷); and
- National Centre for Agronomic Research for Agricultural Development (CNRADA⁷⁸).
- National School for Training and Agricultural Popularisation (ENFVA⁷⁹);
- University of Nouakchott;
- University of Science, Technology and Medicine – USTM
- UNDP
- GIZ;
- NGOs and national associations, such as ONG Arbre, ONG Act for Environment⁸⁰, Association Nazaha and Association Naforé. The potential role of additional relevant NGOs (ONG AFE, ONG AZIZA, ONG Sourire, Association TERRAHOUM and OCB NEZAHA) in the implementation of the LDCF project will be investigated at inception;
- CNEDDs;
- CREDDs;
- Regional Delegation of relevant Ministries including DREDDs, DREs, DRAs and DRHAs;
- Walis of the targeted wilayas;
- Local Government at the moughataa and communal levels;
- Local Associations, including AGLCs, APs and ADCs; and
- Rural communities.

2.6. Baseline analysis and gaps

Baseline situation

Institutional capacity for the integration of adaptation to climate change into development planning

90. Climate change is recognised as a major threat to socio-economic development in Mauritania. For example, mitigation of climate change effects is noted as a priority in the third action plan of the Strategic Framework against Poverty (CSLP⁸¹). However, the first steps to initiate the NAP process were only made recently with the organisation of a NAP workshop in April 2015 by GIZ and NAP GSP. Therefore, at present there is currently no long-term national strategy for adaptation to climate change to enable the consistency, complementarity and coordination of adaptation projects in Mauritania⁸². As a result, the

⁷² Ministère de l'Hydraulique et de l'Assainissement.

⁷³ Ministère de l'Agriculture.

⁷⁴ Ministère des Affaires Sociales, de l'Enfance et de la Famille.

⁷⁵ Ministère des Affaires Economiques et du Développement.

⁷⁶ Ministère de l'Intérieur et de la Décentralisation.

⁷⁷ Institut Supérieur d'Enseignement Technologique.

⁷⁸ Centre National de Recherche Agronomique pour le Développement Agricole.

⁷⁹ Ecole Nationale pour la Formation et la Vulgarisation Agricole.

⁸⁰ Agir pour l'Environnement.

⁸¹ Cadre Stratégique de Lutte contre la Pauvreté.

⁸² Mauritania has not started implementing the NAP process yet.

integration of adaptation to current and future climate change into development planning remains limited. Therefore, adaptation projects are designed and implemented in an *ad hoc* manner. Furthermore, although climate change influences a range of economic sectors, mitigation of the effects of climate change are still considered the sole responsibility of the MEDD. The current policies, strategies and plans in the environmental sector – including water, livestock husbandry and agriculture – do not include practices for adaptation to climate change such as EbA. Consequently, in the absence of a multi-sectoral response, climate change will severely impact and may even prevent the achievement of the Sustainable and Millennium Development Goals (SDGs and MDGs) and other national objectives for socio-economic development (e.g. NSDS, DSRS).

91. Several initiatives have recently been implemented to enhance cross-sectoral coordination of planning and monitoring of interventions related to the environment and sustainable development in Mauritania. For example, the National Council for the Environment and Sustainable Development (CNEDD⁸³) was established in 2012 by the Prime Minister. Corresponding regional institutions – Regional Councils for Environment and Sustainable Development (CREDDs⁸⁴) – were established in each wilaya to promote communication and coordination and to support the implementation of field activities under the PANE (see Section 2.4). In addition, focal points for climate change were designated in 2014 within most of the ministries of the GoM. These focal points, CNEDDs and CREDDs have only been active for a brief period and are not yet fully functional. Therefore, inadequate sectoral collaboration has hindered the implementation of a national response for adapting to climate change.

92. At the local level, the GoM is undergoing a process of decentralisation. For example, in the environmental sector, Regional Delegations for Environment and Sustainable Development (DREDDs⁸⁵) were created in 2006 in each wilaya⁸⁶ to lead and coordinate the MEDD's interventions at the provincial level. DREDDs are also responsible for ensuring that these interventions are aligned with the existing policies, strategies and plans in the environmental sector. However, the DREDDs do not have the official premises, vehicles, human capacity and technical knowledge needed to implement the relevant interventions. In each wilaya in addition to the MEDD, other ministries relevant for the implementation of the project have regional delegations, namely: i) the Ministry of Livestock Husbandry; ii) the Ministry of Agriculture; and iii) the Ministry of Hydraulics and Sanitation.

93. At the communal level, local government institutions do not have adequate technical capacity to efficiently identify, design, budget for and implement socio-economic development interventions. The Forestry Law (2007) (see Section 2.4) promotes the decentralised management of natural resources and transfers responsibility from national to local authorities. Thereafter, local authorities have the right to allocate the management of natural resources to community associations. Past initiatives have demonstrated several approaches to community governance in Mauritania. Firstly, Local Development Associations (ADCs⁸⁷) were established to develop existing income-generating activities (e.g. the

⁸³ Conseil National Environnement et Développement Durable.

⁸⁴ Conseil Régional Environnement et Développement Durable.

⁸⁵ Délégation Régional de l'Environnement et du Développement Durable

⁸⁶ Mauritania is divided into 12 wilayas (i.e. provinces), 44 moughataas (i.e. departments) and 216 communes (i.e. municipalities).

⁸⁷ Association de Développement Communautaire. Located in the four wilayas of the proposed project.

establishment of butcheries and shops and the development of small-scale agricultural plots). Secondly, Pastoral Associations (APs⁸⁸) were established to promote animal health, the use of migratory routes and food availability for livestock. Thirdly, Local Collective Management Associations for Natural Resources (AGLCs⁸⁹) were established to support the sustainable management of natural resources. However, these three community associations have unequal levels of functionality and natural resource management has often been inadequate. The lack of land resource management, including management of plant species, water availability and soil fertility, has contributed to food insecurity and poverty⁹⁰.

94. AGLCs are community organisations for the sustainable management of resources. The AGLCs are the result of an extensive process of local discussions, negotiations of communities with DREDDs and communal authorities, organisation and planning workshops and administrative and legal processes to recognise AGLCs. At the end of this process, AGLC members become officially responsible for the sustainable management of a defined forest-agropastoral system. The AGLCs' mandates are obtained by local communities for 10-year renewable periods, except if: i) the AGLC is found to be responsible for resource degradation; or ii) there are conflicts within the local communities about representativeness among the AGLC members (see Appendix 16 Figure 5 in the Project Document for more information on AGLCs).

Technical capacity

95. Because of limited experience in designing and implementing climate change projects particularly those focused on the promotion of EbA, policy- and decision-makers, regional delegations, mayors, and communal councils are unable to plan effectively for sustainable development at the national and local levels. This is particularly true for cross-sectoral themes such as sustainable management of natural resources and adaptation to climate change. For example, government staff have not received training on the design and implementation of EbA interventions. It was observed during stakeholder consultations and workshops at the PPG phase, a large majority of government stakeholders do not understand this approach. Consequently, government staff do not have the necessary capacity to implement EbA interventions to decrease vulnerability to climate change in Mauritania.

State of natural resources

96. The latest inventory and quantified study of natural resources in Mauritania was conducted in 1982⁹¹. Therefore, there is no data to assess changes in resource availability over time. However, the degradation of natural resources is qualitatively evident in the reduction of forest cover from 1990 to 2000 to 2010 from 415,000 to 317,000 to 242,000 hectares respectively⁹² and the NDVI for pastoral resources for the month of September from 2010–2014 (see Appendix 22.B page 76) and results from several factors. The demand for woodfuel, which remains the primary source of energy for cooking and heating is a major

⁸⁸ Association Pastorale. Located in the four wilayas of the proposed project.

⁸⁹ Association de Gestion Locale Collective des ressources naturelles. Located mainly in Hodh El Gharbi and Guidimaka wilayas.

⁹⁰ IMF. 2007. Islamic Republic of Mauritania: poverty reduction strategy paper.

⁹¹ USAID, 1982. Inventaire des ressources du sud-ouest Mauritanien.

⁹² FAO, 2010. Evaluation des ressources forestières mondiales. Rapport national pour la Mauritanie. Rome, Italie. FRA2010/129.

factor contributing to deforestation. In addition, overgrazing induced by an increasing density of livestock is also degrading natural resources, in particular pastoral resources and contributing to desertification. This is accentuated by the drought-induced shift from nomadic to sedentary lifestyle (see Section 2.1) which has resulted in increased livestock density around water points and settlements. In addition, the increasing adoption of sedentary lifestyles by previously nomadic pastoralists results in localised vegetation removal to create space for agricultural activities. Therefore, pastoralists have to purchase fodder to compensate for the loss of pastoral resources. These factors are all exacerbated by the current effects of climate change, such as the increased frequency and intensity of droughts (see Section 2.1).

Agriculture and pastoralism

97. Drought-induced water shortages and sand encroachment due to desertification, exacerbated by drought, lead to further decreases of pastoral resources in these wilayas. Bushfires result in the degradation of thousands of hectares of rangelands land every year in the targeted wilayas (see Section 2.1). An equivalent of US\$34 million per year in livestock fodder are lost to bushfires⁹³. The four targeted wilayas are among the regions most affected by forest- and bushfires. The effects of reduced pastoral resources include: i) increased livestock and meat prices; ii) increased number of people adopting sedentary lifestyles; iii) decreased income of pastoralists; and iv) progressive shifts from raising bovid species to raising small ruminant and camelid species. Consequently, emergency programmes are regularly implemented in response to increased food insecurity in the most vulnerable communities. These programmes consist of helping pastoralists to purchase fodder, maintain livestock health and build new wells (i.e. Special Intervention Fund⁹⁴ in 2008 with a budget of US\$31 million and Hope 2012 with a budget of US\$17 million). These emergency interventions reduce the availability of budget for the GoM.

Knowledge availability and community awareness

98. A large amount of information is currently generated by multiple ongoing adaptation-related projects in the country. However, this information is generally not transformed into lessons learned or disseminated among stakeholders. Additionally, no long-term monitoring system is in place to rigorously collect and analyse data. This lack of data does not allow for the benefits of past, current and future interventions to be measured. Consequently, the identification and promotion of best practices for adaptation to climate change is prevented.

99. The knowledge of EbA – that is currently viewed as one of the best approaches for long-term adaptation to climate change^{95,96} – is limited in Mauritania, in part because

⁹³ MEDD, 2014. Communication conjointe en conseil des ministres relative à la campagne de protection des pâturages contre les feux de brousse 2014-2015.

⁹⁴ Plan Special d'Intervention.

⁹⁵ Munang, R. et al. 2013. Climate change and Ecosystem-based Adaptation: a new pragmatic approach to buffering climate change impacts. *Environmental Sustainability*, 5: 67-71; Colls, A. et al. Ecosystem-based Adaptation: a natural response to climate change. International Union for Conservation of Natural Resources (IUCN), Gland, Switzerland.

⁹⁶ SPREP, 2013. Rao N.S., Carruthers T.J.B., Anderson P., Sivo L., Saxby T., Durbin, T., Jungblut V., Hills T., Chape S. 2013. An economic analysis of ecosystem-based adaptation and engineering options for climate

experience is lacking and data is not collected and converted to policy-relevant information. Except for the SCTRC project (see Section 2.7), all adaptation-related interventions are implemented using a sectoral approach. Although regional interventions relating to EbA are ongoing in the country (e.g. Great Green Wall project), these interventions are rare, which limits the scope for collecting an EbA evidence base.

100. The awareness of government staff, CSOs and local communities of climate change and adaptation options in Mauritania is limited. This will be addressed partly by the SCTRC project that will: i) provide training to trainers, scientists, practitioners and government staff to plan, implement, manage and conduct research on the effects of concrete, on-the-ground EbA interventions; and ii) implement a small-scale awareness-raising campaign on EbA using local media. However, to date, no awareness-raising campaigns on the effects of climate change and related adaptation options have been implemented on a national scale. National awareness-raising campaigns have already been implemented in Mauritania on other environmental topics (e.g. awareness-raising campaign on the negative effects of plastic bags on the environment has been ongoing since 2007). Without such campaign, awareness of stakeholders is expected to remain limited and negatively affect the sustainability of adaptation-related interventions implemented in the country.

Baseline and associated project

101. The **Annual Programme against Bushfires in Mauritania (APCBF)** is funded by the Government of Mauritania (GoM). It was initiated in 2011 and has no termination date as the budget is allocated annually. During the implementation phase of the project, APCBF is expected to receive US\$2 million per year which corresponds to a co-financing amount of US\$8 million for the project. Within the four targeted wilayas, 48 communes will benefit from APCBF. The main objective of APCBF in these intervention sites is to protect pastoral and forestry resources against bushfires through the implementation of three approaches: i) a defensive approach which maintains a network of firebreaks using the appropriate equipment – e.g. graders and bulldozers – combined with a network of manual firebreaks created and maintained by local communities around pastoral routes; ii) a preventative approach which raises awareness – in nomad and sedentary communities living within and around rangelands – on the risk of bushfires and methods of reducing this risk; and iii) a proactive approach which allocates appropriate financial and human resources to manage controlled fires. Another aspect of this programme is increasing the awareness of local communities on the consequences of – and opportunities to – reduce the risk of bushfires. This includes: i) creating community-based committees at the village scale; ii) developing TV programs; iii) implementing awareness-raising workshops in villages and smaller settlements; and iv) producing newspaper and online publications. As agreed with APCBF during the PPG phase, the intervention sites of APCBF will be selected as a priority for the on-the-ground interventions of the LDCF project (see Appendix 15). The LDCF project will build on APCBF through implementing innovative fire-protection practices including fire-resilient green breaks. The knowledge generated on this new practice against bushfire will be important for APCBF to further climate-proof their on-going activities, and in particular to integrate sustainable ecosystem-based approaches (with multiple co-benefits) in fire-protection practices, which has so far not been done in Mauritania. Consequently, an international consultant will be hired to implement this activity in close collaboration with the management team of APCBF.

change adaptation in Lami Town, Republic of the Fiji Islands. A technical report by the Secretariat of the Pacific Regional Environment Programme. Apia, Samoa.

In addition, training for local communities on bushfire protection techniques such as green firebreaks and soil conservation practices and the implementation of such practices under the LDCF project will decrease the risk of bushfires.

102. The LDCF project will align with the **Programme for the Management of Natural Resources** (ProGRN⁹⁷) as an associated project. ProGRN is funded by the German Agency for International Cooperation (GIZ) and was initiated in 2001. The current phase (2011–2016) denominated ACCMR includes climate change and has a total budget of US\$9.6 million. The main objective of this project is to create a framework for the sustainable management of natural resources by local communities in selected areas. The four components of this project are as follow: (i) development of guidelines on the environment policy; (ii) decentralised management of natural resources in the wilayas of Guidimaka and Hodh el Gharbi; (iii) support for the management of the National Park of Banc d'Arguin; and (iv) support to the environmental sector. The corresponding interventions include: (i) capacity-building of all stakeholders and their organisations, including the training of local communities; (ii) increasing gender equity; and (iii) consulting development partners to achieve greater aid effectiveness. An intervention of ProGRN that is of particular relevance to the LDCF project is the establishment of Local Collective Management Associations for Natural Resources (AGLCs⁹⁸). These associations are responsible for the sustainable management of natural resources in the designated local areas. The LDCF project will collaborate closely with GIZ to benefit from the lessons learned regarding the creation and operationalization of AGLCs through consultations and through the participation of baseline and partner projects to PSC meetings. In return, the LDCF project will complement the activities of ProGRN by creating additional AGLCs to cover a larger part of the country based on existing AGLCs created under ProGRN. In addition, the LDCF project interventions will increase knowledge on climate-resilient practices for agriculture, pastoralism and other sources of income to be integrated into the management plans for natural resources in targeted AGLCs.

103. The **National Programme for Integrated Support to Decentralisation, Social Development and Youth Employment** (PNIDDLE⁹⁹) is an associated project – and not a baseline project – with which the LDCF project will align to maximise benefits. PNIDDLE was initiated in 2014 to: i) continue and strengthen the decentralisation process; and ii) promote democracy and social development at the local scale. This will be achieved by strengthening communal¹⁰⁰ institutions through: i) increasing communal capacity for infrastructure management to improve access of local communities to basic services; ii) increasing synergy between government institutions at the national and local levels; iii) promoting employment of youth; iv) promoting participatory approaches for development planning and management at the communal scale; and v) enabling ownership of all interventions funded by the GoM by the relevant local government institutions. The first phase of the project will run for five years with a budget of US\$102 million provided by the GoM, the World Bank and the European Union – i.e. US\$52 million, US\$25 million and US\$25 million respectively. During this first phase, PNIDDLE will focus on 100 communes in 10 wilayas, including the four wilayas targeted by the LDCF project. The management of natural resources – such as forests and

⁹⁷ Projet de Gestion des Ressources Naturelles.

⁹⁸ Association de Gestion Locale Collective des ressources naturelles.

⁹⁹ Programme National Intégré d'appui à la Décentralisation, au Développement Local et à l'Emploi des jeunes.

¹⁰⁰ Mauritania is divided into 12 wilayas (i.e. provinces), 44 moughataas (i.e. departments) and 216 communes (i.e. municipalities).

rangelands – is not precisely part of the development planning aspects on which PNIDDLE will focus. For example, Communal Development Plans (CDPs) will be created or revised as part of PNIDDLE intervention. However, this PNIDDLE intervention will not consider the integration of adaptation to climate change and sustainable management of natural resources into CDPs. Therefore, the LDCF project will build on PNIDDLE through: i) supporting the decentralisation system by increasing institutional and technical capacity at the local scale – e.g. creating and training AGLCs and local government representatives; and ii) integrating the management of natural resources in local management plans as agreed with the management team of PNIDDLE during the PPG phase. Under the list of selection criteria for the intervention sites of the LDCF project for the on-the-ground interventions, the communes targeted under PNIDDLE will be prioritised (see Appendix 15). Therefore, through increasing the capacity of local government at the communal scale, PNIDDLE will facilitate and increase the sustainability of the LDCF project interventions.

104. During the implementation phase of the project, at least one representative of the management team of APCBF, ProGRN and PNIDDLE will be invited to the Project Steering Committee (see Section 4). The Project Manager of the LDCF project will also meet on a regular basis (at least twice a year in addition to the Project Steering Committee meetings) with the management team of the baseline and associated projects to identify opportunities for complementarity.

105. A cash co-financing of US\$500,000 – corresponding to 10% of the budget – will be provided by the GoM as a contribution to the budget provided by GEF/LDCF to the project. During the implementation phase of the project, this cash co-financing will be used to support the implementation of the interventions through addressing lack of office bureau for the majority of DREDDs and maintaining and running local government infrastructures – e.g. electricity, water, land line, construction work to maintain buildings.

2.7. Linkages with other GEF and non-GEF interventions

106. There are several projects underway in Mauritania that present opportunities for synergies, collaboration and knowledge exchange with the proposed project. A brief description of these partner projects is provided below. A Coordination Working Group will be established as a forum for the partner projects to exchange information, identify opportunities for collaboration, and discuss potential areas of overlap. A coordination plan for the project will be developed at project inception, to identify the strategic key areas for coordination and possible collaboration to be explored in more detail.

107. The project to **Increase Capacity for Adaptation to Climate Change in Rural Areas (ACCMR)** was initiated in 2014 and will run until 2018. This four-year project has a total budget of US\$3.6 million provided by the German Federal Ministry for Economic Cooperation and Development (BMZ) and the EU. It is executed by GIZ and the MEDD. The interventions of the ACCMR are focussing on the wilayas of Brakna and Assaba – the latter being in common with this project. ACCMR is divided into three components: (i) mainstreaming adaptation to climate change into the development process of national strategies and plans; (ii) designing and implementing site-specific adaptation interventions; and (iii) increasing capacity to coordinate climate change and rural development. The first component of ACCMR will contribute to advancing the NAP process and is of particular relevance to the LDCF project. In particular, the ACCMR interventions under Component 1 include: (i) training on the NAP process; (ii) developing the NAP road map; (iii) awareness-raising campaigns on NAP; (iv) developing a funding strategy for the NAP process; and (v)

supporting the integration of adaptation to climate change into policies, strategies, plans and budgets. The documents to be targeted by ACCMR have not been defined yet. Therefore, the LDCF project will consult ACCMR at implementation phase to identify the remaining gaps in the mainstreaming of adaptation to climate change in the main sectors. The national adaptation strategy proposed under the LDCF project will also be designed in collaboration with the management of ACCMR. Under the second and third components of ACCMR, the most relevant interventions include activities to increase capacity of local institutions to adapt to climate change in the wilayas of intervention and to support the implementation of awareness-raising campaigns on adaptation to climate change. Consequently, the LDCF project will maintain close collaboration with the management team of ACCMR to prevent duplication and maximise complementarities between the two projects in these areas, in particular in the wilaya of Assaba which is an intervention area shared by the two projects.

The **Mauritania Sustainable Landscape Management Project (MSLMP)** under the Sahel and West Africa programme (SAWAP) is funded by GEF, LDCF and Special Climate Change Fund (SCCF) to support the Great Green Wall of the Sahara and the Sahel Initiative (GGWSSI). The budget of SAWAP allocated by GEF to 12 countries is US\$105.4 million for 2014–2020. Under this programme, MSLMP has a budget of US\$4,810,000 for Mauritania and focuses on restoration of ecosystems which are important for the production of gum arabic in the wilayas of Trarza, Brakna and Gorgol. A sustainable value chain for gum arabic will be developed as part of MSLMP interventions. Though the MSLMP is operated in different wilayas to the ones included in the LDCF project, the project is of particular relevance for the implementation of Activities 2.2.2 and 2.2.4 of the LDCF project. Consequently, active coordination between the two projects will be sought to ensure that potential synergies between the projects are capitalized on, in particular in terms of mutual learning and exchange of information on ecosystem restoration approaches and lessons learnt. Information, experiences and lessons learnt will be shared between the project teams, and opportunities for joint activities and sharing of resources will be identified, where appropriate. In particular, the management team of MSLMP will be engaged in the design and implementation of the restoration interventions in rangelands and gum tree forests under the LDCF project.

The project for **Improvement of the Investments in the Water Sector to Increase the Resilience of Pastoral and Forest Resources in the Southern Regions of Mauritania (REVUWI¹⁰¹)** is funded by SCCF and AfDB for the period 2015–2018. This project is implemented by AfDB and has a total budget of US\$6,350,000. REVUWI focuses on the sustainable management of natural resources within the sectors of forestry and pastoralism to increase the resilience of local communities and their source of livelihood to climate change. The project's activities are mainly focused on seven wilayas including Hodh El Chargui, Hodh el Gharbi, Assaba, Guidimaka, Gorgol, Brakna, Tagant and Trarza, four of which will be targeted by the LDCF project. The project is structured into the following five components: i) strengthening institutional capacity at the local level for the sustainable management of natural resources; ii) reducing the vulnerability to climate change of infrastructure and water management activities in the rural areas; iii) diversifying and strengthening livelihood opportunities and income-generating activities for agropastoral communities; iv) management and knowledge sharing, monitoring and evaluation; and v) project management. The presence of water-focused projects, including REVUWI, has been

¹⁰¹ Projet d'amélioration des investissements du secteur de l'eau destinés à la résilience des ressources pastorales et forestières des régions méridionales de Mauritanie.

identified as one of the criteria for the selection of the communes to be targeted by this project (see Appendix 15 of the Project Document). In this way, the LDCF project funds for on-the-ground interventions could be complementary on EbA, as the availability of water resources will enable planting interventions to start during the early stages of the project inception phase. To prevent any overlap between the interventions of REVUWI and the LDCF project relating to livelihood opportunities, and to maximise the synergy between their interventions, active coordination will be maintained between the two management teams throughout the project implementation phase. Specific strategic areas for potential collaboration will be identified at the project inception stage.

108. The **Regional Project to Support Pastoralism in the Sahel (PRAPS)** started in October 2015 with an implementation period of five to six years. It is a regional project for the six Sahelian countries¹⁰² funded by the World Bank and the International Development Association. The total budget for this project is ~US\$250 million, of which the proportion allocated to Mauritania is not yet finalised. The five components of the project are: i) Improving animal health; ii) Improve the management of natural resources including rangelands and water resources; iii) competitiveness of production channels and access to markets; iv) Improve the management of pastoral crises ; and v) management, administration, monitoring and evaluation, knowledge sharing, and communication. The project management team of PRASP was consulted at the PPG phase by the project management team, to promote coordination and to avoid duplication between the activities of the two projects, in particular in the area of natural resources management.

109. The project for **Enhancing Resilience of Communities to the Adverse Effects of Climate Change on Food Security in Mauritania (PARSACC¹⁰³)** is funded by the World Food Programme of the Adaptation Fund and implemented by the MEDD. PARSACC is being implemented in 75 communes, in Assaba (14), Brakna (10), Gorgol (7), Guidimaka (4), Hodh El Chargui (6), Hodh El Gharbi (13), Tagant (5), and Trarza (16). These wilayas include the four covered by the LDCF project. A budget of US\$7.8 million is allocated for the period 2014–2018 to enhance environmental governance through: i) ecological monitoring; ii) management and sharing of climate change knowledge; and iii) engagement with and participation of local communities to adapt to climate change, increase climate-resilience of their livelihoods and increase food security. To achieve this objective, PARSACC interventions are grouped into three components: i) strengthening technical capacity of government and local communities to understand the risks and impacts of climate change, and developing plans and adaptation measures; ii) developing and implementing on-the-ground adaptation interventions through the creation of community-based adaptation plans against desertification and degradation of natural resources; and iii) developing and implementing on-the-ground interventions to diversify and improve the livelihoods of local communities that are vulnerable to climate change. The partnership with this project could potentially enable the complementarity of capacity development interventions for adaptation to climate change, community-based adaptation planning and increased food security.

110. **Strengthening Capacity, Knowledge and Technologies for the Climate-resilience of Vulnerable Developing Countries (SCTRC)** is an SCCF project implemented by UNEP. It is jointly executed by the MEDD and the National Development and Reform

¹⁰² Namely Burkina Faso, Mali, Mauritania, Niger, Sénégal and Chad.

¹⁰³ Projet d'Amélioration de la Résilience des communautés et de leur Sécurité Alimentaire face au Changement Climatique.

Commission (NDRC) of China. The objective of SCTRC is to build climate resilience in vulnerable African and Asia-Pacific countries by providing support for planning, financing and implementing EbA in coastal, mountain and arid/semi-arid ecosystems. The project contains three components: i) inter-regional coordination and capacity-building for African and Asia-Pacific developing countries to plan and implement EbA; ii) increased availability of synthesized knowledge on EbA best practices; and iii) increased climate resilience of priority coastal, mountain and arid/semi-arid ecosystems in Seychelles, Nepal and Mauritania. The budget allocated to Mauritania is US\$900,000 for 2013–2018. SCTRC-Mauritania focuses on providing strategic support for adaptation to climate change to agricultural production systems in Mauritania. This will be done by increasing the resilience of plant and animal production systems that are vulnerable to the effects of climate change. The LDCF project will benefit from the experience and lessons learnt of SCTRC, which is expected to generate the first evidence-based knowledge on the implementation of EbA interventions in Mauritania.

111. The **Poverty Reduction Project in Aftout South and Karakoro Phase 2 (PASK2)** was initiated in 2012 and will end in 2020. It is funded by the International Fund for Agriculture Development and has a budget of US\$22.9 million. The objective of PASK2 is to improve income and living conditions for targeted communities. PASK2 will help to increase economic and social security based on sustainable natural resource management by and for poor rural households. The project includes the following four components: i) increased institutional and management capacity; ii) development of infrastructure in rural areas, including road and water infrastructure; iii) promotion of income-generating activities; and iv) coordination, monitoring and evaluation of the project. The interventions of PASK2 will focus on: i) soil restoration; ii) surface water management; iii) crop and livestock management; and iv) local development support. This project is implemented in three wilayas, namely Gorgol, Guidimaka and Assaba. The LDCF project interventions in the three wilayas of PASK2 will be implemented in close collaboration with PASK2 to benefit from their experience – particularly in local management of natural resources in rural areas – and maximise the complementarity of the two projects. The LDCF project will also benefit from the infrastructure built under PASK2 in Guidimaka.

112. The **Project for the Conservation, Restoration and Improvement of the Resilience of Ecosystems in Continental Wetlands (PCRIRE)** is an IUCN project under development. The budget allocated by GEF-LDCF to this project is US\$4.45 million. It is expected to start in 2017 and will focus on: i) restoration and rehabilitation of wetlands; ii) improvement of the resilience and the capacity for adaptation of the populations living near wetlands; iii) wetland knowledge management and monitoring/assessment; and iv) communication, monitoring and assessment of project activities. As part of the project's interventions, participatory management plans for wetlands will be developed. Additionally, local livelihoods will be diversified through development of income-generating activities based on natural resources such as fishing, fodder production and bee-keeping. Therefore, PCRIRE will benefit from the experience of the LDCF project in local management of natural resources and adoption of climate-resilient livelihoods by local communities.

113. The **Project Promoting Inclusive Chains and Concertation Tables (PROFITABLE)** will be launched by IFAD in 2018, in collaboration with the Mauritanian Government. The overall objective of PROFITABLE is to improve the income, living conditions and nutritional status of the rural population (women and youth in particular) in its intervention areas. The development objective of PROFITABLE is to develop sustainable

and inclusive partners for the benefit of different chain actors, particularly of poor rural producers, including women and youth.

Mauritania is included within the countries that receive support by two LDCF-funded projects under the NAP Global Support Programme. The first one entitled **Assisting LDCs with country-driven processes to advance NAPs** seeks to strengthen technical capacities of LDCs for preparation of NAPs through building on their NAPAs. The second project **Building capacity for LDCs to participate effectively in intergovernmental climate change processes** will strengthen institutional and technical capacities in LDCs for more effective participation in intergovernmental climate change negotiations and coordination of climate change efforts. This project is funded by LDCF and implemented by UNDP and UNEP. The proposed LDCF project is aligned to these NAP processes because it will provide support to Mauritania to enhance adaptation planning at the national level, which will help to access climate finance. The evidence base will be developed through this project on the cost effectiveness of investing in ecosystems as an adaptation measure. More broadly, the project will generate lessons learned, and strengthen national and local government coordination mechanisms, implementation partnerships, and awareness and capacity that will be relevant to continuing adaptation planning in the country.

114. The partner projects described above are the main initiatives related to the LDCF project. Other ongoing adaptation projects include the GGWSSI, the Small Grant Programme (SGP), the AfDB's Programme to Strengthen the Resilience to Recurring Food Insecurity in Sahel (P2RS), and the IBDS' imminent project aiming to strengthening climate resilience within Mauritania.

SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)

3.1. Project rationale, policy conformity and expected global environmental benefits

Project rationale

115. Mauritania has experienced multiple negative impacts because of climate variability and climate change, particularly the recurrence of severe drought periods since 1970. Consequently, natural resources such as forests and rangelands are widely affected by degradation, and the generation of ecosystem services has been greatly reduced (see Section 2.1). Rural communities are particularly vulnerable to drought because of the widespread reliance on livelihoods based on the availability of natural resources and generation of ecosystem services. Consequently, climate variability and climate change in Mauritania has resulted in increased poverty, unemployment and rural migration to urban areas.

116. Currently, there is a low level of awareness and adoption of the EbA approach, for example in the management of rangeland and forest ecosystems. This is because: i) government authorities including policy- and decision-makers have limited knowledge and institutional capacity to integrate EbA into policies, strategies and plans; ii) national and local governments have limited technical capacity to guide the implementation of EbA; iii) local communities are not aware of the future effects of climate change and the potential options to reduce the negative effects of climate change on livelihoods; and iv) there are few on-the-ground EbA interventions to demonstrate the effectiveness of the EbA approach.

117. The project will contribute to decreasing the climate change vulnerability of communities living near forests and rangelands in four wilayas. There are a number of barriers that prevent the achievement of the project's objective (see Section 2.3 and 2.6). The project will address these barriers through: i) strengthening the institutional and technical capacity of national and local government to implement adaptation interventions using EbA; ii) integrating EbA into policies and strategies at national and local levels; iii) restoring degraded forests and rangelands using EbA; and iv) promoting climate-resilient livelihoods based on natural resources generated by restored ecosystems. The details of the interventions of the project are described in Section 3.3.

118. The implementation of EbA in degraded rangelands will result in multiple benefits including: i) reduced desertification; ii) increased generation of marketable NTFPs; iii) increased quantity and quality of fresh water; iv) reduced severity of soil erosion and floods; and v) increased productivity of fodder for livestock production. As a result, the interventions of the project will benefit several economic sectors including agriculture, pastoralism, water and health.

119. The interventions of the project will generate multiple benefits for rural communities beyond the project's implementation period and intervention sites. Firstly, the project will provide support to the establishment of local associations to assume responsibility for the sustainable management of natural resources in the long term. Secondly, lessons learned from the implementation of EbA interventions will be collated and disseminated to communities outside of the interventions sites through a national awareness raising campaign and the implementation of an upscaling strategy (see Section 3.3). As a result, the national capacity to plan and implement EbA in other areas across Mauritania will be increased and vulnerability to climate change will be reduced beyond the intervention sites.

Policy conformity

120. The project is aligned with GEF Focal Area/LDCF/SCCF strategies under GEF6. In particular, the following "Focal Area Objectives" are addressed under the Components of the project:

- *CCA-1: Reduce the vulnerability of people, livelihoods, physical assets and natural systems to climate change.*

Outcome 1.1: Vulnerability of physical assets and natural systems reduced. Under project Component 2, EbA and other adaptation practices will be implemented to reduce the vulnerability of pastoral resources to droughts, bushfires and sand dune encroachment. This will include the implementation of reforestation and soil and water conservation practices in degraded watersheds, restoration of degraded rangeland ecosystems through set-aside plans, implementation of fixation techniques to prevent sand dune encroachment, restoration of forests, and implementation of fire-protection practices (including green breaks) on rangelands.

Outcome 1.2: Livelihoods and sources of income of vulnerable populations diversified and strengthened. EbA interventions within Component 2 will include: i) creating AGLCs to enable the sustainable management of natural resources by rural communities; ii) developing management plans to guide the sustainable use of natural resources; iii) training rural communities on restoring ecosystems with climate-resilient and multi-use species; iv) training rural communities to adopt and maintain income-generating activities in the long term; and v) training local authorities to support rural communities beyond the project lifespan (see Section 3.3 Component 2).

- *CCA-2: Strengthen institutional and technical capacities for effective climate change adaptation.*
Outcome 2.1: Increased awareness of climate change impacts, vulnerability and adaptation. The project will implement a national campaign to increase awareness on current and future effects of climate change, as well as potential options for adaptation. These awareness-raising activities will use a wide range of tools to reach remote parts of the country and all age and gender categories (See Section 3.3, Component 3). In the intervention sites, the knowledge on adaptation practices will be further increased through: i) providing site-specific information on the current and future effects of climate change and best adaptation practices; and ii) using a community-based approach for all on-the-ground activities.
Outcome 2.3: Institutional and technical capacities and human skills strengthened to identify, prioritize, implement, monitor and evaluate adaptation strategies and measures. Under Component 1, the project will strengthen the institutional capacity of national government authorities, decentralized government institutions, and CBOs including AGLCs. This will include the provision of training to policy- and decision-makers, government technical staff and NGOs on the planning, budgeting, implementation and monitoring of EbA measures.
- *CCA-3, Integrate climate change adaptation into relevant policies, plans and associated processes.*
Outcome 3.2. Policies, plans and associated processes developed and strengthened to identify, prioritise and integrate adaptation strategies and measures. Under Component 1, the project will support the development of Communal Development Plans at the communal level and Local Management Plans for AGLCs to guide the sustainable management of natural resources using an EbA approach. This will be done in the targeted communes. In addition, an upscaling strategy to extend the use of these decentralised plans for sustainable management of natural resources will be developed. Lastly, national strategies, plans and legislation will be revised to integrate EbA and support the use of these decentralised systems at the national scale.

121. The project is aligned with Mauritania's policies, strategies and plans for environmental management and adaptation to climate change including: (i) Strategic Framework against Poverty II (CSLP2¹⁰⁴, 2010–2015); (ii) the National Adaptation Programme of Action (PANA¹⁰⁵, 2011); (iii) the Third National Communication (TCN¹⁰⁶) to the UNFCCC; (iv) the National Environment Action Plan II (PANE2¹⁰⁷, 2011–2016); (v) the National Strategy for Sustainable Development (SNDD¹⁰⁸, 2006); (vi) the National Strategy for Rural Development (SDSR¹⁰⁹, 2013–2025); (vii) the Strategy for Agriculture and Food Security (SASA¹¹⁰, 2012–2015) and (viii) the National strategy for sustainable access to water and sanitation to 2030.

¹⁰⁴ Cadre Stratégique de Lutte contre la Pauvreté.

¹⁰⁵ Programme d'Action National pour l'Adaptation.

¹⁰⁶ Troisième Communication Nationale.

¹⁰⁷ Plan D'Action National pour l'Environnement.

¹⁰⁸ Stratégie Nationale pour le Développement Durable.

¹⁰⁹ Stratégie de Développement du Secteur Rural.

¹¹⁰ Stratégie d'Agriculture et de Sécurité Alimentaire.

LDCF conformity

122. The project conforms to the LDCF's eligibility criteria, namely: i) undertaking a country-driven, participatory approach; ii) implementing the NAPA priorities; iii) supporting a learning-by-doing approach; iv) undertaking a multi-disciplinary approach; v) promoting gender equality; and vi) undertaking a complementary approach.

123. *Participatory approach:* During the PPG phase, consultations included national stakeholders including government authorities from all relevant sectors, funding agencies, NGOs and CBOs. These stakeholders were engaged during the inception workshop, the validation workshop and individual consultations (see Section 2.5, Appendix 12 and Appendix 21).

124. Implementing NAPA priorities: the project supports the implementation of the following NAPA priorities of Mauritania:

- Priority 7: reorganisation of communities adversely affected by climate change;
- Priority 11: participatory reforestation for energy and agro-forestry in agricultural zones;
- Priority 20: development of fodder crops;
- Priority 25: improvement of knowledge on forest resources and their sustainable management; and
- Priority 28: institutional reinforcement of the body responsible for nature conservation.

125. Learning-by-doing approach: every on-the-ground intervention of the project will be implemented by local communities using a learning-by-doing approach. Additionally, lessons learned from the pilot interventions of the project will be collected and disseminated to inform national and local development plans in Mauritania.

126. Multi-disciplinary approach: the project's interventions require the involvement of different sectors including agriculture, water and livestock husbandry. Therefore, the interventions of the project were developed following a multi-disciplinary approach which included consultations of stakeholders from several sectors. The same approach will be undertaken during the design and implementation of the EbA interventions. Additionally, regional delegations for the relevant ministries have recently been created and a national focal point for climate change has been designed within each ministry. These institutional changes will support the adoption of a multidisciplinary, cross-sectoral approach to implementation. Lastly, the nascent NAP process is by definition cross-sectoral. Therefore, the contribution of the LDCF project to the NAP process – for example through mainstreaming adaptation and providing training in all relevant sectors – will further increase the multi-disciplinarity of the project.

127. Gender equity: in Least Developed Countries (LDCs), women tend to have lower incomes and fewer opportunities compared to men. Their capacity to adapt to the current and future effects of climate change is therefore constrained¹¹¹. Despite their capability to innovate and lead, women have historically been marginalised from national and local decision-making processes in most LDCs including Mauritania. The GoM has ratified several conventions that promote gender equality. Despite these laws and regulations, gender equality has not yet been achieved. In 2014, Mauritania's Gender Inequality Index (GII) value

¹¹¹ Lambrou, Y., & Piana, G. 2006. Gender: the missing component of the response to climate change. Food and Agriculture Organisation, Gender and Population Division.

was 0.610 – ranking it 139 out of 155 countries – and the Human Development Index (HDI) was 0.446 for females and 0.546 for males¹¹². Women currently hold only ~25% of parliamentary seats¹¹³ in Mauritania. In addition, participation in secondary school is 22% and 26% for males and females, respectively. Literacy rates in youth (15–24 years) are reduced in females (66.2%) compared with males (71.6%). For adults, male literacy is 100% while female literacy is 79.6%¹¹⁴. This restriction limits the participation of women in the formal economic sector and reduces their financial resources and technical capacity as compared to men. This compromises women’s ability to meet their livelihood requirements. Additionally, at the household level, women generally stay at home to take care of the children while men are outside of home, working to generate income for the family. As a result, women are responsible for finding food and water for their children throughout the day which makes them particularly vulnerable to droughts. They will also be less mobile in case of extreme climate events such as floods or fires because they have to move with their children. Consequently, women are more vulnerable to climate change than men.

128. Women are often the primary guardians of local and traditional knowledge and consequently need to be included in decision-making processes¹¹⁵. Therefore, the project will include measures to capitalise on women’s knowledge, while increasing the capacity of women to adapt to climate change¹¹⁶. To align with the SNIG, climate-resilient livelihoods will be developed with a focus on including female-headed households and the participation of women in AGLCs will be promoted. Training on project interventions will also be delivered with gender sensitivity to: i) empower both male and female participants to participate meaningfully in the trainings; and ii) make all participants aware of their responsibility to respect the views of all of their colleagues during training sessions. Trainers will be required to have the skills and experience necessary to plan and facilitate gender-sensitive training. For example, training and awareness-raising activities will take place with an appropriate proportion of women that will be determined during the process of consultations with local authorities and communities. The Project Management Unit (PMU) will be responsible for monitoring and reviewing gender sensitivity in the training activities and the application of gender-disaggregated indicators. The promotion of women’s participation under the project is in line with GEF guidance and standards¹¹⁷. To monitor the progress of gender mainstreaming, gender-disaggregated targets have been included in the Project Results Framework (see Appendix 3). The initial targets set for gender-disaggregated indicators were necessarily conservative – i.e. lower than 50% of direct beneficiaries comprising women – based on Mauritania’s HDI and GII. Such low levels of human development reflect significant gender-based inequalities in the country. A 50%-50% target for gender-disaggregated indicators for the training activities may be unlikely to be achievable given the social dynamics in Mauritania.

¹¹² UNDP, 2014. Human Development Reports 2014.

http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/MRT.pdf

¹¹³ World Bank, 2014. World Development Indicators: Women in development. World View.

<http://wdi.worldbank.org/table/1.5> Accessed 06 March 2015.

¹¹⁴ UNICEF, 2012. Adult literacy rate for the period 2008-2012.

http://www.unicef.org/infobycountry/mauritania_statistics.html Accessed 06 March 2015.

¹¹⁵ National Adaptation Programme of Action, 2004. Ministry of Rural Development and Environment of Mauritania.

¹¹⁶ Denton, F. 2002. Climate change vulnerability, impacts, and adaptation: Why does gender matter? *Gender & Development*, 10(2), 10–20.

¹¹⁷ GEF. 2008. *Mainstreaming Gender at the GEF*. Washington, USA.

129. At inception, the need for a gender analysis of climate change- and environment-related policies – to investigate the extent to which gender is considered in these policies – will be assessed and if applicable, the corresponding analysis will be included in the activities under Output 1.1. In addition, wherever possible the project will include measures to promote the needs of other disadvantaged and more vulnerable groups including children, the elderly and disabled people.

Complementary approach: the project will work in conjunction with various relevant ongoing projects in Mauritania, including current adaptation projects (see Section 2.7). The LDCF project will build on the activities of the baseline and associated projects and contribute to achieving their objectives under current and future conditions of climate change. In addition, the LDCF project will share information on the planned interventions to avoid duplication of efforts. A particular focus will be given to sharing information on EbA with adaptation projects to promote the use of this approach.

Overall GEF conformity

130. The project meets the overall GEF requirements in terms of design and implementation. The following core GEF criteria have been addressed:

- **Sustainability:** training will be provided to strengthen the institutional and technical capacity within national and local government to implement EbA and support local communities in maintaining climate-resilient livelihoods. In addition, institutional capacity of local communities will be increased through the creation of AGLCs. These institutions will enable the conservation of the knowledge provided under the training sessions and generated through the implementation of the activities by community members. Lastly, the awareness-raising campaign will also focus on children to promote awareness of future generations. As a result, the climate resilience of local communities will be sustainably increased through project interventions that deliver benefits in the short, medium and long term.
- **Replicability:** the project will document the activities, decisions, strategies, results, lessons learned and guidelines for the design and implementation of future projects. Access to this information for national stakeholders will be facilitated by the establishment of the data collection, analysis and archiving system. Additionally, replication will also be promoted under Component 3 through the development of an upscaling strategy (see Section 3.3).
- **Monitoring and evaluation:** the project design includes an M&E framework (see Appendices 6 and 20). This framework will be used to track the progress of the project and success in meeting the targets, and ensure its continued alignment with GEF objectives.
- **Stakeholder involvement:** The project design was developed through extensive stakeholder consultation. The stakeholders' involvement in the project will be clearly defined and validated by each stakeholder group during the initial phases of project implementation.

3.2. Project goal and objective

131. The overarching **goal** of the project is to reduce the vulnerability of local communities to climate change – particularly droughts – in Mauritania. The **objective** of the project is to reduce the vulnerability of Mauritanian authorities and local communities to the effects of climate change in the forests and rangelands of the Sahelian Acacia Savanna Ecoregion

through the implementation of EbA measures¹¹⁸. The project will focus on the most vulnerable pastoral communities living in the wilayas of Guidimaka, Assaba, Hodh El Gharbi and Hodh El Chargui.

3.3. Project components and expected results

Component 1: Institutional and technical capacity to address climate change risks through EbA

Adaptation Alternative

132. Under Component 1, the project will address gaps in institutional and technical capacity of government and non-government institutions to use best adaptation practices to decrease vulnerability to climate change in Mauritania. In particular, this component will focus on strengthening the institutional capacity of: i) national government authorities; ii) deconcentrated government institutions including CREDD, DREDD and other regional delegations; and iii) CSOs including AGLCs to plan and implement EbA interventions.

Outcome 1: Strengthened capacity at the national, provincial and local levels to use EbA measures to address climate change risks in rangelands.

Output 1.1: A national adaptation strategy to inform adaptation planning developed.

133. The first step towards a national response to the effects of climate change will be the development of a national strategy for adaptation to climate change in Mauritania that includes EbA. A participatory approach will be used to develop this document, in order to incorporate different sectoral evidence and experience of measures that help communities buffer extreme events. Representatives from relevant government sectors will participate in elaborating the strategy, including the Sectoral Focal Points on climate change (see Section 2.6). In addition, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) will be actively involved¹¹⁹ to maximise the contribution of the national strategy for adaptation to advancing the NAP process and the synergy between the LDCF project and the ACCMR project¹²⁰. The national strategy for adaptation will contain precise objectives to be met and targets for the short, medium and long term. This strategy will include best practices for adaptation to climate change – including the EbA approach – at the national scale as well as means of promoting gender equity under the climate change scenario. The development of the national adaptation strategy will be accompanied by a system of periodic review to align with the iterative nature of the NAP process.

134. To support the implementation of a national strategy for adaptation to climate change, revisions will be proposed to several relevant national strategies and plans to: i) integrate adaptation to climate change; ii) promote the implementation of best adaptation practices, including EbA; and iii) increase gender considerations. Firstly, revisions will be developed for the cross-sectoral strategy and action plan complementing the CSLP – namely the National

¹¹⁸ For more information on the process through which the proposed project will meet its objective, please see the Theory of Change in Appendix 19.

¹¹⁹ GIZ is responsible for helping the GoM to advance the NAP process.

¹²⁰ As part of the objectives of the ACCMR project, the NAP process will be supported. However, the specific activities under this objective are not specified yet. Therefore, collaboration between the LDCF and ACCMR will be crucial to maximise complementarity and avoid any duplication.

Strategy for Sustainable Development (SNDD¹²¹) and the PANE (see Section 2.4). Secondly, revisions for the sectoral strategies including the National Strategy for Food Security (SNSA¹²²) and the National Strategy for Adaptation (SNA¹²³) will be prepared and submitted for validation by the government.

135. In the environmental sector, revisions to several laws will be proposed to increase their focus on climate change and to mainstream best adaptation practices such as EbA. This revision process will start with the LCE and continue with the sub-sectoral laws that emerged from the LCE including the Forestry Law, the Pastoral Law and the Hunting Law. These revisions will be conducted in collaboration with GIZ to maximise the revised documents' support of advancing the NAP process. Similar to the development of the national strategy, best adaptation practices – including EbA – will be integrated into these documents to: i) provide guidance to policy-, decision-makers and practitioners; and ii) contribute to a coherent and efficient response to adaptation in the country.

136. The project will also include a focus on increasing institutional capacity at the national level, institutional capacity for sustainable development planning under the scenario of climate change will be increased at the communal level (see Appendix 16). Ten communes will be selected in the targeted wilayas and communes benefitting from the APCBF programme will be prioritised (see Section 2.6 for information on APCBF and Appendix 15 for the selection criteria of the intervention sites). For these ten communes, CDPs will be developed or revised in the light of climate change projections to integrate adaptation interventions – such as EbA – and to promote them as best practices for the management of natural resources. To achieve this, the members of the Communal Council responsible for the development of the CDPs will be trained on: i) the sustainable management of natural resources under a climate change scenario; and ii) how to plan and implement EbA interventions. Furthermore, the project's activities will support members of the Communal Council to develop the CDPs using a participatory approach. These activities will be designed and implemented in close collaboration with the management team of PNIDDLE (see Section 2.6).

137. Activities to be implemented under Output 1.1 are:

- 1.1.1. Develop – under the sponsorship of the Coordinating Unit of the National Programme of Climate Change (CCPNCC) – a national adaptation strategy with a matching costed and time-specific National Adaptation Plan in collaboration with the ACCMR project team, and other relevant institutions (SFP) as well as periodic review system to guide planning for adaptation to climate change – including the use of EbA – to advance the NAP process.
- 1.1.2. Initiate the validation process of the national adaptation strategy by taking the document through as many steps of the government validation process and dissemination as possible until project closure.
- 1.1.3. Propose revisions to the main sectoral policies, strategies and plans and develop briefs for the revised documents in the relevant sectors – including management of

¹²¹ Stratégie Nationale de Développement Durable.

¹²² Stratégie Nationale pour la Sécurité Alimentaire.

¹²³ Stratégie Nationale d'Adaptation.

natural resources and sustainable development – to integrate adaptation to climate change, according into the national adaptation strategy developed under Activity 1.1.1.

- 1.1.4. Propose revisions to selected laws – including environmental, pastoral, water and forestry laws – and develop briefs of the revised documents to integrate adaptation to climate change, according into the national adaptation strategy developed under Activity 1.1.1.
- 1.1.5. Initiate the validation process of the revisions developed for selected policies, strategies, plans and laws under Activities 1.1.3 and 1.1.4 by taking the document through as many steps of the government validation process as possible until project closure.
- 1.1.6. Integrate the EbA approach into decision-making processes at the community level in at least 10 LDPs, according to the national adaptation strategy developed under Activity 1.1.1.

Output 1.2: Training events organised to increase technical capacity of national, provincial and local institutions to facilitate the implementation of appropriate adaptation measures.

138. The strengthening of the institutional framework at the national and local levels will be followed by providing government staff and other relevant stakeholders with the required technical capacity to analyse their strategies in the light of climate change projections and to implement the revised strategies and plans. Therefore, under the interventions of Output 1.2, training will be provided to government staff at national, provincial and local levels, and to CBOs in targeted wilayas. Technical training under this output will focus on i) supporting these stakeholders to promote good practices among communities; and ii) the implementation of EbA interventions for the sustainable development of local communities under the scenario of climate change. These training topics will include raising awareness of the ecological and economic advantages of viable ecosystems, and training on the restoration of ecosystems that provide climate-resilience livelihoods to local communities. This training will be provided to: i) relevant national government staff including policy-makers, decision-makers and technical staff; ii) deconcentrated government staff including DREDDs, IEDD; and iii) relevant municipality staff and CBOs.

139. In addition to receiving training on the implementation of EbA, DREDDs and other relevant regional delegations will be trained on designing and implementing awareness-raising campaigns for local communities in their respective wilayas – particularly for AGLC members. Technical and material support will be provided to facilitate the production of awareness-raising tools (e.g. posters, 3D maps, pamphlets). This will be undertaken following a training-of-trainers approach. Specifically, DREDDs and other regional delegations will be trained and they will then work directly with local community members. Training will be provided on: i) accessing and analysing existing studies on climate change trends and effects; and ii) best adaptation options from inside and outside the country. Specific training support adapted to the local context will be developed for each of the targeted wilayas. DREDDs and other relevant regional delegations will also be trained on the use of monitoring and evaluation techniques, including SEPANE and the new system developed under Output 3.1 to measure rigorously the efficiency of adaptation interventions on communities' livelihoods.

140. The training interventions implemented under Output 1.2 will be supported by the production of guidelines that will be distributed to the stakeholders before the training sessions. These guidelines will: i) facilitate learning during the meeting; ii) increase the sustainability of the training; and iii) reach an audience beyond the training attendees.

141. Activities to be implemented under Output 1.2 are:

1.2.1. Develop training material to facilitate the use of EbA including technical EbA guidelines.

1.2.2. Provide training to policy- and decision-makers, government technical staff and NGOs, on the use of the technical EbA guidelines and other material developed under Activity 1.2.1.

1.2.3. Provide training and equipment¹²⁴ to relevant government staff – including the SFP, DREDDs, IEDD – and sectors to collect and analyse data on the efficiency of adaptation practices.

1.2.4. Provide support to the DREDDs and other relevant regional delegations to design and implement awareness raising campaigns on EbA for rural communities, particularly municipality staff and AGLC members.

Output 1.3: New AGLCs established and existing AGLC management committees trained on the use of EbA for the sustainable management of natural resources including pastoral resources.

142. This output will focus on establishing appropriate institutional framework at the local level for the implementation of on-the-ground activities, namely CBOs (i.e. AGLCs). The objective of Output 1.3 is to establish operational AGLCs in the intervention sites for the management of natural resources. Building the technical capacity of AGLC members will include the development of an appropriate framework for knowledge transfer between community members. These institutions are expected to: i) be the main interface between the project and the community members; and ii) have a major role in the efficiency and sustainability of the project interventions.

143. The preliminary step towards the establishment of operational AGLCs will be a stocktaking of the existing local associations in the four targeted wilayas. This stocktaking will enable the identification of gaps in CBO coverage for the management of natural resources. Firstly, all relevant categories of local associations including ADCs, APs and AGLCs will be identified. Secondly, an analysis of the structure and achievements of each local association will be conducted. Gender equality within the AGLCs will also be included in this analysis. Thirdly, at least 12 local associations that are not fully operational will be selected based on the communities and ecosystems included in their MAs (see Appendix 15 for the selection criteria for the communities and ecosystems to be targeted by the project) and their capacity gaps to benefit from the capacity-building interventions of the project. These interventions will include addressing the institutional and technical gaps of the selected associations, and promoting gender equality within the AGLCs. In addition, if these selected local associations

¹²⁴ The equipment to be provided will likely include GPS devices, cameras, species identification books, sampling material and apparatus to measure vegetation indices and water quality.

are not AGLCs the necessary process will be followed to transform them into AGLCs. This will allow the adoption of a standardised approach to implementation that will facilitate the replication of successful project activities.

144. The interventions of the project will contribute to addressing the gaps identified under Activity 1.3.1 through the creation of 15 new AGLCs in important pastoral zones. The establishment of the AGLCs will involve a process of local discussions, negotiations of communities with DREDDs and communal authorities, organisation and planning workshops, and administrative and legal processes to recognise the AGLCs. At the end of this process, AGLC members become officially responsible for the sustainable management of a defined forest-agropastoral system. The Management Area (MA) covered by each AGLC will comprise between 105 and 810 km^{125,126} (see Appendix 15). One of the selection criteria for a site to become an AGLC is for it to border at least two operational AGLCs – under Component 2 (see the full list of selection criteria under Appendix 15). According to stakeholder consultations, the establishment of an AGLC is expected to be a six-month process. The creation of AGLCs will upscale the activities implemented under ProGRN. Therefore, the ProGRN management team under GIZ will be engaged with the design and implementation of the activities under Output 1.3.

145. Auditing of the existing AGLCs will be undertaken in the project's interventions and technical training provided to AGLC members in planning for climate change. The technical gaps in adaptation interventions are expected to include: i) identifying best practice in restoration, agricultural and pastoral activities in a specific context; ii) using an ecosystem services approach to guide the design of interventions; iii) business plan development; iv) implementing EbA measures; and v) monitoring results.

146. Activities to be implemented under Output 1.3 are:

1.3.1 Undertake a diagnostic review of government and community-based organisations in the targeted wilayas, to identify with the support of DRCL where AGLCs are most urgently required and where AGLCs should be strengthened.

1.3.2 Establish 15 new AGLCs and strengthen the operational framework of 12 existing AGLCs for the sustainable management of natural resources in the four targeted wilayas of the Sahelian Acacia Savanna Ecoregion.

1.3.3 Provide training on climate-resilient practices with a focus on EbA interventions and sustainable resource management to: i) the 27 AGLC steering committees targeted by the project; and ii) local community representatives in the project intervention sites.

Component 2: Climate-resilient livelihoods for rural communities using an EbA approach in rangelands in four wilayas in the Sahelian Acacia Savanna Ecoregion

Adaptation Alternative

¹²⁵ The MA of one AGLC should be crossed from side to side within a day maximum on the back of a camel.

¹²⁶ GIZ. 2011. Gestion décentralisée des ressources naturelles en Mauritanie: Experience et enseignements 2001-2011 du Programme de Gestion des ressources naturelles. Nouakchott, Mauritanie.

147. Component 1 will focus on building institutional and technical capacity to implement EbA interventions at the national and local levels. Within Component 2, EbA pilot interventions will be implemented both to increase knowledge on best adaptation practices in Mauritania and to decrease the vulnerability of local communities to the effects of climate change such as droughts and bushfires. Firstly, specific training on the development of Local Management Plans (LMPs) to guide the sustainable management of natural resources – following an EbA approach – for rural communities’ development under the conditions of climate change will be provided to the selected AGLCs in each of the four targeted wilayas. The on-the-ground interventions planned under the project will be included as part of the LMP. Secondly, the pilot EbA interventions included in the LMPs will be implemented using a community-based approach.

Outcome 2: Increased provision of pastoral resources and climate-resilient livelihoods via an EbA approach.

Output 2.1: Management plans for natural resources including EbA interventions developed in collaboration with AGLCs.

148. As a first activity under Component 2, a maximum of 12 AGLCs among the 27 AGLCs trained under Activity 1.3.3 – a group of 3-4 neighbouring AGLCs in each of the four wilayas – will be selected according to the criteria provided under Appendix 15. After selecting the AGLCs to be targeted for the on-the-ground interventions, a gender analysis will be undertaken in these AGLCs to identify how gender equity can be promoted in the adaptation interventions implemented and to incorporate this into the strategy for Components 1 and 2. In addition, within the MAs of the selected AGLCs, an Integrated Ecosystem Assessment (IEA) will be undertaken to determine the extent of degradation and productivity levels of rangelands, forests and other ecosystems within the selected MAs. Furthermore, community members within the AGLCs will be consulted to ensure that potential intervention sites are selected in a participatory manner. The results of both the IEA and the participatory selection will then be combined to finalise site selection for the planting activities under Output 2.2. In addition, support will be provided to members of the selected AGLCs to produce detailed digital maps of ecosystems and land tenure in their MAs. These digital maps will facilitate site selection in these areas for future projects.

149. Following the precise selection of the intervention sites for implementing on-the-ground interventions under the project, 2–4 LMPs will be developed in a participatory manner with the AGLC members for each intervention site. These LMPs will guide the sustainable management of natural resources in the context of climate change in the MAs for a period to be defined in collaboration with local stakeholders (e.g. 2–5 years). The priority on-the-ground interventions under Output 2.2 and 2.3 will be integrated in the LMPs of the corresponding site. The remaining interventions identified during the development of the LMPs that are not addressed by the project will guide ongoing and future interventions in the targeted sites.

150. Lastly, the private sector will be engaged with to explore opportunities for upscaling the most successful project interventions for adapting to climate change. Additionally, to generate funding for the conservation of natural resources in the long term, the implementation of Payment for Ecosystem Services (PES) will be promoted in the

intervention sites where appropriate. The PES concept is integrated into the Forestry Law¹²⁷ as an appropriate tool for stakeholders to manage and access natural resources. Where appropriate, local agreements will be developed with the AGLCs and integrated as required into the LMPs. These agreements can – for example – include taxes paid by private companies or individuals for the commercial use of natural resources including water, wood and pastoral resources except when it is part of a community management plan in an MA or on private land. The funds generated would then be allocated to community members whose practices contribute to conserving or promoting ecosystem services.

151. Activities to be implemented under Output 2.1 are:

2.1.1. Select AGLCs – among the AGLCs trained under Output 1.3 – that will benefit from the on-the-ground interventions of the project within the Sahelian Acacia Savanna Ecoregion.

2.1.2. Undertake a gender analysis in the selected AGLCs and identify opportunities to further integrate gender equity in the on-the-ground interventions of Component 2.

2.1.3. Undertake participatory baseline surveys to determine the level of degradation and productivity of rangelands and other ecosystems within the management areas of AGLCs established and strengthened under Output 1.3.

2.1.4. Produce geo-referenced digital maps of pastoral and forest resources in the AGLCs.

2.1.5. Develop and implement at least nine LMPs for the sustainable management of pastoral and forest resources under the climate change scenario, including PES systems where appropriate, in collaboration with DREDDs, local authorities, AGLC members and other rural community members including EbA measures.

Output 2.2: EbA and other adaptation practices implemented to decrease vulnerability of pastoral resources to droughts, bushfires and sand dune encroachment within the management areas of the AGLCs selected under Output 2.1.

152. After developing the required local management framework under Output 2.1, the restoration interventions for pastoral and forest ecosystems will be implemented. This will include assessments of biodiversity and vegetation density. Further assessments on water conservation techniques – including *zai*¹²⁸, half-moons¹²⁹ and stone rows¹³⁰ – will be conducted and the selected methods will be implemented within and outside restoration sites to increase water infiltration and promote further natural regeneration. Guards will be hired to protect the restoration sites from being degraded by direct livestock- or human-related activities during the early stages of the restoration activities¹³¹. For each planting intervention described under Output 2.2, a preliminary study to assess the baseline state of the area to be restored will be conducted before planting activities commence. A long-term management

¹²⁷ Article 10 of the Forestry Law.

¹²⁸ Traditional land rehabilitation technology whereby small pits, 20-30 cm in diameter and 10-20 cm deep, are dug and approximately two handfuls of organic material (animal dung or crop residue) is placed. Seeds are planted in the pits with the first rainfall.

¹²⁹ Half-moon trenches dug on gentle slopes with the removed soil placed downslope.

¹³⁰ Walls of large rocks tightly packed with smaller rocks for reinforcement to slow runoff.

¹³¹ Hiring a guard will enable to start the restoration activities before the long-term management systems of the corresponding AGLCs are implemented.

system for the restoration sites will be implemented within the AGLCs including: i) monitoring the vegetation recovery in the set-aside plot; ii) maintaining the restoration areas; and iii) managing access to restored areas. To allow trees to reach maturity during the four-year lifespan of the project, nurseries will be implemented as soon as possible, once the project is initiated.

153. The first restoration activity will focus on watersheds that are greatly eroded. Trees and shrubs will be planted on 150 hectares of degraded watersheds to stabilise the soil and increase water infiltration into the soil. Contour lines will be included in the planting protocols to reduce the speed of rainwater flow and the extent of subsequent erosion. Potential candidate species to be grown in nurseries under this activity include: gum acacia (*Acacia senegal*), umbrella thorn acacia (*Acacia tortilis*), desert date tree (*Balanites aegyptiaca*) and jujube (*Ziziphus mauritania*).

154. Set-aside practices that are climate-resilient will be designed to rehabilitate at least 300 hectares of degraded ecosystems. Under the scenario of climate change, these set-aside plots will provide NTFPs including fodder resources and fruits during the dry season thereby increasing the sources of income for local communities during drought periods. In addition, this intervention will contribute to reducing desertification and erosion. The following sub-activities will be implemented: i) fencing set-aside plots to exclude livestock; ii) establishing tree nurseries in close proximity to the set-aside zones; and iii) supplementing the natural recovery and tree plantation in rangelands by sowing seeds. The results of these three methods – natural recovery, natural recovery plus sowing and tree plantation – will be compared through an in-depth economic analysis to identify which method is the most cost effective. In addition, a rotation system for setting aside will be established and rules for the periodic exploitation of resources within the set-aside plots will be defined.

155. In the intervention sites where sand dunes are encroaching on pastoral and forest habitat because of desertification and leading to reduced resource availability, a combination of biological and mechanical fixation techniques for reducing sand dune encroachment will be implemented over 390 hectares. Firstly, nurseries will be established near the transplantation sites to grow the selected trees for dune fixation. The following species are potential candidates for dune fixation in Mauritania: i) khimp (*Leptadenia pyrotechnica*); and ii) merkba (*Panicum turgidum*). Secondly, natural material – such as wooden stakes erected on dune slopes¹³² – will be used to stabilise the dunes temporarily and prevent the saplings to be planted from being buried or uprooted as a result of moving sand. Thirdly, saplings will be planted mechanically in the dunes. This planting method will enable the saplings to grow until their root systems are sufficiently developed to fix the sand in the long term.

156. Regarding the forest ecosystems, at least 150 hectares of protected forests and 210 hectares of *Acacia* woodlands will be restored as part of the project interventions. The degraded *Acacia* ecosystems targeted under this activity will be suitable for *Acacia senegal*, one of the main species producing gum Arabic in Mauritania. Therefore, this species – and other gum-producing tree species – will be planted to increase the production of gum and promote income-generating activities based on gum harvesting. The restoration areas will be fenced to prevent exploitation by livestock and the presence of the guard will prevent tree cutting for woodfuel. Natural regeneration is expected to occur to some extent after fencing.

¹³² For examples of dune stabilisation methods using simple materials, see “Sand dune stabilization methods – a global tour”. Available at: ww.gbuapcd.org/keelerdunes.

However, to accelerate the regeneration process, nurseries will be established and additional saplings planted in the restoration sites. Selective pruning and removal of deadwood will also be undertaken where necessary. The restoration of protected forest will follow similar steps to the restoration of *Acacia* woodlands (see Appendix 22.B page 119-120 for examples of tree species to be planted for forest and *Acacia* woodland restoration).

157. To build on the APCBF project and increase the resilience of local communities to bushfires in Mauritania, pilot interventions for the creation of green firebreaks will be implemented as part of the project. Considering that this technique has never been used in Mauritania, 20 hectares of green firebreaks will be developed as a pilot intervention. To do so, thick corridors – 20–25 meters wide – of perennial species will be planted¹³³. Collectively, the selected species will be: i) fire-resilient; ii) drought-resilient; iii) fast-growing; iv) indigenous or presenting no invasion risk; and v) will exclude other species from growing beneath their foliage. The trade offs between criteria for species selection will be determined largely by the site-specific purposes of the planting activities and the preferences of local communities. For example, potential species to be planted in the green firebreaks are: i) *Leptadenia pyrotechnica*; ii) *Vetiver nigriflora*; iii) *Guiera senegalensis*; iv) *Khaya senegalensis*; and v) *Piliostigma reticulata*. The species prioritised for planting in the green firebreaks will have multiple traditional uses for rural communities, including the provision of medicinal products and other NTFPs. The value of these species will promote: i) the maintenance of the species planted under the LDCF project; and ii) future planting activities if this pilot intervention is successful. This intervention will be designed in collaboration with the Institute for Higher Technological Education (ISET). The following sub-activities will be implemented: i) developing the planting protocols; ii) establishing nurseries; iii) removing all other types of vegetation at the sites; iv) planting trees and fencing the planting area; and v) maintaining the green firebreaks by removing inappropriate plants and trimming trees as needed. If successful, these pilot interventions will reduce the amount of pastoral and forest resources being removed for bushfire prevention.

158. Activities to be implemented under Output 2.2 are:

2.2.1 Design and implement reforestation practices, and soil and water conservation practices on 150 hectares of degraded watersheds.

2.2.2. Design and implement set-aside plans for the restoration of 300 hectares of degraded ecosystems, and rainwater retention systems such as rainwater reservoirs, *zaï*, stone rows and half-moons.

2.2.3. Design and implement fixation techniques to prevent sand dune encroachment on 390 hectares of pastoral routes including biological and mechanical fixation.

2.2.4. Develop restoration protocols and restore 210 hectares of gum tree forests and 150 hectares of protected forests.

2.2.5. Develop and implement fire-protection practices – including fire-resilient green breaks – on 20 hectares of rangelands.

¹³³ Potential communes for the plantation of these green firebreaks are Arr and Dafort in Guidimaka.

Output 2.3: Training, technical support and equipment provided to local communities for the establishment of climate-resilient livelihoods.

159. Increasing the climate resilience of local livelihoods will begin with climate-proofing existing agropastoral activities. Therefore, the following sub-activities will be implemented: i) an inventory of current agropastoral practices and the location of corresponding agropastoral plots; ii) the identification of sites for establishing additional agropastoral plots and strengthening existing ones; iii) the selection of beneficiaries; iv) the identification of appropriate agropastoral practices to increase resilience to droughts; and v) the development of protocols to promote these practices in the selected agropastoral plots. At least 50 hectares of agropastoral plots will be targeted by the project's interventions. Women, youth and marginalised groups will be the priority beneficiaries of these interventions. Potential species to be promoted to increase agropastoral productivity under the scenario of climate change are: i) crop species including onions, carrots, potatoes, melons and beetroots; ii) fodder species including Lucerne (*Medicago sativa*), sorghum (*Sorghum* sp.), pigeon pea (*Cajanus cajan*) and cowpea/dolique mongette (*Vigna unguiculata*); and iii) fruit-tree species including mango (*Mangifera indica*), citrus (*Citrus* sp.), papaya (*Carica papaya*) and guava (*Psidium guajava*). In addition, micro-irrigation techniques that optimise the use of water during drought periods will be piloted. The sandy soil typical in the agropastoral plots might be unsuitable for the use of drip irrigation and the option of using sprinkler irrigation should be considered¹³⁴ in alignment with Priority 23 of Mauritania's NAPA¹³⁵.

160. In addition to agropastoralism, climate-resilient economic activities based on these ecosystems will be developed to sustain the restoration interventions. This direct generation of income from viable ecosystems is expected to create incentives for local communities to preserve the restored ecosystems and other natural and agropastoral ecosystems sustainably. Therefore, a rigorous socio-economic survey will be conducted to identify the best opportunities for the development of climate-resilient, income-generating activities based on the NTFPs produced by targeted ecosystems in the intervention sites. This study will mainly be based on consultations of a representative sample of community members in the intervention sites to: i) investigate what are the current income-generating practices based on NTFPs; ii) assess their profitability; iii) assess their climate resilience and sustainability; and iv) identify which practices based on NTFPs the local community members – with a balanced number of men and women – would be willing to expend or adopt. The following NTFPs and the corresponding drought-resilient, NTFP-generating species will likely be promoted under the project: i) desert dates (*Balanites aegyptiaca*); ii) monkey bread (*Adansonia digitata*); iii) gum and resin trees (*Acacia* sp.); iv) doum palms (*Hyphaene thebaica*). Trees attracting bees such as *Acacia melifera* and medicinal trees will also be considered.

161. After identifying a set of potential income-generating activities, the feasibility of developing value chains for the sale of NTFP's will be assessed. This assessment will consider both technical and financial factors. A detailed protocol to address these constraints will then be developed. The management teams of ProLPRAF and the gumtree project will also be consulted as part of this study as these respective initiatives include activities which

¹³⁴ Brouwer, C., Prins, K., Kay, M. & Heibloom, M. 1998. Irrigation water management: irrigation methods. FAO, Rome.

¹³⁵ GoM. 2004. National Adaptation Programme of Action (NAPA) to Climate Change. Priority 23: experimental use of drip techniques in oasis zone.

focus on developing sustainable income-generating activities in the project's targeted wilayas. The results of the socio-economic survey will be used to inform the selection of tree species for the restoration interventions under Output 2.2.

162. Nurseries will be established to grow trees that produce NTFPs for the agropastoral plots. In addition, tree species selected to generate NTFPs under Output 2.2 but not planted under the restoration activities will be grown in these nurseries. To facilitate tree transplantation, these nurseries will be constructed in close proximity to the plantation sites.

163. The project's interventions will provide the material necessary for growing, harvesting, maintaining, transforming and marketing the selected agropastoral products and NTFPs. This material will include canning or drying micro-units for the transformation of agropastoral outputs and NTFPs into marketable products. The opportunity for the infrastructure needed to host the processing activities to be provided by the AGLC members will be investigated before any construction plan is considered.

164. After receiving the appropriate material to implement climate-resilient livelihoods, the AGLC members will be trained on the implementation of these livelihoods. The content of these training sessions will include: i) the concept of value chains for the selected agropastoral products and NTFPs; ii) the detailed role of the different actors in the value chain; iii) the requirements for setting up and maintaining a business – including budgeting and accounting; iv) the growing and collecting processes for the respective agropastoral products and NTFPs; v) the transformation processes needed to render the agropastoral products and NTFPs marketable; and vi) the methods and equipment required to maintain the agropastoral products and NTFP species. Potential transformation processes on which the beneficiaries will be trained are: i) drying collected products; ii) extracting vegetable oils; iii) soap production; and iv) handcrafting. These training sessions will be complemented by field visits in Mauritania or in neighbouring countries where the selected NTFPs are being used.

165. Two long-term monitoring activities will be implemented at AGLC and communal levels as part of the training activities. This will include the monitoring of: i) market trends for each NTFPs; and ii) the efficiency of the NTFP-based livelihoods in reducing poverty levels in the intervention sites. The results of these long-term monitoring activities will be compiled into an electronic database. The long-term data collection system implemented under Output 3.1 will be used to sustain this monitoring process.

166. Activities to be implemented under Output 2.3 are:

2.3.1. Identify sustainable livelihood opportunities to climate-proof and diversify income-generating activities of pastoral communities under the climate change scenario, including market assessments – if required.

2.3.2. Promote the development of sustainable income-generating activities such as climate-resilient pastoral activities, small-scale agriculture and agroforestry.

2.3.3. Promote the development of traditional, climate-resilient, non-pastoral livelihoods – such as the exploitation of NTFPs from *Balanites aegyptiaca* and *Acacia senegal*, and/or apiculture – through the provision of equipment and training for the collection, processing and conservation of natural products.

Component 3: Awareness and knowledge of EbA and climate-resilient livelihoods

Adaptation Alternative

167. Under Component 3, the experience gained under Component 2 and under the intervention of other adaptation projects – see Section 2.7 for some information on the corresponding projects – will be processed and disseminated. Firstly, a long-term data collection, analysis and archiving strategy will be developed. Secondly, this knowledge will be disseminated to local communities through a national awareness-raising campaign on the EbA approach and corresponding livelihood opportunities. At the governmental level, the dissemination of the generated information will be achieved by strengthening the knowledge-sharing platform of the MEDD, both for MEDD staff and other relevant ministries. Lastly, an upscaling strategy for the replication of the best adaptation interventions will be implemented.

Outcome 3: Increased awareness and knowledge of climate change risks, benefits of EbA and opportunities for climate-resilient livelihoods in Mauritania.

Output 3.1: A knowledge management strategy – including long-term data collection, analysis and archiving – developed to capture and share information on the benefits of adaptation practices to local communities.

168. To build on the systems that have already been implemented, a review of the existing data collection and analysis systems will be conducted. This review will include both large- (i.e. national) and small-scale (i.e. intervention site) monitoring systems. Consequently, the SEPANE monitoring and evaluation system developed under the PANE will be audited. To complement this activity, a review of on-going and future adaptation-related projects will be conducted. Each project in the sub-sectors of water, agropastoralism and forestry will be reviewed. Precise information on the practices promoted under these projects – as well as the intervention sites and beneficiaries – will be collected. The results of the review will be digitally mapped to facilitate their dissemination and interpretation. This review is expected to significantly increase the coordination and complementarity between projects. For the mapping to be beneficial on the long term and to align with the iterative approach of the NAP process, a system for periodic revisions of this map on a yearly basis will be implemented as part of the project interventions. CNEDDs and CREDDs will be consulted to discuss the institutionalisation of the periodic review system so that it may continue beyond the project's lifespan.

169. Following the review of existing systems, a centralised system for data collection and analysis will be developed or strengthened. The individuals and institutions to be prioritised for the development of this system will include the stakeholders involved in the research programmes on EbA implemented under the SCCF project particularly the Faculty of Sciences and Techniques (FST¹³⁶) of the University of Nouakchott (UoN). Other institutions that will be engaged in the development of the data collection and analysis system are: i) ISET; ii) the National School for Training and Agricultural Popularisation (ENFVA¹³⁷); and iii) the National Centre for Research on Agronomics and Agricultural Development (CNRADA¹³⁸). Firstly, detailed protocols for rigorous and replicable data collection processes

¹³⁶ Faculté des Sciences et Techniques.

¹³⁷ Ecole Nationale de Formation de la Vulgarisation Agricole.

¹³⁸ Centre National de Recherche Agronomique et de Développement Agricole.

will be developed. These will include protocols for monitoring: i) ecosystem recovery after restoration activities with climate-resilient species; ii) income trends for local community members following the development of climate-resilient livelihoods based on NTFPs; and iii) agricultural productivity after promoting climate-resilient practices. Secondly, a rigorous long-term data collection and analysis system will be developed for the relevant on-the-ground interventions of the project and other adaptation-related projects. This system will complement and sustain the monitoring activities implemented during the lifespan of the identified adaptation-related projects – such as the monitoring activities implemented under Output 2.2. Lastly, the institutional framework for a centralised system for data collection and analysis will be developed in collaboration with the partners previously mentioned as well as the project managers of the selected projects. This will include the development of Terms of Reference (ToRs) defining the role of each actor in the system. Following the development of the long-term system for data collection and analysis, the necessary information to measure cost-effectiveness of past interventions will be collected and the results will be disseminated under Output 3.2 and 3.3. Additionally, the raw data collected under this output will be made available to the public through the website developed under Output 3.2. For example, this data could be used by PhD or post-doctorate students from the University of Nouakchott to conduct research project and produce scientific publications.

170. To complement the long-term system for data collection and analysis, an archiving system for the generated information will be developed. The archiving system will be designed through consultations with stakeholders, including government practitioners, scientists and other relevant stakeholders and informed by comparable information management systems¹³⁹. The archiving system will include all the necessary filing and data back-up systems to ensure that the knowledge generated on adaptation to climate change in Mauritania is retained. A classification system will be designed to allow for timely access to appropriate documents. In addition, a digitisation system for field-work documents or information from past interventions will be established. A small library will be developed and maintained in the infrastructure of MEDD or another relevant ministry to enable the direct access to printed documents.

171. Activities to be implemented under Output 3.1 are:

3.1.1. Review and identify the gaps in existing data collection and analysis systems for adaptation projects in the country.

3.1.2. Review the current and planned activities of all adaptation projects in the country, including precise geographical mapping of their interventions.

3.1.3 Develop and institutionalise a centralised system for long-term data collection and analysis to measure the costs and benefits of adaptation practices of the project and other projects implemented in Mauritania.

3.1.4 Develop and institutionalise an archiving system for: i) the data collected under Activity 3.1.3; ii) protocols for data collection and analysis; iii) information on the successes and failures of adaptation interventions; and iv) current best practices for adaptation interventions.

¹³⁹ Statistical Commission Forty-second Session. 2010. Report on global geospatial information management. United National Economic and Social Council. Accessed on: 4 March 2015.

Output 3.2: Awareness-raising campaigns via different media – including radio and TV – on the benefits of an EbA approach and associated climate-resilient livelihoods developed and implemented for government staff and local communities.

172. A national awareness-raising campaign will be implemented under the project to increase the sustainability of the adaptation-related interventions, including those of the proposed project. The focus of this campaign will be on: i) current effects of climate change; ii) expected effects of climate change in the medium and long term; iii) the EbA approach; and iv) best adaptation options, including climate-resilient livelihoods based on targeted ecosystems. Therefore, awareness-raising material will be developed for distribution through various media, including radio and TV shows¹⁴⁰. Oral communication, as the traditional way of communicating in Mauritania remains the most efficient medium, preferable to written communication. Additionally, oral communication tools will enable the project to reach illiterate people, the majority of whom are women. By applying a range of communication tools, the project will be able to reach both men and women. Therefore, media such as poetry and songs will be investigated as potential awareness-raising tools, in addition to printed media such as posters, comics, pamphlets and booklets. These will contain a limited amount of text and will focus on imagery to reach literate and illiterate people equally. The awareness-raising material and events will be undertaken in all national languages (i.e. Arabic, Pulaar, Soninke and Wolof). At least one awareness-raising day will be organised in each region to present the awareness-raising material and discuss case-specific adaptation options. By using this diversity of communication tools, it is expected that both men and women will have adequate access to the disseminated information. In addition, MASEF¹⁴¹ will be consulted in the design of an awareness-raising campaign to reach as many women and young people as possible.

173. At the government level, the information generated under Output 3.1 will be disseminated through an improved MEDD website. Currently this website has very few users and contains only limited information on adaptation to climate change. The structure of this website will be revised to facilitate information access by government staff, NGOs, community leaders and other relevant stakeholders. In addition, the website will be designed to ensure the information can be used by neighbouring governments, international consultants and funding agencies. The webpages revised and created will rather be organised per projects, per geographic areas or per type of adaptation techniques. The current management system for the web-based platform will be amended if required to enable regular updating of the expanded website. Lastly, the data collected under Output 3.1 will be made accessible on this website under the relevant webpage for use by national and international scientific community to enable the publication of peer-reviewed paper on EbA practices in Mauritania.

174. Activities to be implemented under Output 3.2 are:

3.2.1. Develop and implement awareness-raising campaigns on climate change to raise awareness about the benefits of ecosystem-based adaptation solutions especially given expected climate change, to be delivered through pamphlets and radio and television

¹⁴⁰ Radio Mauritanie has 12 regional stations but it does not fully cover the country. There are also private radios that could be involved. The TV network covers the whole country.

¹⁴¹ Ministère des Affaires Sociales, des Femmes et de la Famille.

programmes. These campaigns will target: i) government staff at the national, provincial and local scales; ii) CSOs; and iii) local communities including illiterate people.

3.2.2. Strengthen the knowledge-sharing platform of the MEDD for the timely dissemination – at national, provincial and local levels – of: i) the protocols developed under Activity 3.1.3; ii) documentation on the implementation of adaptation interventions including EbA; and iii) best adaptation practices identified under Activity 3.1.3.

Output 3.3: A long-term strategy to upscale and sustain best adaptation measures including EbA.

175. Under the last output of the project, a long-term strategy for upscaling the best interventions for adaptation to climate change will be developed. The interventions to be promoted under Output 3.3 during the life-span of the project will include: i) successful practices implemented under the project that already showed some success during the first years of the implementation phase; and ii) successful interventions implemented in the past and reviewed under Output 3.1. In addition, this long-term upscaling strategy will promote the upscaling of best adaptation practices identified in the future, guided by the long-term monitoring system under Output 3.1. Firstly, the potential sites for the replication of the best adaptation interventions will be selected. Secondly, funding opportunities within the public and the private sectors to upscale best interventions for adaptation to climate change in the country will be identified. Thirdly, local authorities and local associations – with a particular focus on the AGLCs trained under Output 1.3 that did not benefit from the on-the-ground interventions – will be trained on: i) integrating the selected practices into LDPs and LMPs; ii) designing, budgeting and implementing these practices; iii) monitoring the efficiency of these interventions; and iv) maintaining these interventions to increase the long-term benefits. If funding opportunities identified under this output can be accessed directly by local stakeholders, training will also be provided on accessing these sources of funds. This will increase the capacity of these local stakeholders to raise – and efficiently use – funds allocated for local development by future projects.

176. Activities to be implemented under Output 3.1 are:

3.3.1 Identify potential sites for replication of successful projects activities identified under Activity 3.1.3.

3.3.2. Provide training and raise awareness on the use of the successful practices to the AGLCs corresponding to the identified replication sites.

3.4. Intervention logic and key assumptions

177. The project will strengthen the institutional and technical capacity of the national and local authorities to plan and implement EbA for adaptation to climate change. This will include activities to strengthen the institutional framework through integration of EbA into national policies and strategies. The central activities will be complemented by activities to increase the climate resilience of rural communities in pilot intervention sites. The lessons learned by the project will be publicly accessible through an online portal and will be actively shared through awareness-raising campaigns and distribution of guidelines on EbA.

178. The project was designed in participation with multiple stakeholders (see Section 2.5). Consequently, the project's activities are aligned with Mauritania's NAPA priorities and

have been developed in consultation with government authorities during the PPG phase. Therefore, the relevance of the project's activities will encourage the sustained participation of stakeholders at both national and local scales. The sustainability of the project's activities will be further supported by the development of livelihood opportunities based on the restoration and protection of natural resources, thereby providing communities with an incentive to adopt the project's EbA approach in the long term. The project will further encourage local-level ownership of the project's activities by encouraging the decentralisation of natural resource management to community-based management units (i.e. AGLCs).

179. The interventions of the project are considered to be "low regret" or "no regret" options which will generate benefits for government and local communities irrespective of the effects of climate change. For example, interventions that are focused on strengthening the technical capacity and raising the awareness of communities and government authorities on EbA (Outcome 1 and 3) will support improved planning and management of natural resources and ecosystems. In addition, interventions that are focused on restoring rangeland and developing climate-resilient livelihoods (Outcome 2) will generate ecosystem goods and services. As a result, the project activities will benefit local livelihoods including agriculture and pastoralism. Lastly, interventions that support long-term research by post-graduate students will increase the human resource capacity and increase knowledge on best practices to improve communities' livelihoods in Mauritania. These co-benefits will be further explored with the targeted communities at the project inception phase, and appropriate indicators as well as a methodology for tracking them will be identified.

180. The assumptions underlying the design of the project are listed below.

- Project interventions are unlikely to be undermined by extreme climate events during implementation.
- Adaptation priorities are unlikely to be undermined by national emergencies or civil unrest.
- Local communities in target areas will take ownership of the proposed interventions during and beyond the implementation phase of the project.
- The GoM will support the project throughout its duration.
- There is adequate institutional and technical capacity to undertake preliminary studies and design the implementation of activities.
- The activities of the baseline and associated projects will be implemented as planned.
- Large-scale infrastructural development that would disrupt project activities will not take place within the project areas during project implementation.
- The degradation that has occurred in rangeland ecosystems where EbA will be implemented is reversible.
- Future degradation of rangeland ecosystems which would have been caused by population pressure will be prevented by the incentives provided by ecological and economic benefits generated from restoration activities.

3.5. Risk analysis and risk management measures

181. For the project objective to be met, the risks to implementation need to be identified and assessed (Figure 2). Effective identification and assessment of risks will allow for appropriate countermeasures to be taken. Monitoring and updating the project risks will be

an important task of the TA throughout the project implementation phase. Table 1 summarises the identified risks and suggested countermeasures.

Table 1. Summary of the risks to the project's objectives and suggested countermeasures.

#	Risk description	Potential consequences	Risk rating	Countermeasures	Risk category	Probability & Impact (1–5)
1	Current climate and seasonal variability and/or hazards prevent the implementation of planned activities.	Economic loss or physical damage in restoration areas is a challenge to the timely implementation of project activities.	Low	<ul style="list-style-type: none"> Consider current variability in the occurrence of droughts and bushfires during the restoration process. Focus on climate-resilient species and techniques to: i) assist plant growth particularly in the seedling/sapling phase; and ii) reduce risk of damage from hazard events. Take into account meteorological predictions for droughts, winds, rains, and seasonal variability into account to reduce the risk of damage to plants. 	•Economic	P = 2 I = 3
2	Climate change adaptation priorities undermined by national emergencies or civil unrest.	Changes in government and project staff lead to a delay in the implementation of the project activities. Natural and financial capital is lost.	Low	<ul style="list-style-type: none"> The project manager and NTA will keep abreast of national events and politics to plan contingency activities when/if necessary. 	•Socio-environmental	P = 1 I = 3

3	The selected sites for on-the-ground interventions are not chosen efficiently and do not address the needs of most vulnerable communities or the distance between sites makes the implementation difficult.	Project activities are delayed and the project is not as beneficial as planned. The benefits to vulnerable communities are limited.	Low	<ul style="list-style-type: none"> • Detailed, clear and specific selection criteria are provided in Appendix 15 of the project to guide the selection of the best intervention sites. Additionally, a detailed geographic map of the intervention sites of all adaptation projects in the country will facilitate the efficient selection of intervention sites. The extensive collaboration with partner projects such as ACCMR, ProGRN and MSLMP will also contribute to selecting the most appropriate sites and maximise the benefits of the project interventions for local communities. 	• Technical	P = 2 I = 4
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4	Local communities do not support the proposed EbA interventions.	Limited support of local communities may result in continued degradation of rangelands and unsustainable use of natural resources.	Medium	<ul style="list-style-type: none"> • Local stakeholders will be engaged throughout implementation of adaptive management approaches and will participate in project planning, implementation and monitoring. Furthermore, the project stakeholders will be organised into AGLCs to ensure that they are empowered to in making decisions about the management of natural resources in their management area. • The project will focus on raising awareness on the benefits of EbA for the sustainable management of natural resources in the four targeted wilayas. • The project will develop and implement income-generating activities for pastoral communities that are socially viable and dependent on functioning ecosystems to increase incentive for ecosystem protection. 	• Socio-environmental	P = 2 I = 4
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5	High staff turnover in Project Steering Committee, project management team and responsible government departments.	Frequent changes in government bodies and limited institutional memory results in a disruption and/or delays in the project implementation and may jeopardize the sustainability of the project.	Medium	<ul style="list-style-type: none"> •A principal and a secondary focal point will be identified in each relevant government institution (e.g. MEDD, ME, MAg, MHA) during the inception phase of the project. •Dialogue between stakeholders will be promoted during the implementation phase. •The processes of decision-making, design and implementation under the project will be well documented. •Established government structures have already been engaged with strongly during the PPG phase. This approach will be continued as much as possible during the implementation phase. 	•Institutional	P = 3 I = 2
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6	Limited capacity of institutions to undertake rigorous scientific research.	Long-term research will not be continued and the long-term efficiency of the activities will be unknown.	High	<ul style="list-style-type: none"> • Institutional representatives from relevant government institutions such as universities and research institutes will be consulted to develop the institutional framework for the long-term data collection, monitoring and archiving system and agree on the roles and responsibilities in this system. • Lesson learned from the implementation of the research projects under the SCCF project will be used to maximise the efficiency and sustainability of the long-term research system under the LDCF project. 	•Economic	P = 4 I = 4
7	Limited technical capacity to implement the project.	Adaptation interventions are not designed appropriately and does not fully provide expected benefits.	Medium	<ul style="list-style-type: none"> • Capacity of national and local government will be substantially strengthened to enable the planning and implementation of EbA measures. • International experts will work closely with local experts, project manager and other relevant stakeholders to achieve timely delivery of project outputs and further increase in-country technical capacity. 	•Technical	P = 3 I = 3

8	Interventions are not cost-effective.	Project interventions are not upscaled for large-scale EbA programmes.	Low to medium	<ul style="list-style-type: none"> •EbA is an inherently cost-effective approach and ensuring cost-effectiveness will be a core principle of the project. • Detailed information on cost-effectiveness will be collected and analysed during the PPG Phase to inform the design of project interventions. 	•Economic	P = 2 I = 4
9	Large scale infrastructure development in project area during implementation.	Project activities are disrupted or delayed.	Low	<ul style="list-style-type: none"> •The project manager and the NTA will collaborate with relevant government agencies (e.g. MEDD, ME, MAg, MHA) to ensure appropriate coordination between all ongoing projects in the intervention sites. 	•Institutional	P = 1 I = 2

Figure 2. Probability and impact of risks to the project.

3.6. Consistency with national priorities or plans

182. Several national strategies have been developed in Mauritania, and international conventions ratified, in response to observed degradation of natural resources. The project will contribute to realising the objectives of national plans for adaptation to climate change including the **NAPA** (2004). In particular, the project is aligned with the priorities listed below:

- Priority 7 “Reorganisation of the communities adversely affected by climate change” will be addressed by the creation, strengthening and support of AGLCs for the sustainable management of natural resources (Output 2.1).
- Priority 11 “Participatory reforestation for energy and agroforestry in agricultural zones” will be addressed through the restoration of watersheds, listed forests, *Acacia* woodlands and rangelands over a total of 1,200 hectares. These restoration activities will be designed using a participatory approach and implemented using a community-based approach (Output 2.2).
- Priority 20 “Development of fodder crops” will be contributed to by promoting the use of climate-resilient practices for agriculture and pastoralism (Output 2.3).
- Priority 25 “Improved knowledge on forest resources and their sustainable management” will be addressed through: i) developing sustainable exploitation of NTFPs (Output 2.3); and ii) implementing of long-term data collection, analysis and archiving system (Output 1.2 and 3.1).
- Priority 28 “Institutional reinforcement of the body responsible for nature conservation” will be addressed under Outputs 1.1, 1.2, 3.1 and 3.2 through the creation of a SNA, integration of adaptation to climate change into policy revisions, training on best practices for the sustainable management of natural resources and increasing access to best available information for sustainable development in Mauritania.

183. The project will contribute to the achievement of the **Millennium Development Goals (MDGs)** for Mauritania by 2015. In particular, the project will contribute to priorities under MDG Objective 1 “Reduction of extreme poverty and hunger”: i) reduce the proportion of people with an income of less than US\$1 per day from 42% in 2008 to 28.3% in 2015; ii) increase employment opportunities for everyone, including women and youth; and iii) reduce the number of people suffering from hunger from 31.2% in 2008 to 23.5% in 2005.

184. The **Sustainable Development Goals (SDGs)** are a set of targets that have been proposed to replace the Millennium Development Goals, which expire in 2015. However, the SDGs take a broader approach on environmental sustainability. There are 17 SDGs that are to be achieved by 2030. The LDCF project will contribute to the following SDGs:

- *SDG 5 – Achieve gender equality and empower all women and girls*, by promoting gender equity throughout the project and targeting women in specific project activities;
- *SDG 6 – Ensure availability and sustainable management of water and sanitation for all*, by implementing EbA interventions in forests and rangelands of the Sahelian Acacia Savanna Ecoregion;
- *SDG 13 – Take urgent action to combat climate change and its impacts*, specifically:
 - *13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries*, by increasing the technical capacity of national, provincial and local institutions to facilitate the implementation of appropriate adaptation measures;
 - *13.2 Integrate climate change measures into national policies, strategies and planning*, by developing a national strategy to inform climate change adaptation; and
- *SDG 15 – Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss* through the implementation of EbA and other

adaptation practices, which will decrease the vulnerability of pastoral resources to droughts, bushfires and sand dune encroachment.

185. The **Third National Communication (TCN) on Climate Change** for Mauritania was published in July 2014. The adaptation measures recommended under the TCN that are aligned with the project include: i) managing surface- and ground-water for the sustainable restoration and promotion of rangelands; ii) promoting technologies for ecosystem restoration and participatory monitoring; and iii) managing sustainably pastoral resources.

186. The project is also aligned with the following strategies and plans:

- **National Strategy against Poverty (CSLP)** in 2001. The strategy was initiated in 2001 to guide the country's objectives related to poverty reduction and the improvement of local communities' livelihoods to achieve the MDGs. The CSLPIII (2011–2015) contains the following five pillars: i) increase the economic growth rate and strengthen the macroeconomic framework; ii) target economic growth for people leaving under the poverty threshold; iii) develop human resources and increase access to social services; iv) improve national governance and strengthen capacities; and v) strengthen the guiding, monitoring and evaluating and coordinating systems. The project will contribute to the second (Component 2), fourth (Component 1) and fifth (Component 3) of CSLP's pillars. Particularly, climate change considerations are included under the fourth pillar of CSLP3 that contains a sub-section about environmental governance. The objectives of this sub-section include integrating climate risks and sustainable management of land and natural resources into development strategies and plans. To meet this objective, the following activities are recommended: i) promotion of the productivity of natural and agropastoral ecosystems; ii) sustainable management of land and natural resources; iii) soil restoration; iv) integrated management of natural resources including water, fish and forests, whilst preserving natural areas and wetlands; v) biodiversity conservation; and vi) involvement of rural communities in resource management. The interventions of the project are aligned with each of these activities. In addition, the GoM plans to introduce tracking mechanisms for climate change risks. The LDCF project will engage with the IMF at inception to determine the potential for collaboration during the implementation phase. These collaborations will enable the GoM to expand its activities from tracking climate change risks to assessing the progress of EbA interventions in the country.
- **Mauritania's National Sustainable Development Strategy (SNDD)** (2006–2015). The strategy aims to integrate the principles of environmental sustainability into national policies. It is composed of five pillars: i) strengthened institutional framework for the sustainable management of environmental and natural resources; ii) increased access to social services to reduce poverty; iii) integrated and participatory management of natural resources; iv) sustainable management of local and global environment in compliance with the ratified international conventions; and v) developed funding mechanisms to implement the **National Action Plan for Environment and Sustainable Development (PANE)**. PANEII (2011–2016) was developed to implement the SNDD following the completion of the PANE I (2007–2011). This action plan was created to protect the environment through activities including: i) measures to control desertification; ii) sustainable and fair management of terrestrial resources; iii) sustainable and fair management of fishing resources; and iv) management of environmental problems related to urban development, mines and industries. To facilitate sustainable management of the environment, the **Regional Institutional framework for the**

Environmental Sector (RISE/Regionale¹⁴²) was developed to set prerequisites for the management and sustainable development of the environment.

- **Strategy for Rural Sector Development (SDSR) (2013–2025)**. The strategy was developed in 2013 to be undertaken until 2025 and has the main objectives of: i) increasing productivity in the agricultural and animal husbandry sectors to reduce food insecurity; and ii) providing the necessary tools to develop the regulatory framework for agriculture and pastoralism, including consideration of tailored strategies for different production channels such as livestock/meat, leather, fruits and vegetables and gum Arabic. The project will contribute to the development of several production channels through the promotion of agroforestry and sustainable practices in agriculture and animal husbandry.
- **National Action Plan to Combat Desertification in Mauritania (PAN-LCD) in 1987**. The strategy was developed to address the severe problem of ongoing desertification. The PAN-LCD was revised in 2013 to align with the National Framework to Combat Desertification (CNLCD¹⁴³), based on the following five principles: i) a participatory approach to combat desertification; ii) improving livelihoods through combining the management of natural resources and poverty reduction; iii) combining the objectives of the three conventions, namely desertification, biodiversity and climate change; iv) building on previous initiatives to combat desertification and reduce the effects of drought; and v) flexibility of the PAN-LCD.
- **National Strategy and Action Plan for Biodiversity (SPANB) in 1999**. The strategy comprises eight major principles that define the national view on biodiversity. Among these principles, five are particularly relevant to the project: i) biodiversity is a priority for sustainable development; ii) biodiversity conservation and sustainable use of natural resources is the responsibility of every Mauritanian; iii) the ecosystem approach is necessary to support biodiversity conservation and sustainable use of natural resources; iv) the conservation and development of knowledge, innovations, traditions, and indigenous and local practices is of major importance; and v) collaboration and sharing of knowledge, costs and benefits between all sectors and government levels is required for the conservation of genes, species and ecosystems.
- **National Strategy for Food Security (SNSA) (2012–2015)**. The overall objective of the SNSA is to support vulnerable populations to acquire adequate physical and economic access to a healthy diet. The following principles underpin this overall objective: i) promoting a diversified rural and peri-urban economy that is adapted to climate change; ii) improving commercial trade routes; iii) strengthening mechanisms to prevent food shortage crises; and iv) promoting good governance toward food security.
- **National Gender Strategy (SNIG) (2006)**. The SNIG aims to improve women's social and economic rights and to achieve equitable development. To do so, it promotes the integration of inequality and discrimination reduction into national development strategies.
- **Development Strategy of the Water and Sanitation Sector (SDSEA) (2009)** aims to improve the governance of the water sector and develop integrated management of water resources and increase access to drinking water and sanitation in Mauritania. The project will support this aim through *inter alia* restoring degraded watershed ecosystems.
- **National Action Plan for Disaster Risk Management (PAN-GRC) in 2007**. PAN-GRC focuses on responding to, and preventing risks and disasters related to: i) food security; ii) the environment including drought, desertification, bushfire and pollution; and iii) health.
- **United Nations Development Assistance Framework (UNDAF) (2012-2016)**. The project aligns with Mauritania's UNDAF particularly Cooperation Area 3 related to the

¹⁴² Revue Institutionnelle du Système de l'Environnement en Mauritanie.

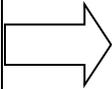
¹⁴³ Cadre National de Lutte contre la Desertification.

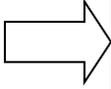
improvement of environmental governance and rational use of natural resources. Furthermore, the project will contribute to improving governance of natural resources taking into account the effects of climate change and to strengthening national capacity for intersectoral coordination of natural resource management. The collaboration with other UN agencies including UNDP and one UN for the implementation of the LDCF project will be ensured by UNEP and MEDD. Last, the results obtained and lessons learned through the implementation of the project will inform the development of the new UNDAF thereby promoting the approach used and contributing to sustaining the project results.

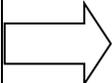
187. In addition to the project, there are a number of international institutions that provide support for the GoM to meet national priorities and plans. Such institutions include UNEP, UNDP, United Nations Educational, Scientific and Cultural Organisation (UNESCO), Food and Agriculture Organisation (FAO), World Bank (WB), International Union for the Conservation of Nature (IUCN), World Wildlife Fund (WWF) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

3.7. Additional cost reasoning

Table 2. Comparison of the business-as-usual scenario to the alternative adaptation scenario.

	Business-as-usual		Alternative adaptation scenario
Problem Description	Mauritania has experienced changes in climate since 1960, including <i>inter alia</i> : i) reduced annual precipitation; ii) longer drought periods; iii) increased mean annual temperature; and iv) increased occurrence of extreme weather events. During the droughts, human-induced pressure on natural resources such as forest and rangelands is increased in response to crop failures and food scarcity. The extractive pressure on natural resources is exacerbated by widespread poverty and the reliance of rural communities on pastoralism. In addition to the direct negative impacts of droughts, Mauritania's rural communities are also vulnerable to climate-related hazards such as bushfires and sand encroachment, which further decrease the availability of natural resources. These climate-		The project will focus on the restoration and sustainable management of forest and pastoral resources using an EbA approach. The activities demonstrated by the project will focus on planting drought-resilient, multi-use and indigenous species to: i) restore ecosystem services, including water infiltration; and ii) increase the generation of ecosystem goods, such as NTFPs. It is expected that these activities will restore ecosystem function and services to communities, thereby increasing their ability to e.g. buffer longer periods of dry spells and to increase agricultural productivity through better soil fertility. The project will also invest in diversified livelihoods for the communities in the targeted wilayas which is expected to help them become more resilient to climate variability and change by giving them alternative means to earn a living during drought periods. The interventions of the project will be selected, developed, implemented and maintained by the communities themselves so as to ensure buy-in and sustainability.

	and environment-related challenges result in a cycle of natural resource degradation, increased food insecurity and poverty. The future effects of climate change will include further scarcity of water and pastoral resources.		
Project Outcomes	<p>Outcome 1:</p> <ul style="list-style-type: none"> • Limited institutional framework to guide a coordinated response to climate change in Mauritania. • Limited sharing of experience and information between adaptation-related initiatives – particularly between environmental, water, agricultural and livestock husbandry sectors. • Limited integration of priorities and decision-making to adapt to climate change, such as EbA, in national strategies, plans and laws. • Limited technical capacity of national and local authorities to promote and guide the implementation of best adaptation practices, including EbA and the newly devised decentralised management of natural resources. • Limited availability of evidence on the effectiveness of EbA as a response to climate change. • Opportunities for developing climate-resilient livelihoods using EbA principles have not been studied. • Interventions using the EbA approach are not prioritised as part of national adaptation strategy. • Absence of the requisite knowledge of climate change and adaptation 		<p>The project will: i) promote improved coordination between sectors to plan for adaptation to climate change; ii) develop the technical capacity of government authorities to increase awareness within local communities of the current and future effects of climate change, as well as potential adaptation options; and iii) establish local institutions to assume responsibility for the decentralised management of natural resources. The interventions under this outcome will develop an enabling environment to catalyse the widespread adoption of EbA in Mauritania by:</p> <ul style="list-style-type: none"> • Establishing a national strategy for adaptation to guide and coordinate adaptation planning. • Integrating EbA into institutional frameworks – including national strategies, plans and laws – to promote the implementation of the national strategy for adaptation. • Integrating EbA into communal development plans to promote the adoption of EbA in the four targeted wilayas. • Providing training to government authorities on planning and overseeing the implementation of EbA interventions. • Providing training to provincial and local authorities on data collection and analysis to increase the evidence base for best adaptation practices. • Establishing AGLCs in the intervention sites. • Training AGLC committees to enable the sustainable management of natural resources at the local scale under the scenario of climate change. <p>Cost: LDCF US\$541,477</p>

	<p>options within existing local associations to support implementation of best adaptation practices.</p> <ul style="list-style-type: none"> • Implementation of environment-related projects will continue in an <i>ad hoc</i> manner with minimal consideration of climate change. Consequently, rural households in Mauritania will remain vulnerable to the negative impacts of climate change. 		
	<p>Outcome 2:</p> <ul style="list-style-type: none"> • The current status of Mauritania's ecosystems, such as spatial extent, health and threats, are largely unknown. • Absence of appropriate management plans at a local level to guide the efficient application of external funds. • Restoration interventions are implemented and maintained in an <i>ad hoc</i> manner by inappropriate institutions with limited consideration of current and future effects of climate change. Consequently, interventions are often unsustainable. • Limited knowledge on best practices for ecosystem restoration under the current and future effects of climate change. • Forest – including <i>Acacia</i> forests – and pastoral resources are degraded by unsustainable exploitation. • Bushfires and sand encroachment are exacerbated by droughts, thereby reducing the availability of forest and pastoral resources. • The unsustainable exploitation of forest and pastoral resources leads to desertification that causes 		<p>The interventions of the project will promote and demonstrate the EbA approach as an option to increase the climate resilience of communities living in the targeted wilayas. The project will develop and apply evidence-based knowledge on best management practices for forest and pastoral ecosystems under the scenario of climate change. The climate-related hazards to be addressed by the project include: i) scarcity of pastoral resources; ii) scarcity of water resources; iii) bushfires; and iv) sand dune encroachment. These challenges will be addressed through:</p> <ul style="list-style-type: none"> • Assessing the condition of natural and agropastoral ecosystems and mapping these ecosystems in the management area of each selected AGLCs. • Developing local management plans for the most vulnerable ecosystems identified to guide the interventions of the project and other initiatives, including exploring the scope for integrating PES systems in the plans. • Establishing climate-resilient and multi-use ecosystems in degraded watersheds, rangelands, protected forests and <i>Acacia</i> woodlands and implementing water conservation techniques to promote sustainability of the interventions and natural recovery of the ecosystem. • Increasing the generation of ecosystem goods and services

	<p>decreased water infiltration and increased erosion.</p> <ul style="list-style-type: none"> Local communities employ techniques for agriculture, pastoralism and other resource uses that increase the degradation of ecosystems and their vulnerability to climate change. Local communities and their livelihoods remain vulnerable to the current and future effects of climate change. Restoration initiatives in Mauritania will continue to be implemented without: i) taking into account the current and future effects of climate change; ii) focusing specifically on the adaptation needs of local communities; and iii) realising adaptation benefits that can be generated by appropriately managed natural infrastructure. 		<p>(e.g. NTFPs) and services (e.g. water infiltration, soil fixation) in the medium term.</p> <ul style="list-style-type: none"> Measuring the efficacy of green firebreaks to combat bushfires in the targeted wilayas. Providing technical training to AGLC members on establishing, managing and monitoring the interventions. This will promote community support of the interventions and increase the sustainability of the interventions beyond the lifespan of the project. Identifying climate-resilient livelihoods in all intervention sites to supplement and increase the sustainability and compatibility of income-generating activities for rural communities with ecosystem restoration. Providing the required training and equipment for the maintenance and profitability of these climate-resilient livelihoods. <p>Cost: LDCF US\$3,711,238</p>
	<p>Outcome 3:</p> <ul style="list-style-type: none"> The interventions of ongoing adaptation-related interventions are not monitored beyond the project lifespan. Consequently, the experience gained on-the-ground is not sustained and the long-term effects of adaptation practices in Mauritania are poorly understood. Limited cross-sectoral dialogue impedes the sharing of lessons learned, resulting in duplication of efforts and a risk of repetition of ineffective approaches. Awareness on the current and future effects of climate change and adaptation options is minimal in at the communal level in Mauritania's rural areas. 		<p>The project will promote the generation and sharing of evidence-based knowledge to support widespread adoption of EbA, including the promotion of the EbA approach beyond the intervention sites of the project. These activities will include a strong focus on increasing the awareness of Mauritania's population on the topics of climate change and potential options for adaptation. Therefore, the interventions under this outcome will include:</p> <ul style="list-style-type: none"> Designing and institutionalising a centralised system for long-term data collection and analysis of the results of adaptation interventions. Compiling and annually updating information on past, on-going and future adaptation-related interventions in Mauritania. Implementing a national awareness-raising campaign on adaptation to climate change using multiple tools.

	<ul style="list-style-type: none"> • Limited capacity of communities to adopt appropriate practices to increase resilience of livelihoods undermines the long-term sustainability of interventions of past and ongoing initiatives. • Examples of community-based approaches to adaptation remain isolated and <i>ad hoc</i> in the absence of a strategy to promote replication and upscaling of best adaptation practices. • Environment-related interventions are often implemented by government authorities without full ownership of local communities required to maintain them beyond the project lifespan. 		<ul style="list-style-type: none"> • Strengthening the existing MEDD online platform for knowledge-sharing between and within sectors, with a focus on government staff and other relevant stakeholders. • Supporting the upscaling of appropriate adaptation practices through providing training on the results of this and other projects in the identified replication sites and guiding the mobilisation of funds for replication. <p>Cost: LDCF US\$374,785</p>
Cost	Business-As-Usual Development Cost		Additional Adaptation Cost
Financed by:	Government of Mauritania, World Bank and GIZ		LDCF

3.8 Sustainability

188. The sustainability of the project's investments will be supported by: i) emphasising the active participation of relevant government and community stakeholders in decision-making and the project implementation strategy; ii) strengthening the institutional and technical capacity at national, provincial and local levels to ensure that stakeholders have adequate knowledge and skill to maintain the benefits of the project's restoration interventions; iii) increasing public awareness of the benefits of EbA at a national level, thereby increasing the willingness to support and maintain the activities of adaptation-related projects; iv) creating community-led livelihood strategies that are sustainable and compatible with ecosystem conservation; and v) generating evidence to assess the benefits of EbA in Mauritania through the implementation of long-term data collection, analysis and dissemination. More information on these approaches is detailed below.

189. The project was developed in close consultation with government stakeholders at the national, provincial and local level during the PPG phase. These consultations included members of NGOs and CBOs and representatives of bilateral and multilateral donors (see Section 2.5, and Appendices 21 and 22). These stakeholders will continue to be consulted intensively during the implementation phase. This participatory approach will create and maintain support for the project's activities. An important aspect of the implementation of the project's activities on-the-ground is the leading role to be played by AGLCs. These AGLCs – with a 10-year renewable mandate for the sustainable management of a defined sylvo-agropastoral system – will be the primary implementers of the project and will also be the primary beneficiaries of the project's activities, in alignment with the SNDD's emphasis on the importance of participatory management of natural resources (see Section 3.6).

Consequently, the participation of the AGLCs will strongly support the sustainability of the interventions.

190. Training is recognised as essential for the sustainability of the LDCF-financed interventions and will be provided at all levels. At the central level, the institutional and technical capacity of government authorities, particularly the MEDD, ME, MAg and MHA to implement EbA will be strengthened through training and raising awareness on adaptation options such as EbA. The training interventions will include the development of technical protocols, designing, planning and implementing EbA interventions, and monitoring their long-term efficiency. A National Strategy for Adaptation (SNA) will be developed and the EbA approach will be integrated into cross-sectoral and sectoral strategies and development plans. Additionally, a periodic revision process for these documents will be implemented to support adaptation planning beyond the project lifespan. As a result, the LDCF project will contribute to advancing the NAP process thereby contributing to information and knowledge of adaptation planning in the medium and long term. At a local level, training on EbA will focus on ecosystem restoration, soil and water conservation, and management techniques for bushfires. Consequently, the project will generate the necessary knowledge, tools and institutional framework for local communities targeted by the project to benefit fully from the project interventions in the long term.

191. The sustainability of the project's investments will be further supported by the implementation of a national awareness-raising campaign on the benefits of the EbA approach. Information will be delivered through media such as TV and local radio stations and will target both urban areas and rural places. At a local level, the project will increase the awareness of EbA within communities in targeted wilayas following a training-of-trainers approach. The trained trainers will be able to continue the project's awareness-raising activities beyond the project lifespan.

3.9 Replication

192. To promote the replication of successful EbA interventions, an upscaling strategy will be developed under Output 3.3 of the project. Government authorities and rural communities are expected to support the replication and upscaling of successful activities and approaches identified by the project because of the concrete livelihood benefits that the project is expected to deliver. The knowledge management strategy (Output 3.1) to gather data and support analysis on the benefits of adaptation practices to rural communities is expected to raise awareness and understanding among local authorities and communities of the benefits of doing things differently vis-a-vis resilience to climate change. Guidelines, protocols and lessons generated by the project will be documented to facilitate the replication and upscaling of the activities in other degraded rangelands in the country.

193. The implementation of the upscaling strategy will be supported by the revision of existing national policies, strategies and plans to integrate the EbA approach. Consequently, an increasing number of EbA interventions will likely be integrated into national and local development planning processes.

194. The project focuses on the restoration of degraded rangelands. This land-use type covers a large part of the country and supports the country's most important source of livelihood, namely livestock husbandry, through the provision of pastoral resources for livestock grazing. As a result, both government authorities and rural communities are expected to support the replication of successful activities and approaches identified by the project. Guidelines, protocols and lessons learned generated under the project will be documented to facilitate the replication of the activities in other degraded rangelands in the country.

195. To promote the replication of successful EbA interventions, an upscaling strategy will be developed under Output 3.3 of the project. The implementation of this upscaling strategy will be supported by the revision of existing national policies, strategies and plans to integrate the EbA approach. Consequently, an increasing number of EbA interventions will likely be integrated into national and local development planning processes.

196. The knowledge generated under Output 3.1 will provide an evidence base to identify the most locally appropriate and cost-effective approaches to EbA. Furthermore, the MEDD's current web-based platform will be strengthened and expanded to facilitate access to this evidence-based knowledge. New webpages will be created and organised in a user-friendly manner. For example, restoration protocols, technical reports, progress reports, evaluation reports and lessons learned from the project will be available on this website. This will facilitate the sharing of information between national and local government, project managers, NGOs and community leaders. This will promote the replication and upscaling of EbA activities beyond the project's intervention areas and implementation phase.

3.10. Public awareness, communications and mainstreaming strategy

197. Rural communities in Mauritania have limited knowledge on climate change and how to use EbA to increase their climate resilience. To address this limited knowledge, the project's activities will include a national campaign to increase public awareness on the use of EbA to adapt to climate change. The awareness-raising campaign will include information such as: i) current and future effects of climate change; ii) principles of the EbA approach; iii) the development of climate-resilient livelihoods using EbA; and iv) guidance for the implementation of EbA interventions. The campaign will use several forms of media including: i) TV; ii) radio; iii) Internet; iv) posters; v) art (e.g. music and poems); and vi) national and local newspapers. Lessons learned during the project will be integrated into the awareness-raising campaign to ensure that the most recent information on best adaptation options is disseminated. Furthermore, the training provided by the project's activities to national and provincial authorities will promote the implementation of further awareness-raising campaigns beyond the project lifespan to increase the capacity of local communities to adapt to climate change.

198. The MEDD website will be revised and updated to include information on the following: i) latest news on the effects of climate change in the region; ii) activities and interventions sites of ongoing projects; iii) technical and progress reports from adaptation projects; and iv) guidance on successful practices and potential replication sites for project developers and donors. In addition, lessons learned from the implementation of EbA interventions will be shared directly with other relevant stakeholders during meetings and workshops.

3.11. Environmental and social safeguards

199. The UNEP checklist for Environment and Social Safeguards (Appendix 17) reflects the positive environmental and social impacts of the project. The PM, TA and UNEP Task Manager (TM) will be responsible for overseeing adherence to these guidelines throughout the implementation of the project.

200. The interventions of the project will result in multiple positive environmental impacts, including: i) reduced erosion from degraded watershed areas; ii) increased availability of surface and ground water through piloting water harvesting techniques; iii) increased climate resilience of rangelands and forests; iv) reduced ecosystem degradation through the development of sustainable livelihoods based on NTFPs; and v) reduced incidence of bushfires through green firebreaks.

201. The project will promote gender equality, women's rights and the empowerment of women (see Appendix 17). The participation and number of women involved in the project will be monitored during project implementation. In addition, the project will also emphasise the involvement of particularly vulnerable community groups, such as youth and women-headed households. Therefore these community groups will be targeted for inclusion in the project's activities, particularly with respect to the national awareness-raising campaigns and identification of climate-resilient livelihoods based on NTFPs.

SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS

202. The project will be implemented over a period of four years (see workplan in Appendix 4). The process of hiring project staff will be undertaken shortly after the CEO endorsement and project internalisation. Implementation will be informed by the lessons learned from the SCTRC project (see Section 2.7). During the inception phase of the project, the following steps will be undertaken¹⁴⁴: i) organisation of the inception workshop to inform existing and new stakeholders about the project and the roles of each stakeholder during the implementation phase; and ii) intensive consultation with national and local stakeholders (see Section 2.5) to select the intervention sites of the project (see Appendix 15 for the site selection process); iii) conducting the baseline study in the selected sites to measure the baseline values of the indicators selected for the project's Results Framework.

203. UNEP will be the Implementing Agency (IA) for the project and will oversee the project and provide the technical assistance required to meet the project goal (see details of UNEP's comparative advantage in Appendix 18). Therefore, UNEP will be responsible for project supervision to ensure consistency with GEF and UNEP policies and procedures. This supervision will be the responsibility of the Task Manager (TM), who will be appointed by UNEP. The TM will formally participate in the following: i) Project Steering Committee (PSC) meetings; ii) the mid-term and final evaluations; iii) the clearance of Half-yearly Progress Reports and Project Implementation Reviews, expenditure reports and budget revisions; and iv) the technical review of project outputs.

Management structure

204. The management structure of the project is presented in Figure 3. This structure will comprise: i) the PSC; ii) the National Executing Agency (NEA); iii) the Project Manager (PM); iv) the national M&E specialist; v) field officers; vi) an administrative assistant; vii) a financial assistant; and viii) national technical experts as needed. The project will rely mostly on the regional technical professionals where appropriate on a task force assignment basis. The roles specific to each component of the management structure is described in Appendix 10.

205. The mandate of the PSC will include: i) overseeing project implementation; and ii) reviewing annual workplans and project reports. All decisions taken by the PSC will be communicated to the Minister to seek his/her approval prior to execution and then to the Project Management Unit (PMU). The PSC will include national representatives from the MEDD (CCPNCC, DPN, DAPL, DPCID, DRCL), ME, MA, MHA, MASEF, MIDEF, MAED, and MDRE. The Secretary General of MEDD will chair the PSC, and the NEA representing MEDD. The PSC will meet twice a year, with *ad hoc* meetings held when necessary to discuss the main performance indicators of the project and to provide future guidance. Members of relevant implementing NGOs and CBOs as well as community leaders will also be invited to participate to the PSC to ensure local ownership and guidance for the project.

¹⁴⁴ According to the decree 2007.105 on Environment Impact Assessments (EIAs), the interventions of the proposed project will not necessitate to conduct EIAs.

Coordinating structures at the level of the wilayas and lower-level government structures will be determined during the inception phase.

206. The CCPNCC under the MEDD will be the National Executing Agency (NEA). A full-time, dedicated Project Manager (PM) from DPN will be hired by the MEDD to lead the PMU and execute the day-to-day management of the project. He/she will operate in a transparent and effective manner in line with all budgets and workplans. In addition, the Project Manager (PM) will report on a monthly basis to the Task Manager (TM) and the National Technical Advisor (NTA) on the progress and challenges encountered on-the-ground during the execution of activities. In particular, the PM will: i) lead the day-to-day planning and implementation of the project in close collaboration with the NEA ; ii) provide on-the-ground information for UNEP progress reports; iii) engage with stakeholders; iv) organise the PSC meetings; v) provide technical support to the project, including measures to address challenges to project implementation; vi) manage the project budget and resource allocation; and vii) participate in training activities, report writing and facilitation of consultant activities that are relevant to his/her area of expertise. Additionally, the PM will meet with the managers of the baseline (i.e. APCBF, ProGRN, PNIDDLE), and partner projects including GEF (i.e. MSLMP) and non-GEF projects (i.e. ACCMR, REVUWI, PRASP)¹⁴⁵ twice a year – or more frequently if necessary – as part of a coordination working group. The focus will be on sharing lessons learned, avoiding duplication of activities and promoting synergies between projects.

207. The PM will be supported in meeting the project objective by an M&E specialist whose duties will include: (i) establishing a performance monitoring framework to define bi-annual targets for the project to meet the targets defined in the project document by the end of the implementation phase; (ii) measuring project and AMAT indicators at least 1–2 times per year to evaluate the progress of the project in meeting the targets; and (iii) reporting to the PMU and PSC on the performance of the project according to project and AMAT indicators. As part of his/her responsibilities, the M&E specialist will oversee and monitor the application of gender-disaggregated indicators. If the expected ratio is not achieved, corrective actions will be designed by the M&E specialist, the PM and the relevant expert. The latter will be responsible for implementing these corrective actions until a satisfactory level of participation of women is reached.

208. The role of the field officers will include: (i) the timely execution of activities and achievement of expected deliverables; (ii) promoting dialogue between stakeholders, particularly at a local level; and (iii) facilitating the participation of local communities in project activities. To achieve this, the field officers will be required to visit the intervention sites regularly and work in close collaboration with the PM (see Appendix 10). In addition, an administrative assistant and a financial assistant will be hired to support the PM. The administrative assistant will help the project staff with technical, logistical and administrative matters. The accountant will handle the accounts of the project and prepare the expenditure reports to the standard required by the IA. The PMU members will be responsible for monitoring and reviewing gender sensitivity in the training activities. Two vehicles will be purchased and a driver will be hired to assist with transport of the management team, particularly field officers. Procurement of services, goods and works of the project will follow the national procurement regulations.

209. Consultants will be hired for specific tasks which requires specific expertise and which cannot be undertaken by government staff. International technical assistance will be sourced for specialist tasks only where existing national capacity is insufficient. Appropriate

¹⁴⁵ For more information on the partner projects, please see Section 2.7.

international expertise will be sourced with the support of UNEP’s network for procurement of consulting services in participation with the PM. Descriptions of consulting services required are included in the budget notes of Appendices 1 and 13. Each technical expert will be responsible for ensuring that the gender equity ratio pertaining to their activities (as defined in Appendix 3) is reached. This will be clearly stipulated in their ToRs. ToRs for project staff are presented in Appendix 10. The MEDD will support the work of project staff and consultants by providing office space and other logistic support in the targeted wilayas of the project during the implementation phase.

210. Budget disbursement will be managed by UNEP to facilitate timely expenditure, disbursement and transparency. Expenditure reports will be prepared quarterly based on the UNEP’s UMOJA System and will be made available to the MEDD and other members of the PSC for review, subject to clearance by UNEP.

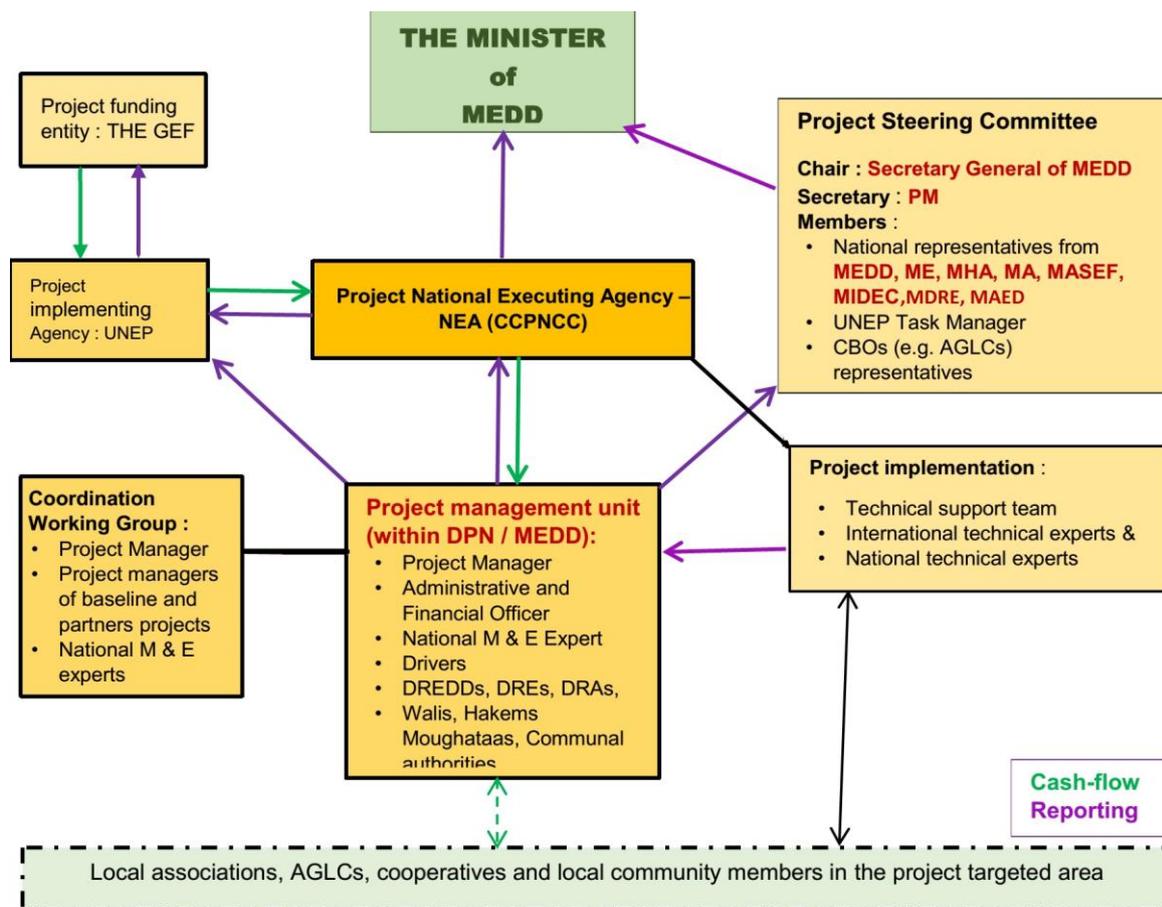


Figure 3. Organogram of the project management structure.

SECTION 5: STAKEHOLDER PARTICIPATION

211. The implementation strategy for the project includes extensive stakeholder participation. Details of the stakeholder participation during the PPG phase are provided in Appendices 21 and 22. A stakeholder engagement plan to be used during the implementation phase will be developed during the project inception workshop. Stakeholders will be consulted throughout the implementation phase to: i) promote community understanding of the project’s outcomes; ii) promote local community ownership by promoting their engagement with the planning, implementation and monitoring of the

interventions; iii) communicate with the public in a consistent, supportive and effective manner; and iv) maximise complementarity with other on-going projects.

212. The mechanisms for stakeholder consultations will include: i) initial meetings with national (i.e. the MEDD, ME, MA and MHA), provincial, departmental and communal authorities during the inception workshop (see Section 2.5); ii) consultations with the coordinators of the baseline and partner projects (see Section 2.6 and 2.7); iii) consultations with NGOs, local associations and cooperatives; and iv) consultations with other members of local communities that will benefit from the project. Local communities will be involved in the decision-making processes and implementation of the project. For example, the selection of species for the planting activities under Component 2 will be informed by the preferences of local communities.

213. During project implementation, stakeholder consultations will be divided into three phases. Firstly, the “mobilisation” phase will take place during the first year of the project. This phase will focus mainly on engaging stakeholders and planning their participation in the project. This will include developing a detailed workplan for the activities on a monthly-basis according to availability of the required stakeholders and to biophysical parameters for planting interventions (e.g. seasons, growth rates). Secondly, the “consultative implementation” phase will run during the main implementation phase of the project. This phase consists of applying the stakeholder involvement plan to each of the activities defined during the mobilisation phase. Thirdly, the “completion and upscaling” phase will start during the last year of project implementation. This phase will support the sustainability of the project by further transferring responsibility for management of the project’s investments to local stakeholders.

214. The engagement of specific stakeholders during the implementation phase of the project is presented in Table 3. As described in more detail in Section 2.6 (on the institutional arrangement for project implementation), the Project Manager will be responsible for coordinating the engagement and consultation of the stakeholders during project implementation. This will be done in accordance with the stakeholder engagement plan for the implementation phase, to be developed during the project inception workshop. The implementing partners (both government institutions and civil society organizations) will be invited to participate in the Project Steering Committee (PSC). MoUs will be signed between the different government and other institutions participating in the implementation of the project. The corresponding budget for each activity will then be transferred to the partnering government institution in charge. As the MEDD is responsible for the implementation of the majority of interventions, this system will only be followed when the implementation of the technical activities is undertaken by an expert institution.

Table 3. List of stakeholder responsibilities.

Outcome	Output	Activity	Stakeholders																						
			MEDD/DPN	MEDD/CCPNCC	MEDD/DPCID	MEDD/DRCL	MEDD/DAPL	ME	MHA	MA	MASEF	MAED	MIDEC	MDRE	ISET	CNRADA	ENFVA	UdN	GIZ	NGOs	CNEDDs	CREDDs	Regional Delegations	Local Government	AGLCs
1	1.1	1.1.1	X	X	X	X	X	X	X	X	X	X	X	X				X		X					
		1.1.2	X	X	X	X	X	X	X	X	X	X	X	X					X		X				
		1.1.3	X	X	X			X	X	X	X	X	X	X							X				
		1.1.4	X	X	X	X	X	X	X	X	X	X	X	X							X				
		1.1.5	X	X	X	X	X	X	X	X	X	X	X	X									X	X	
		1.1.6	X	X	X		X	X	X	X	X	X	X	X					X	X	X	X	X	X	
	1.2	1.2.1	X	X				X	X	X			X						X	X			X	X	X
		1.2.2	X	X				X	X	X			X						X	X			X	X	X
		1.2.3	X	X	X			X	X	X				X	X	X	X	X	X		X	X	X		
		1.2.4	X	X	X	X		X	X	X	X			X			X		X	X		X	X	X	X
	1.3	1.3.1	X	X															X	X			X	X	X
		1.3.2	X	X	X	X		X	X	X	X		X	X					X	X		X	X	X	X
1.3.3		X	X				X	X	X	X			X	X	X	X		X	X			X	X	X	
2	2.1	2.1.1	X	X				X	X	X												X	X		
		2.1.2	X	X							X								X	X		X	X	X	
		2.1.3	X	X										X	X	X	X	X		X		X	X	X	
		2.1.4	X	X																		X	X	X	
		2.1.5	X	X	X			X	X	X	X		X	X					X	X			X	X	X
	2.2	2.2.1	X	X				X	X	X	X			X	X	X	X	X	X	X		X	X	X	X
		2.2.2	X	X				X	X	X	X			X	X	X	X	X	X	X		X	X	X	X
		2.2.3	X	X				X	X	X	X			X	X	X	X	X	X	X		X	X	X	X
		2.2.4	X	X				X	X	X	X			X	X	X	X	X	X	X		X	X	X	X
2.2.5		X	X				X	X	X	X			X	X	X	X	X	X	X		X	X	X	X	

Outcome	Output	Activity	Stakeholders																						
			MEDD/DPN	MEDD/CCPNCC	MEDD/DPCID	MEDD/DRCL	MEDD/DAPL	ME	MHA	MA	MASEF	MAED	MIDEC	MDRE	ISET	CNRADA	ENFVA	UdN	GIZ	NGOs	CNEDDs	CREDDs	Regional Delegations	Local Government	AGLCs
	2.3	2.3.1	X	X			X	X	X	X	X	X	X					X	X			X	X	X	
3		2.3.2	X	X				X		X	X		X		X		X	X	X			X	X	X	
		2.3.3	X	X							X	X		X	X	X	X	X	X			X	X	X	X
		3.1.1	X	X	X			X	X	X		X		X	X	X	X	X					X		
	3.1	3.1.2	X	X	X			X	X	X	X	X		X							X	X	X		
		3.1.3	X	X	X			X	X	X		X	X	X	X	X	X	X			X	X	X		
		3.1.4	X	X	X			X	X	X		X	X	X	X	X	X	X			X	X			
		3.2.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	3.2	3.2.2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X		
		3.3.1	X	X	X			X	X	X		X	X	X					X		X	X	X	X	X
	3.3	3.3.2	X	X	X			X	X	X	X	X	X	X					X		X	X	X	X	X
3.3.3		X	X	X			X	X	X		X	X	X					X		X	X	X	X		

SECTION 6: MONITORING AND EVALUATION PLAN

215. The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarised in Appendix 6. Reporting requirements and templates are an integral part of the UNEP legal instrument to be signed by the executing agency and UNEP.

216. The Monitoring and Evaluation (M&E) plan of the project is consistent with the GEF M&E policy. The Project Results Framework presented in Appendix 3 includes SMART indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification and the costs associated with obtaining the information to track the indicators are summarised in Appendix 14. Other M&E related costs are also presented in the costed M&E Plan and are fully integrated in the overall project budget.

217. The M&E plan will be reviewed and revised if required during the project inception phase. This process will enable project stakeholders to understand their roles and responsibilities in terms of project M&E. Indicators and their means of verification will also be fine-tuned if necessary at the inception workshop or during the baseline study at the latest. Day-to-day project monitoring is the responsibility of the project management team particularly the Project Manager, the M&E specialist and the Field Officers (see Appendix 10). In addition, other project partners will be responsible to collect specific information to track the indicators. It will be the responsibility of the Project Manager to inform UNEP of any delays or difficulties during implementation. This communication allows the appropriate support or corrective measures to be implemented with minimal delays.

218. The Project Steering Committee will receive periodic reports on progress and will make recommendations to UNEP on the need to revise any aspects of the Results Framework or the M&E plan. The Task Manager is responsible for project oversight to ensure that the project complies with UNEP and GEF policies and procedures. The Task Manager will also review the quality of project outputs, provide feedback to the project partners, and establish peer-review procedures to ensure adequate quality of scientific and technical outputs and publications.

219. Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan during the inception phase of the project, which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager's supervision will be on monitoring outcomes, without neglecting financial management and monitoring of the project's implementation. Progress regarding the delivery of the agreed project benefits will be assessed by the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEP. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project M&E will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure effective use of financial resources.

220. As indicated in the project milestones, a mid-term management review or evaluation will take place at the end of the second year of implementation of the project. The purpose of the Mid-Term Review (MTR) or Mid-Term Evaluation (MTE) is to: i) provide an independent assessment of project performance at mid-term; ii) determine whether the project is on track and whether any challenges are impeding progress; and iii) decide on the corrective actions required for the project to achieve its intended outcomes by project completion in the most efficient and sustainable way. In addition, it will include all parameters recommended by the GEF Evaluation Office for terminal evaluations and will verify information gathered through

the GEF tracking tools, as relevant. The Project Steering Committee will participate in the MTR or MTE and develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented. The MTR will be managed by the UNEP Task Manager at DEPI. The MTE will be managed by the Evaluation Office of UNEP. The Evaluation Office will determine whether a MTE is required or whether an MTR is sufficient.

221. An independent terminal evaluation (TE) will take place at the end of project implementation. The Evaluation Office of UNEP will manage the TE process. The TE will provide an independent assessment of project performance – in terms of relevance, effectiveness and efficiency – and determine the likelihood of impact and sustainability. The TE will have two primary purposes: i) to provide evidence that accountability requirements have been met, and ii) to promote learning, feedback and knowledge sharing through results and lessons learned among UNEP and executing partners, particularly the MEDD, ME, MAG and MHA. The direct costs of the evaluation will be charged against the project evaluation budget. The TE report will be sent to project stakeholders for comments. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six-point rating system. The final determination of project ratings will be made by the Evaluation Office when the report is finalised. The evaluation report will be publically disclosed and will be followed by a recommendation compliance process.

222. The GEF tracking tools are attached as Appendix 14. These will be updated at mid-term and at the end of the project and will be made available to the GEF Secretariat along with the project PIR report. As mentioned above the mid-term and terminal evaluation will include the verification of the information on the tracking tools.

SECTION 7: PROJECT FINANCING AND BUDGET

7.1. Overall project budget

Table 4. A breakdown of total project financing.

	LDCF Funds	Co-Financing	Total Costs
Total project cost (US\$)	5,000,000	8,500,000	13,500,000

7.2. Project co-financing

Table 5. Breakdown of project financing by funder.

	US\$	%
LDCF Funds	5,000,000	37
Co-financing		
National government (APCBF)	8,000,000	59
National government (cash co-financing)	500,000	4
Total	13,500,000	

7.3. Project cost-effectiveness

223. The development of the LDCF project included consideration of the NAPA priorities identified by the GoM, including the NAPA criterion of cost-effective and efficient allocation of resources. Consequently, the LDCF project was designed to build on existing initiatives. For example, the project will prioritise interventions in sites where local authorities have benefited from institutional capacity building under the PNIDDLE project.

224. The most noteworthy feature of the project with respect to cost-effectiveness is the emphasis on an EbA approach. A growing body of scientific research demonstrates that past initiatives which included EbA measures resulted in a greater ratio of benefit:cost compared to the use of hard infrastructural measures. For example, an economic analysis of the restoration and rehabilitation of grasslands and woodlands estimated internal rates of return of 20–60% and benefit:cost ratios of up to 35:1¹⁴⁶ for grasslands. A frequently cited example of the cost-effectiveness of EbA is an economic analysis undertaken in Lami, Fiji¹⁴⁷. This study included assessments of the costs and benefits of three approaches to watershed management: i) solely EbA measures; ii) “hard” engineering options and a hybrid approach; and iii) combining both hard engineering and EbA interventions. The analysis demonstrated that EbA watershed management options are at least twice as cost-effective as hard engineering options – e.g. a benefit:cost ratio of US\$19.50 for EbA compared with US\$9 for hard engineering¹⁴⁸.

225. The LDCF project will implement interventions largely using an EbA approach, but complimented by hard engineering options. The EbA techniques demonstrated by the project will include: i) reforestation ii) fire-resilient green breaks; and iii) vegetation fixation to prevent sand dune encroachment. The hard engineering options to be implemented by the LDCF project will include rainwater retention systems, such as rainwater reservoirs, zaï, stone rows and half-moons. This combination of EbA and hard engineering will be effective because: i) EbA interventions are more flexible in the long term; and ii) hard infrastructure has benefits that are more direct in the short to medium term¹⁴⁹. Therefore, this complementary approach to adaptation will further promote cost-effectiveness¹⁵⁰.

226. Although EbA alone is less effective in adapting to the effects of climate change than when combined with hard engineering, it provides multiple social and ecological benefits that contribute to its overall effectiveness. These benefits include: i) maintenance of soil fertility; ii) carbon sequestration; and iii) biodiversity and habitat restoration. In the long-term, these benefits will further mitigate the damage caused by climate change. Therefore, the implementation of EbA interventions will be a cost-effective approach to reducing the long-term economic impacts of climate change compared to expensive hard engineering interventions.

To guide the development of future initiatives related to EbA, long-term monitoring of the benefits and cost-effectiveness of adaptation practices such as EbA will be promoted under Output 3.1. The results of these analyses will be made available nationally (Output 3.2) and will be used to inform the upscaling of successful approaches identified by the project (Output 3.3).

¹⁴⁶ De Groot et al. 2013. Benefits of investing in ecosystem restoration. *Conservation Biology* 27: 1286-1293.

¹⁴⁷ Rao et al. 2013. *An economic analysis of ecosystem-based adaptation and engineering options for climate change adaptation in Lami Town, Republic of the Fiji Islands*. A technical report by the Secretariat of the Pacific Regional Environment Programme. Apia, Samoa.

¹⁴⁸ A combination of EbA and hard engineering options is the most effective option to decrease vulnerability to floods according to this study. However, EbA interventions are prioritised in the proposed project as it focuses mainly on reducing the negative effects of droughts and bushfires.

¹⁴⁹ Hallegate, S. and Dumas, P. 2009. Adaptation to climate change: soft vs. hard adaptation. C.I.R.E.D. Available at: <http://www.oecd.org/env/cc/40899422.pdf>. Accessed on 1 April 2014.

¹⁵⁰ CARE. 2011. Policy brief: climate change – why community based adaptation makes economic sense.

Available at: http://www.careclimatechange.org/files/adaptation/PolicyBrief_Why_CBA_Makes_Economic_Sense_July12.pdf. Accessed on 1 April 2014.

APPENDICES

Appendix 1: Budget by project components and UNEP budget lines

Project number:														Budget Notes	
Project executing partner				Direction for the Protection of Nature (DPN) in partnership with Ministry of Environment and Sustainable Development (MEDD) and Ministry of Livestock Husbandry (ME), Ministry of Agriculture (MA) and Ministry of Hydraulics and Sanitation (MHA)											
Project implementation period				Expenditure by project component/activity						Expenditure by calendar year					
From:				Outcome 1	Outcome 2	Outcome 3	PM	M&E	Total	Year 1	Year 2	Year 3	Year 4		Total
To:															
UNEP Budget Line															
10	PERSONNEL COMPONENT														
	1100		Project personnel												
		1101	National project manager (48 months @ \$2500/month)				120,000		120,000	30,000	30,000	30,000	30,000	120,000	
		1199	Sub-total	0	0	0	120,000	0	120,000	30,000	30,000	30,000	30,000	120,000	
	1200		Consultants												
		1201	International specialist in EbA (20 days @ \$500/day; 1 flights @ \$2500/flight; 15 days in-country @ \$166/day)	15,000					15,000	5,000	6,250	3,750	0	15,000	1
		1202	National Technical Advisor (50 days @ \$150/day)	7,500					7,500	1,900	1,900	1,900	1,800	7,500	
		1203	National specialist in policy-making and adaptation (40 days @ \$150/days)	6,000					6,000	580	2,980	1,890	550	6,000	2

		1204	National specialist in local management of natural resources, adaptation and awareness raising (80 days @ \$150/days)		12,000				12,000	3,940	5,240	2,820	0	12,000	3
		1205	International specialist in fire-resilient green breaks (30 days @ \$500/day; 1 flight @ \$2500/flight; 20 days in-country @ \$166/day)		21,000				21,000	0	11,000	10,000	0	21,000	4
		1206	National specialist in management of natural resources and adaptation to climate change (30 days @ \$150/day)		4,500				4,500	2,250	2,250	0	0	4,500	5
		1207	National gender specialist (30 days @ \$150/day)		4,500				4,500	2,250	2,250	0	0	4,500	6
		1208	National expert in geomatics (45 days @ \$150/day)		6,750				6,750	4,000	2,750	0	0	6,750	7
		1209	National specialist in pastoralism, agronomics and climate-resilient livelihoods (30 days @ \$150/day)		4,500				4,500	3,700	800	0	0	4,500	8

		1210	Field officers for Assaba, Guidimaka, Hodh El Gharbi and Hodh El Chargui (2 x 48 months @ \$400/month)		38,400				38,400	9,600	9,600	9,600	9,600	38,400	
		1299	Sub-total	40,500	79,650	0	0	0	120,150	33,220	45,020	29,960	11,950	120,150	
	1300		Administrative Support												
		1301	Administrative Assistant (48 months @ \$300/month)				14,400		14,400	3,600	3,600	3,600	3,600	14,400	
		1302	Financial Assistant (48 months @ \$500/month)				24,000		24,000	6,000	6,000	6,000	6,000	24,000	
		1303	M&E Specialist (8 months @ \$2500/month)				20,000		20,000	5,000	5,000	5,000	5,000	20,000	
		1304	Project Steering Committee meetings				4,800		4,800	1,200	1,200	1,200	1,200	4,800	
		1399	Sub-total	0	0	0	63,200	0	63,200	15,800	15,800	15,800	15,800	63,200	
	1600		Travel on official business												
		1699	Sub-total	0	0	0	0	0	0	0	0	0	0	0	
1999			Component total	40,500	79,650	0	183,200	0	303,350	79,020	90,820	75,760	57,750	303,350	
20	SUB-CONTRACT COMPONENT														
	2100		Sub-contracts (MOUs/LOAs for supporting organisations)												
		2101	Subcontract for the development of the website			22,000			22,000	0	15,000	7,000	0	22,000	9
		2102	Subcontract for the development of the data collection, analysis and archiving system			35,500			35,500	0	20,000	15,500	0	35,500	10

		2199	Sub-total	0	0	57,500	0	0	57,500	0	35,000	22,500	0	57,500	
	2200		Sub-contracts (for commercial purposes)												
		2201	Subcontract for the production of the awareness-raising material including TV and radio shows			84,600			84,600	0	30,000	34,600	20,000	84,600	11
		2299	Sub-total	0	0	84,600	0	0	84,600	0	30,000	34,600	20,000	84,600	
2999			Component total	0	0	142,100	0	0	142,100	0	65,000	57,100	20,000	142,100	
30	TRAINING COMPONENT														
	3200		Group training												
		3201	Workshops for the integration of EbA into decision-making and LDPs	60,000					60,000	0	20,000	20,000	20,000	60,000	12
		3202	One-day training for each of the 3 groups on the use of the EbA guidelines	12,000					12,000	4,000	8,000	0	0	12,000	
		3203	Two sessions of 3 days will be provided in each of the four wilayas (the training in Assaba and Guidimaka will be combined)	48,000					48,000	24,000	0	24,000	0	48,000	
		3204	Three-days training of the organisation of awareness-raising campaigns in the wilayas	24,000					24,000	0	24,000	0	0	24,000	
		3205	Training for the steering committees of 27 AGLCs	63,000					63,000	23,000	40,000	0	0	63,000	13
		3210	One participatory baseline survey for		31,500				31,500	16,500	15,000	0	0	31,500	14

			each AGLCs.												
		3211	Workshops for the development of LMPs.		27,000			27,000	8,000	19,000	0	0	27,000	15	
		3212	Training of the AGLC members to implement the restoration activities		20,000			20,000	0	8,000	8,000	4,000	20,000		
		3213	Training of the AGLC members on the climate-resilient sources of income		20,000			20,000	0	0	10,000	10,000	20,000		
		3214	Ten training days on the central system for data collection, analysis and archiving			30,000		30,000	0	8,000	22,000	0	30,000		
		3215	Training on the use of appropriate adaptation practices in the replication sites.			18,000		18,000	0	0	8,000	10,000	18,000		
		3299	Sub-total	207,000	98,500	48,000	0	0	353,500	75,500	142,000	92,000	44,000	353,500	
	3300		Meeting/Conferences												
		3301	Validation workshops for the NAS, sectoral strategies and laws	27,000				27,000	2,700	0	10,800	13,500	27,000		
		3302	Workshop for the development of the website			3,000		3,000	0	3,000	0	0	3,000		
		3399	Sub-total	27,000	0	3,000	0	0	30,000	2,700	3,000	10,800	13,500	30,000	
3999			Component total	234,000	98,500	51,000	0	0	383,500	78,200	145,000	102,800	57,500	383,500	
40			EQUIPMENT AND PREMISES COMPONENT												
	4100		Expendable equipment												
		4101	Computer equipment				14,000	14,000	8,000	2,000	2,000	2,000	14,000		
		4102	Office supplies				13,000	13,000	6,000	3,000	3,000	1,000	13,000		
		4199	Sub-total	0	0	0	27,000	0	27,000	14,000	5,000	5,000	3,000	27,000	

	4200	Non-expendable Equipment												
	4201	Equipment for data collection and analysis	105,000					105,000	71,000	0	34,000	0	105,000	16
	4202	Awareness-raising equipment	119,000					119,000	22,670	79,330	17,000	0	119,000	17
	4203	Support for the process of creation of each AGLC	33,977					33,977	11,322	22,655	0	0	33,977	18
	4204	Establishment of tree nurseries for the planting activities		341,188				341,188	80,000	190,000	40,000	31,188	341,188	19
	4205	Restoration of watersheds including water conservation methods		247,500				247,500	37,500	80,000	80,000	50,000	247,500	
	4206	Establishment of tree nurseries to be planted in 300 hectares of set-aside pastoral lands		120,000				120,000	40,000	50,000	20,000	10,000	120,000	20
	4207	Sowing on 100 ha of set-aside rangeland		20,000				20,000	0	20,000	0	0	20,000	
	4208	Fencing 300 ha of rangeland including the development of a rotation system for setting-aside		510,000				510,000	110,000	250,000	150,000	0	510,000	
	4209	Establishment of tree nurseries to be planted in 390 ha of drifting dunes		120,000				120,000	40,000	50,000	30,000	0	120,000	
	4210	Dune fixation with stick and trees		546,000				546,000	96,000	250,000	200,000	0	546,000	
	4211	Restoration of 150 hectares of listed forests including water conservation methods		315,000				315,000	70,000	150,000	70,000	25,000	315,000	
	4212	Restoration of 210 hectares of Acacia woodlands including water conservation		399,000				399,000	60,000	130,000	130,000	79,000	399,000	

Budget notes

Number	Budget note
1	The international consultant will develop context-specific technical guidelines on EbA for each of the three groups, including developing a template of the guiding document and the preparation of training events for the use of these guidelines. At least one day of training will be organised for each group. The national consultant will prepare material for the DREDDs on how to monitor adaptation interventions and deliver training to the DREDDs based on this material. 3 days of training will be provided at the beginning of the project implementation phase in each of the targeted wilayas (training events for Assaba and Guidimaka will be combined) and when most of the activities are in place, i.e. approximately at the mid-term of the project. Additionally, the international consultant will oversee the selection of natural and agropastoral ecosystems to be targeted by the project and will support the study on the state of those ecosystems. The international consultant will also participate in the development and implementation of LDPs, including EbA interventions of the proposed project.
2	The national consultant will oversee the preparation of the National Strategy for Adaptation. This will include the validation workshop. In addition, the revision of sectoral strategies and plans to integrate EbA (at least 5 documents will be revised) as well as the revision of sectoral laws (at least 4 documents will be revised) will be undertaken. One validation workshop will be organised for each document.
3	The national consultant will be responsible for conducting a stock-take of existing local associations in the intervention areas and evaluating how functional and efficient they are. AGLCs already in existence will be reviewed. Thereafter, the consultant will identify sites for the establishment of 15 AGLCs. The national consultant will be responsible for the process through which these AGLCs will be established. In addition, the national consultant will prepare training material for the steering committee of AGLCs on the sustainable management of natural resources using an EbA approach. 2 sessions of 3 days will be organised in each wilaya (the sessions for Assaba and Guidimaka will be combined). In addition, the national consultant will develop and implement a national awareness-raising campaign on adaptation to climate change and the value of viable ecosystems. The national consultant will be responsible for designing the campaign and developing the awareness-raising material. This will involve intensive consultations with national stakeholders. In addition, the national consultant will review the GoM's websites currently available to policy- and decision-makers, technical staff and other relevant stakeholders. According to the structure and content of these websites, the national consultant will propose revisions that facilitate improved access to information on adapting to climate change, including documents generated under the proposed project.
4	The international specialist in fire-resilient green breaks will design the planting activities, produce planting and maintenance protocols, and provide training to the AGLC members and the management team of APCFB on restoration techniques.
5	The national consultant will select the ecosystems to benefit from the project interventions in collaboration with the international consultant. The national consultant will also oversee the baseline surveys in each of the AGLCs and the production of geo-referenced maps of natural resources. Four days are allocated for each baseline survey. Additionally, the national consultant will support the AGLCs in developing LDPs that include the interventions of the proposed project, further EbA interventions and PES systems if appropriate. In addition, the national consultant will identify: i) best adaptation practices from the proposed project and related projects according to the system developed under Output 3.1; and ii) replication sites for the most successful practices. The national consultant will also: i) develop material for training and awareness-raising and ii) organise training events for AGLC members and local authorities on the use of best adaptation interventions in their area. Finally, the national consultant will develop a funding strategy to enable the upscaling of best adaptation interventions in consultation with national stakeholders.
6	A national gender expert will identify the gender issues relative to climate change in the AGLCs selected for the implementation of the on-the-ground interventions, and develop recommendations for the project management team to further promote gender equity in the interventions of the project, particularly under Component 2.

7	The national consultant will produce digitised maps for natural resources for each of the targeted AGLCs. 45 days are allocated to the data collection, analysis and production of the 12 geo-referenced maps.
8	The national specialist in pastoralism and adaptation will design the restoration activities, produce restoration and maintenance protocols, and provide training to the AGLC members on the restoration techniques. In addition, the national consultant will be responsible for identifying the best practices to increase the resilience of agropastoral activities to climate change. The national consultant will also provide the list of necessary equipment and train local community members on these new practices as well as the maintenance of this equipment. The national consultant will also be responsible for identifying the best income-generating activities based on NTFPs to be developed under the interventions of the proposed project. During the early stages of the proposed project, the national consultant will participate in the selection of species to be planted as part of the restoration activities under Output 2.2.
9	The selected service provider will collaborate with the specialist in awareness-raising to develop the website.
10	The selected service provider will collaborate with the specialist in project monitoring and knowledge management to set up the system for data analysis and archiving. This will both include implementing the system and providing the necessary assistance to support its use by the stakeholders.
11	Awareness-raising material to be developed include TV and radio shows, art and pamphlets. The budget allocated for this is US\$84,600.
12	A workshop will be organised in each commune targeted by the project. A budget of US\$6,000 is allocated for each workshop. This budget will include: i) reviewing existing LDPs; ii) training local authorities on EbA and its integration into LDPs; and iii) integrating EbA into existing LDPs or create LDPs when missing.
13	US\$7,000 is allocated to organising three sessions of two days of training for the steering committees of AGLCs in each wilaya (the steering committees of AGLCs in the wilayas of Assaba and Guidimaka will be trained jointly). This budget includes the transportation of committee members to the training sites.
14	US\$1,166 is allocated for each participatory baseline survey.
15	US\$1000 is allocated per workshop to cover for the provision of drinks, snacks, small material and transportation costs for the participants where needed. Three workshops are budget for to create each LDP.
16	The equipment for data collection and analysis to be provided includes GPS devices, cameras, species identification books, sampling material and apparatus to measure vegetation indices and water quality. US\$35,000 is allocated to the regional authorities of each wilaya (the regional authorities of Assaba and Guidimaka will receive a combined budget of US\$35,000).
17	The budget of US\$40,000 is allocated to each wilaya (Assaba and Guidimaka will receive a combined budget of US\$40,000) and the beneficiaries will be DREDDs, CREDDs and other regional delegations. The equipment to be purchased includes: i) projectors and screens; ii) advertising boards; iii) whiteboards; iv) raw material such as felt pens and paper for implementing awareness-raising exercises such as the production of 3D maps.
18	A budget of US\$2,200 allocated to support local communities to establish AGLCs including travel to and from Nouakchott.
19	US\$28,432 is allocated for each nursery (four nurseries will be established in Hodh El Gharbi and Hodh El Chargui, respectively and four nurseries will be divided between Assaba and Guidimaka) to: i) build nurseries and purchase the required material, including seedlings, containers, and shading equipment; and ii) purchase construction material to restore watersheds, listed forests and <i>Acacia</i> woodlands.
20	US\$20,000 is allocated per nursery (two nurseries in Hodh El Gharbi and Hodh El Chargui, respectively and two nurseries divided between Assaba and Guidimaka) to i) build nurseries and purchase required material including seedlings, containers, shading equipment; and ii) purchase construction material to restore 300 hectares of set-aside rangeland.
21	This will include: i) the establishment of nurseries to grow agroforestry species providing NTFPs; ii) the provision of crop species; iii) the development of drought-resilient irrigation methods; and iv) training on the cultivation of the planted species. US\$169,300 is

	allocated to increase the resilience of agropastoralism in the intervention sites.
22	US\$90,000 per wilaya (the wilayas of Assaba and Guidimaka will receive a combined amount of US\$90,000) is allocated for the purchase of equipment required for collecting, processing and conserving NTFPs and to provide the corresponding training. Potential material to be provided includes an oil press, stocking material, conservation material, drying material, a mill and weighing scales.
23	The data collection and analysis equipment provided at the national level will be similar to the one provided at the regional level under Activity 1.2.2, but refined according to stakeholder needs. The information collected by regional delegations will determine how a system for data collection and analysis is institutionalised. US\$35,000 is allocated at the national level.
24	The archiving equipment will include hard drives, flash disks, CDs, archiving software, an appropriate IT system and a contribution towards the establishment of a consulting room, including the purchase of books.
25	Each geo-referenced map will be printed five times in large format (A0) for distribution to AGLCs and DREDDs.

Appendix 2: Co-financing by source and UNEP budget lines

Project number:						
Project executing partner				Direction for the Protection of Nature (DPN) in partnership with Ministry of Environment and Sustainable Development (MEDD) and Ministry of Livestock Husbandry (ME), Ministry of Agriculture (MA) and Ministry of Hydraulics and Sanitation (MHA)		
Project implementation period						
From:				GEF	National governme nt	National governme nt
To:				Grant	Cash	In kind
UNEP Budget Line						
	1100		Project personnel			
		1101	National project manager (48 months @ \$2500/month)	120,000	0	0
		1199	Sub-total	120,000	0	0
	1200		Consultants			
		1201	International specialist in EbA (20 days @ \$500/day; 1 flights @ \$2500/flight; 15 days in-country @ \$166/day)	15,000	0	249,688
		1202	National Technical Advisor (50 days @ \$150/day)	7,500	0	124,844
		1203	National specialist in policy-making and adaptation (40 days @ \$150/days)	6,000	0	99,875
		1204	National specialist in local management of natural resources, adaptation and awareness raising (80 days @ \$150/days)	12,000	0	199,750
		1205	International specialist in fire-resilient green breaks (30 days @ \$500/day; 1 flight @ \$2500/flight; 20 days in-country @ \$166/day)	21,000	0	349,563
		1206	National specialist in management of natural resources and adaptation to climate change (30 days @ \$150/day)	4,500	0	74,906
		1207	National gender specialist (30 days @ \$150/day)	4,500	0	74,906
		1208	National expert in geomatics (45 days @ \$150/day)	6,750	0	112,360

		1209	National specialist in pastoralism, agronomics and climate-resilient livelihoods (30 days @ \$150/day)	4,500	0	74,906
		1210	Field officers for Assaba, Guidimaka, Hodh El Gharbi and Hodh El Chargui (2 x 48 months @ \$400/month)	38,400	0	639,201
		1299	Sub-total	120,150	0	2,000,000
	1300		Administrative Support			
		1301	Administrative Assistant (48 months @ \$300/month)	14,400		
		1302	Financial Assistant (48 months @ \$500/month)	24,000		
		1303	M&E Specialist (8 months @ \$2500/month)	20,000		
		1304	Project Steering Committee meetings	4,800	20,000	
		1399	Sub-total	63,200	20,000	0
	1600		Travel on official business			
		1699	Sub-total	0	0	0
1999			Component total	303,350	20,000	2,000,000
20	SUB-CONTRACT COMPONENT					
	2100		Sub-contracts (MOUs/LOAs for supporting organisations)			
		2101	Subcontract for the development of the website	22,000		
		2102	Subcontract for the development of the data collection, analysis and archiving system	35,500		
		2199	Sub-total	57,500	0	0
	2200		Sub-contracts (for commercial purposes)			
		2201	Subcontract for the production of the awareness-raising material including TV and radio shows	84,600		
		2299	Sub-total	84,600	0	0
2999			Component total	142,100	0	0
30	TRAINING COMPONENT					
	3200		Group training			
		3201	Workshops for the integration of EbA into decision-making and LDPs	60,000	5,000	339,463

		3202	One-day training for each of the 3 groups on the use of the EbA guidelines	12,000	5,000	67,893
		3203	Two sessions of 3 days will be provided in each of the five wilayas	48,000	5,000	282,885
		3204	Three-days training of the organisation of awareness-raising campaigns in the wilayas	24,000	5,000	141,443
		3205	Training for the steering committees of 27 AGLCs	63,000	5,000	339,463
		3210	One participatory baseline survey for each AGLCs.	31,500	5,000	178,218
		3211	Workshops for the development of LDPs.	27,000	5,000	152,758
		3212	Training of the AGLC members to implement the restoration activities	20,000	5,000	113,154
		3213	Training of the AGLC members on the climate-resilient sources of income	20,000	5,000	113,154
		3214	Ten training days on the central system for data collection, analysis and archiving	30,000	5,000	169,731
		3215	Training on the use of appropriate adaptation practices in the replication sites.	18,000	5,000	101,839
		3299	Sub-total	353,500	55,000	2,000,000
	3300		Meeting/Conferences			
		3301	Validation workshops for the NAS, sectoral strategies and laws	27,000		
		3302	Workshop for the development of the website	3,000	10,000	
		3399	Sub-total	30,000	10,000	0
3999			Component total	383,500	65,000	2,000,000
40	EQUIPMENT AND PREMISES COMPONENT					
	4100		Expendable equipment			
		4101	Computer equipment	14,000	10,000	
		4102	Office supplies	13,000	20,000	
		4199	Sub-total	27,000	30,000	0
	4200		Non-expendable Equipment			
		4201	Equipement for data collection and analysis	105,000	30,000	107,465
		4202	Awareness-raising equipment	119,000	30,000	121,794

		4203	Support for the process of creation of each AGLC	33,977		34,775
		4204	Establishment of tree nurseries for the planting activities	341,188		349,198
		4205	Restoration of watersheds including water conservation methods	247,500		253,310
		4206	Establishment of tree nurseries to be planted in 300 hectares of set-aside pastoral lands	120,000		122,817
		4207	Sowing on 100 ha of set-aside rangeland	20,000		20,470
		4208	Fencing 300 ha of rangeland including the development of a rotation system for setting-aside	510,000		521,973
		4209	Establishment of tree nurseries to be planted in 390 ha of drifting dunes	120,000		122,817
		4210	Dune fixation with stick and trees	546,000		558,818
		4211	Restoration of 150 hectares of listed forests including water conservation methods	315,000		322,395
		4212	Restoration of 210 hectares of Acacia woodlands including water conservation methods	399,000		408,367
		4213	Establishment of tree nurseries for the fire-resilient green breaks	50,000		51,174
		4214	Plantation of 20 hectares of fire-resilient green breaks	22,000		22,516
		4215	Provide the required equipment to adopt agropastoral practices that are climate-resilient	507,900		519,823
		4216	Provide the required equipment to adopt climate-resilient livelihoods based on NTFPs	270,000	10,000	276,339
		4217	Data collection and analysis equipment	40,000	30,000	40,939
		4218	Archiving equipment	55,827	25,000	57,138
		4219	Purchasing vehicles	85,858		87,874
		4299	Sub-total	3,908,250	125,000	4,000,000
4999		Component total		3,935,250	155,000	4,000,000
50	MISCELLANEOUS COMPONENT					
	5100	Operation and maintenance of equipment				
		5101	Vehicle maintenance	33,000	40,000	
		5199	Sub-total	33,000	40,000	0

	5200		Reporting costs			
		5201	Reports	24,000	10,000	
		5299	Sub-total	24,000	10,000	0
	5300		Sundry			
		5301	Production of the guidelines	9,000		
		5302	Printing of geo-reference digital maps for each targeted AGLCs	7,500		
		5303	Communication for PM and M&E	20,000	10000	
		5399	Sub-total	36,500	10,000	0
	5500		Evaluation			
		5501	Baseline	40,000		
		5502	Mid-term evaluation	35,000		
		5503	Final evaluation	35,000		
		5504	Inception workshop and report	12,300		
		5505	External financial audit	20,000		
		5599	Sub-total	142,300	0	0
5999			Component total	235,800	60,000	0
99			GRAND TOTAL	5,000,000	300,000	8,000,000

Appendix 3: Results Framework

Outcomes/ Outputs	Indicators	Baseline	Mid-term target	End-of-project targets	Means of Verification
Project objective: To reduce the vulnerability of Mauritanian authorities and local communities to the effects of climate change in the forests and rangelands of the Sahelian Acacia Savanna Ecoregion.	Total number of direct beneficiaries (% of which are women) of the project's EbA activities.	Zero	At least 400 (to be validated at inception) including 40% of women.	At least 1,200 (to be validated at inception) including 40% of women ¹⁵¹ .	Household surveys and reports.
Component 1: Institutional and technical capacity to address climate change risks through EbA.					
Outcome 1: Strengthened capacity at the national, provincial and local levels to use EbA measures to address climate change risks in rangelands.	1.1.1 Degree to which capacity of targeted government institutions at national and sub-national levels is strengthened to identify, prioritise, implement, monitor and assess effectiveness of EbA interventions.	1.1.1 Current estimated level of capacity to identify, prioritize, implement, monitor and assess effectiveness of EbA interventions is 2. Institutions have limited capacity to monitor	1.1.1 Increase of 3 in the capacity score assessment of each institution.	1.1.1 Increase of 5 in the capacity score assessment of each institution.	1.1.1 Verified through scoring methodologies developed by the TAMd and PPCR and adapted from the GEFSec - AMAT (2014) ¹⁵² . The indicator is based on a five-step criteria of a capacity assessment framework (expressed as questions): <ul style="list-style-type: none"> Are the institutions in the process of identifying climate change risks and appropriate EbA interventions?

¹⁵¹ The initial targets set for gender-disaggregated indicators were necessarily conservative – i.e. lower than 50% of direct beneficiaries comprising women – based on Mauritania's HDI and GII. Such low levels of human development reflect significant gender-based inequalities in the country. A 50%-50% target for gender disaggregated indicators is unlikely to be achievable given the social dynamics in Mauritania.

¹⁵² Adapted from TAMd (2013) and PPCR (2014) scorecard indicators.

		<p>and identify climate risks. They are able to design, budget and implement restoration interventions but not EbA interventions. Increasing vegetation cover is prioritised by national institutions but not EbA.</p> <p>Baseline study to be conducted at the project inception stage (to verify the overall score).</p>			<ul style="list-style-type: none"> • Are the institutions prioritising EbA interventions and specifying budget allocations and targets for these interventions? • Have the institutions defined clear roles and responsibilities for the coordination and implementation of EbA interventions? • Is there evidence of effective implementation of EbA interventions by the institutions? • Is there evidence of adequate institutional capacities for the continuous assessment, learning and review of adaptation strategies and measures? <p>Each question is answered with an assessment and score for the extent to which the associated criterion has been met: not at all (= 0), partially (= 1) or to a large extent/ completely (= 2). An overall score is calculated, with a maximum score of 10 given to five criteria. These five criteria will be reviewed and validated at inception phase of the project.</p>
	1.1.2 Number of policy revisions proposed for sectoral strategies, plans and laws to integrate adaptation to climate change, and submitted to government for validation.	1.1.2 Zero, the existing strategies, plans and laws in the sectors of management of natural resources and sustainable development makes minimal mention of adaptation to	1.1.2 At least two sectoral strategies, plans and laws.	1.1.2 At least six sectoral strategies, plans and laws.	1.1.2 Proposed revisions to the relevant policy documents.

		climate change (to be further defined during the baseline study).			
	1.2. National adaptation strategy developed.	1.2. The ACCMR project includes the development of a NAP road map that should be produced in the near future. However, there is no national adaptation strategy to guide adaptation planning in Mauritania.	1.2. N/A	1.2. One gender-sensitive national adaptation strategy developed.	1.2. National adaptation strategy document.
	1.3. Number of local government officials, environmental committee members and local community representatives with capacity to plan, budget and implement and monitor EbA interventions (disaggregated by gender).	1.3. No trainings that have been provided to support national, provincial and local government in implementing appropriate adaptation measures, including EbA interventions. A more quantitative assessment of this indicator will be made at inception phase.	1.3. At least: i) 40 government technical staff members ; ii) 30 NGO staff members; iii) 20 staff members from DREDDs and other relevant institutions have increased capacity to plan, budget, implement and monitor EbA interventions (of which at least 40% of women).	1.3. At least: i) 50 government technical staff; ii) 20 government decision-makers; iii) 40 NGO staff members; iv) 30 staff members from DREDDs and other relevant regional delegations have increased capacity to plan, budget, implement and monitor EbA interventions (of which at least 40% of women).	1.3. Attendance registers from training sessions and training reports. A scoring scale methodology will be used to measure the capacity of trained officers. To measure people's capacity to identify, prioritize, implement, monitor and evaluate adaptation strategies and measures; the tracking tool recommends the following scoring scale: 1 = Very limited or no evidence of capacity 2 = Partially developed capacity 3 = Fully developed, demonstrated capacity Depending on the nature and scope of the training provided, the tracking tool may provide an average score based on an assessment of capacity along the following criteria:

					<p>(a) understanding what is EbA and its role in adapting to climate change;</p> <p>(b) identifying EbA adaptation options and their use to restore ecosystems in Rwanda;</p> <p>(c) developing climate-resilient livelihoods based on restored and resilient ecosystems;</p> <p>(d) identifying cost-effective adaptation interventions;</p> <p>(e) Planning, budgeting and implementing EbA measures.</p>
	1.4. Number of AGLCs established for the sustainable management of natural resources including pastoral resources using EbA.	1.4. There are ~45 AGLCs in the intervention areas that are located mainly in Guidimaka and Hodh El Gharbi.	1.4. Five new AGLCs established for the sustainable management of natural resources including pastoral resources using EbA.	1.4. 15 new AGLCs established for the sustainable management of natural resources including pastoral resources using EbA.	1.4. Ministerial order for each AGLC.
	1.5. Number of training events for AGLC committees on the use of EbA for the sustainable management of natural resources including pastoral resources.	1.5. Some of the existing local associations that will be targeted by the project will likely have received some training on ecosystem management and tree planting when they were created. However, these local associations represent a minority of those focused on by the project and EbA	1.5. Six training events for at least 30 committee members from at least four AGLCs each on the use of EbA for the sustainable management of natural resources including pastoral resources.	1.5. Nine training events for at least 30 committee members from four AGLCs each on the use of EbA for the sustainable management of natural resources including pastoral resources.	1.5. Reports of training sessions.

		approach was not part of this training.			
Component 2: Climate resilient livelihoods for rural communities using an EbA approach in rangelands in three wilayas in the Sahelian Acacia Savanna Ecoregion.					
Outcome 2: Increased provision of pastoral resources and climate-resilient livelihoods via an EbA approach.	2.1. Number of AGLCs with management plans for natural resources include EbA interventions in the four wilayas of the project.	2.1. No management plans for natural resources including EbA interventions in the project intervention area.	2.1. At least six management plans (1 for each individual AGLC) for natural resources including EbA interventions developed.	2.1. At least nine management plans (1 for each individual AGLC) for natural resources including EbA interventions developed.	2.1. Management plans for AGLCs.
	2.2 Number of hectares of pastoral ecosystems benefiting from EbA measures (adapted from AMAT indicator 4).	2.2 Protection measures involving mechanical and manual firebreaks, and mechanical sand fixation techniques are being implemented mainly under the APCBF project. However, the use of EbA to combat the adverse effects of climate change is limited.	2.2 EbA measures implemented across at least 400 hectares within the management areas of the AGLCs selected under Output 2.1 to address climate change effects such as droughts, fires and sand dune encroachment.	2.2 EbA measures implemented across at least 1200 hectares – 150 hectares of watersheds, 300 hectares of rangelands, 390 hectares of sand dunes, 210 ha of <i>Acacia</i> forests and 150 ha of protected forests – to address climate change effects such as droughts, bushfires and sand dune encroachment.	2.2 Surveys of the project intervention sites and monthly reports provided by DREDDs. These surveys will also investigate land ownership in the areas benefitting from EbA measures to check that an appropriate proportion (to be defined during the baseline assessment or by the national M&E specialist) of women is represented.
	2.3 Number of individuals receiving training, technical support and equipment to adopt climate-resilient livelihoods.	2.3 A limited number of individuals received training, technical support and equipment to adopt climate-resilient livelihoods in the targeted wilayas (to be confirmed by the	2.3 At least 100 individuals have received training, technical support and equipment to adopt climate-resilient livelihoods.	2.3 At least 300 individuals have received training, technical support and equipment to adopt climate-resilient livelihoods.	2.3 Surveys of the project intervention sites; list of material procured; reports of the training sessions; list of attendees to the training sessions.

		baseline study).			
Component 3. Awareness and knowledge of EbA and climate-resilient livelihoods					
<p>Outcome 3: Increased awareness and knowledge of climate change risks, benefits of EbA and opportunities for climate-resilient livelihoods in Mauritania.</p>	<p>3.1. Proportion of the population in the four wilayas of the project with increased awareness and corresponding behavioural change on climate change effects and adaptation options.</p>	<p>3.1. There is limited awareness of climate change effects and adaptation options in the wilayas of the project (less than 5%, to be confirmed by the baseline study).</p>	<p>3.1. At least 2 out of 10 people with increased awareness on climate change effects and adaptation options in the wilayas of the project (of which ~50% are women).</p>	<p>3.1. At least 3 out of 10 people with increased awareness on climate change effects and adaptation options in the wilayas of the project and at least 1 out of 10 people with corresponding behavioural changes (of which ~50% are women).</p>	<p>3.1. Household surveys in the four wilayas of the project.</p> <p>Indicative questions to measure awareness are listed below. These questions should be validated at project inception, and amended if necessary (each of the questions should be followed by a question on how they know about it to check that it is actually the effects of the awareness raising campaign that are being measured):</p> <ul style="list-style-type: none"> • Do you know what climate change is? (ask interviewee to explain to be sure) • What are the current climate change effects in the main regions of Mauritania? • What climate change effects are predicted for Mauritania in the near future? And in the longer term? • Do you know what can be done to reduce the negative effects of climate change on your livelihood? If yes, what could be done at your level to reduce your vulnerability to climate change? <p>The following questions illustrate what could be used to measure the change in behaviour of Mauritians:</p> <ul style="list-style-type: none"> • Have you done anything differently as a result of the awareness-raising campaign? (e.g. talking about climate change with other community

					<p>members, talking about the role of natural resources with other community members, seeking for information to adopt climate-resilient practices, installing rainwater collection system, planting a tree)</p> <ul style="list-style-type: none"> Do you plan to implement new practices as a result of the awareness-raising campaign? (e.g. changing your agricultural/pastoral practices).
	3.2. Number of knowledge management strategies on the benefits of EbA interventions to local communities developed to capture and share experiences from and between all adaptation projects developed.	3.2. There is no knowledge management strategy on the benefits of EbA interventions to local communities to capture and share experiences from and between all adaptation projects.	3.2. N/A	3.2. One knowledge management strategy on the benefits of EbA interventions to local communities to capture and share experiences from and between all adaptation projects developed and implemented – the knowledge-sharing element of the strategy will include specific guidelines to promote gender equity in access to information.	3.2. Mandate for the data collection system, data collection protocols and databases; knowledge management strategy document.
	3.3. Number of communication tools developed to increase awareness of government staff and local communities on the benefits of an EbA approach and associated climate-resilient livelihoods.	3.3. The EbA approach is unknown in the country and there are limited communication tools to increase awareness on the benefits of an EbA approach and associated climate resilient livelihoods	3.3. At least one website developed/strengthened to increase awareness of government staff and local communities on the benefits of an EbA approach and associated climate resilient livelihoods.	3.3. At least one radio show, one TV show and one website to increase awareness of government staff and local communities on the benefits of an EbA approach and associated climate resilient livelihoods.	3.3. Communication tools including radio shows, TV shows, pamphlets and website visitor statistics.

		(to be confirmed during the baseline study).			
	3.4. Long-term strategy developed to upscale and sustain best adaptation measures including EbA.	3.4. No strategy to upscale and sustain best adaptation measures including EbA exists in Mauritania.	3.4. N/A	3.4. A long-term strategy to upscale and sustain best adaptation measures including EbA developed.	3.4. Review of the progress reports; strategy document in existence.

Appendix 4: Workplan and timetable

Output	Activity	Annual breakdown				Quarterly breakdown															
		Year 1	Year 2	Year 3	Year 4	Year 1				Year 2				Year 3				Year 4			
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Outcome 1:																					
Output 1.1	1.1.1																				
	1.1.2																				
	1.1.3																				
	1.1.4																				
	1.1.5																				
	1.1.6																				
Output 1.2	1.2.1																				
	1.2.2																				
	1.2.3																				
	1.2.4																				
Output 1.3	1.3.1																				
	1.3.2																				
	1.3.3																				
Outcome 2:																					
Output 2.1	2.1.1																				
	2.1.2																				
	2.1.3																				
	2.1.4																				
	2.1.5																				
Output 2.2	2.2.1																				
	2.2.2																				
	2.2.3																				
	2.2.4																				
	2.2.5																				
Output 2.3	2.3.1																				
	2.3.2																				
	2.3.3																				

Output	Activity	Annual breakdown				Quarterly breakdown															
Outcome 3:																					
Output 3.1	3.1.1																				
	3.1.2																				
	3.1.3																				
	3.1.4																				
Output 3.2	3.2.1																				
	3.2.2																				
Output 3.3	3.3.1																				
	3.3.2																				
	3.3.3																				

Appendix 5: Key deliverables and benchmarks

See Appendix 8.3: Results Framework and Appendix 8.6: Costed M&E plan.

Appendix 6: Costed M&E plan

Type of M&E activity	Responsible Parties	Budget US\$ (Excluding project team staff time)	Time frame
Inception workshop and report	<ul style="list-style-type: none"> • PM • M&E Specialist • UNEP TM 	Indicative cost: US\$12,300	Within the first two months of project start up. Will be undertaken at the national and sub-national scales.
Baseline study	<ul style="list-style-type: none"> • PM • M&E Specialist • UNEP TM 	Indicative cost: US\$40,000	At project inception.
Measurement of means of verification of project results	<ul style="list-style-type: none"> • UNEP TM • M&E Specialist • PM 	To be finalised at Inception Workshop. This includes hiring of specific studies and institutions, and delegate responsibilities to relevant team members.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of means of verification for project progress on output and implementation	<ul style="list-style-type: none"> • UNEP TM • PM • M&E Specialist • CTA 	To be determined as part of the AWP's preparation.	Annually prior to PIR and to the definition of annual work plans.
PIR	<ul style="list-style-type: none"> • PM • M&E Specialist • UNEP TM • UNEP FMO (Fund Management Officer) 	None.	Annually
Audit	<ul style="list-style-type: none"> • PM • UNEP TM • UNEP FMO (Fund Management Officer) 	Financial audit records to be provided from UMOJA for PSC review. Total indicative cost: US\$20,000 (US\$ 5,000 per year).	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> • PM • M&E Specialist • UNEP TM 	None	Quarterly

Type of M&E activity	Responsible Parties	Budget US\$ (Excluding project team staff time)	Time frame
MTR/MTE	<ul style="list-style-type: none"> • UNEP TM/UNEP Evaluation Office 	Indicative cost: US\$35,000	At the mid-point of project implementation.
Terminal Evaluation (TE)	<ul style="list-style-type: none"> • UNEP Evaluation Office 	Indicative cost: US\$35,000	At least three months before the end of project implementation.
Project terminal report	<ul style="list-style-type: none"> • PM • M&E Specialist • UNEP FMO • UNEP TM 	None	On completion of the terminal evaluation.
Visits to pilot intervention sites	<ul style="list-style-type: none"> • UNEP TM • M&E Specialist • PM • PSC representatives 	For GEF supported projects, paid from UNEP's IA fees and operational budget.	Two annual supervision missions by UNEP.
Consultants	<ul style="list-style-type: none"> • M&E specialist, MTR and TE consultants 	Included in the baseline assessment, MTR and TE costs.	During baseline assessment in inception phase, at the mid-point of project implementation and at least three months before the end of project implementation
TOTAL indicative COST Excluding project team staff time and UNEP staff and travel expenses			Estimated to cost US\$142,300

Appendix 7: Summary of reporting requirements and responsibilities

Reporting requirements	Due date	Responsibility
Inception Workshop Report	One month after Project Inception Workshop.	<ul style="list-style-type: none"> PM M&E specialist UNEP TM CTA
Expenditure report accompanied by explanatory notes	Every three months (due 31 January; 31 April; 31 July; and 30 October for Q1, Q2, 3, Q4 respectively).	<ul style="list-style-type: none"> PM Accountant
Cash Advance request and details of anticipated disbursements	When deemed necessary.	<ul style="list-style-type: none"> PM Accountant
Supervision Plan	Before the end of the project's inception phase.	<ul style="list-style-type: none"> UNEP
Progress reporting	Quarterly.	<ul style="list-style-type: none"> PM NTA M&E specialist
Audited report for expenditures for year ending 31 December	Yearly on or before 30 June.	<ul style="list-style-type: none"> Executing partners
Inventory of non-expendable equipment	Yearly on or before 31 January.	<ul style="list-style-type: none"> PM Accountant
Co-financing report	Yearly on or before 31 July.	<ul style="list-style-type: none"> PM
PIR	Yearly on or before 31 July (aligned with yearly UNEP PIR schedule).	<ul style="list-style-type: none"> PM M&E specialist CTA UNEP TM
Minutes of PSC meetings	Quarterly (or as relevant).	<ul style="list-style-type: none"> PM
Completion report	Within six months of project completion date.	<ul style="list-style-type: none"> PM Implementing Agency
Final inventory of non-expendable equipment		<ul style="list-style-type: none"> PM
Equipment transfer letter		<ul style="list-style-type: none"> PM

Final expenditure statement	Within three months of project completion date.	<ul style="list-style-type: none"> • PM • UNEP
Mid-term evaluation/Review	Midway through project lifetime.	<ul style="list-style-type: none"> • PM • UNEP TM • External Expert
Terminal evaluation	At least three months prior to the project end date.	<ul style="list-style-type: none"> • PM • TA • UNEP TM • External Expert
Final audited report for expenditures of project	Within three months prior to project completion date.	<ul style="list-style-type: none"> • AFO
Annual audit	Annually.	<ul style="list-style-type: none"> • PM • UNEP TM • External Expert/company

Appendix 8: Standard Terminal Evaluation TOR

Below are the standard Terminal Evaluation Terms of Reference (ToRs) of UNEP.

Objective and Scope of the Evaluation

The objective of the Terminal Evaluation is to: i) examine the extent and magnitude of any project impacts to date; and ii) determine the likelihood of future impacts. The evaluation will also assess project performance and the implementation of planned project activities and planned outputs against actual results.

Methods

This terminal evaluation will be conducted as an in-depth evaluation using a participatory approach whereby the UNEP TM, key representatives of the executing agencies and other relevant staff are kept informed and consulted throughout the evaluation. The expert will liaise with UNEP and the UNEP TM on any logistic and/or methodological issues that can compromise an independent review. The draft report will be circulated to UNEP TM, main representatives of the executing agencies and the UNEP. Any comments or responses to the draft report will be sent to UNEP for collation and the expert will be advised of any necessary or suggested revisions.

Key Evaluation Principles

In attempting to evaluate any outcomes and impacts of the project, evaluators must remember that the project's performance should be assessed by considering the difference between the answers to two simple questions "what happened?" and "what would have happened anyway?". These questions imply that there should be consideration of the baseline conditions and trends in relation to the intended project outcomes and impacts. In

addition, it implies that there should be plausible evidence to attribute such outcomes and impacts to the actions of the project.

Sometimes, adequate information on baseline conditions and trends is lacking. In such cases, this should be clearly highlighted by the evaluator, along with any simplifying assumptions that were taken to enable the evaluator to make informed judgments about project performance.

Appendix 9: Decision-making flowchart and organisational chart

See Section 4: Institutional Framework and Implementation Arrangements

Appendix 10: Terms of Reference

A 10.1 Terms of Reference for Project Steering Committee (PSC)

Background

The PSC will be responsible for undertaking management-related and technical decisions for the project in accordance with this ToR and providing guidance and direction for the project on a regular basis.

The PSC will review and approve the Annual Work Plans (AWPs) and reports produced by national and international consultants as well as oversee the M&E plan for the project. Additionally, it is required to authorise any substantive deviation from the agreed AWPs and budget lines to be included in budget revisions submitted to the IA. The PSC will also ensure that necessary resources are committed, and will arbitrate on any conflicts within the project or negotiate a solution to any problems between the project and external bodies. Lastly, the PSC will approve the responsibilities of the PM. For detailed information on the responsibilities of the PSC, see Section 4.

The PSC will comprise the following members (see Section 2.5, 4 and 5):

- MEDD including the MEDD Secretary General (chair), CCPNCC, DPN, DAPL, DPCID;
- ME;
- MA;
- MHA;
- MASEF;
- MAED;
- MDRE;
- GIZ;
- NGOs;
- PM (member secretary);
- UNEP TM; and
- CTA.

Scope of Work

Specific responsibilities of the PSC are described below.

- Ensure that project objectives are fulfilled in an effective and efficient manner.
- Approve annual workplans and budgets, and other reports that may be required.
- Ensure effective quality assurance and financial reporting requirements.
- Ensure institutional coordination and facilitate an effective communication and decision-making process between government, implementation partners, civil society and other actors.
- Monitor and evaluate project implementation to ensure consistency with the approved work plans and results framework of the project.
- Review, revise and approve ToRs for staff, experts and contractors required to assist in project implementation, as proposed by the PM.
- Propose policy revisions that would facilitate the mainstreaming of the project activities.
- Facilitate interactions between the project management team particularly the PM and the relevant ministries or government agencies to optimise collaboration and sharing of experiences.

A 10.2 Terms of Reference for Project Manager (PM)

Scope of Work

The PM will lead the project team and provide overall operational management for the successful execution and implementation of the project. This includes the daily responsibility to manage, coordinate and supervise the implementation of the project and the delivery of results in accordance with the project document and agreed work plans. Furthermore, the PM will be responsible for financial management and disbursements, with accountability to the government and UNEP. The PM is located in DPN, works administratively under the supervision of DPN and CCPNCC and will report to the NTA and the PSC.

Particular responsibilities of the PM are listed below.

- Oversee and manage project implementation, monitor work progress, and ensure timely delivery of outputs.
- Head the PMU within DPN.
- Report to the TA, the PSC and UNEP TM regarding project progress.
- Develop and facilitate implementation of a comprehensive monitoring and reporting system.
- Ensure timely preparation of detailed AWP's and budgets for approval by PSC.
- Organise the PSC meetings.
- Write ToRs with the NTA for national experts.
- Assist in the identification, selection and recruitment of project staff and experts as required.
- Supervise, coordinate and facilitate the work of the Administration and Financial Officer, field officers, M&E specialist, procurement specialist, national focal point and technical unit (including national and international experts).
- Control expenditures and assure adequate management of resources.
- Provide a quarterly update of the expenses of the previous three months and the expenses expected for the next three months to UNEP.
- Establish linkages and networks with the ongoing activities of other government and non-government agencies.
- Provide input to management and technical reports and other documents as described in the M&E plan for the overall project. Reports should contain detailed assessments of progress in implementing activities, including reasons for delays, if any, and recommendations on necessary improvements.
- Participate in training activities, report writing and facilitation of expert activities that are relevant to his or her area of expertise.
- Inform the PSC immediately of any issue or risk which might jeopardise the success of the project.
- Provide on-the-ground information for UNEP progress reports.
- Liaise and coordinate with UNEP TM on a regular basis.

Qualifications

- Master's degree in environment, natural resources management, agriculture or a closely related field.
- A minimum of 10-year relevant work experience including at least 6 years' experience as a lead project manager in relevant sectors.
- Demonstrated solid knowledge of adaptation to climate change, ecological restoration and sustainable exploitation of natural resources.
- Experience in the public participation development process associated with environment and sustainable development is an asset.

- Experience in working and collaborating within governments is an asset as well as experience in GEF projects.
- Fluent in English and French including writing and communication skills.

Reporting

The PM will work closely with the PSC, NTA and TM to ensure the availability of information on progress and performance regarding the implementation of the project. The PM will deliver progress reports on a monthly basis to the TM and the CTA. These reports will include: i) status of activities; and ii) challenges encountered on the ground during project execution.

A 10.3 Terms of Reference for the National Chief Technical Adviser (CTA)

Scope of Work

The NTA will provide technical guidance on the implementation of the project to the PM. This position will be filled by a national consultant if a suitable candidate with proven technical expertise to undertake this assignment is available. Otherwise, an international expert will be hired. He/She will render technical support to the Project Manager (PM) and other core staff of the Project Coordination Unit (PMU), the Project Steering Committee (PSC) and other government counterparts. The NTA in consultation with the National Project Coordinator will coordinate the provision of the required technical inputs, reviewing and preparing Terms of Reference (ToR) and reviewing the outputs of consultants and other sub-contractors for the LDCF project activities. The NTA will be an experienced national expert if they meet the qualifications of the role. He/She will report to the chair of the PSC. The NTA will cooperate with the PM to ensure the availability of information on progress and performance in the implementation of the project. In the performance of his/her duties, the NTA will work in close collaboration with TM, and update him/her on the project's progress. Additionally, in consultation with the TM, the NTA will take responsibility for decision-making and implementation of the project. Specifically, his/her tasks include but are not limited to:

Duties and Responsibilities

- Overall responsibility for providing technical assistance for project activities under the LDCF project, including those related to planning, monitoring and site operations, and assuming quality control of interventions;
- Assure timely and efficient coordination of activities funded through the LDCF project, through close consultations with the PM and in collaboration with all key partners including the UNFCCC FP, MEDD, the LDCF Project Steering Committee (PSC), and the UNEP Task Manager.
- Oversee, guide and, as may be needed, directly support work to achieve the following tasks:
 - Provide hands-on support to the PM, project staff and other government counterparts in the areas of project management and planning, management of site activities, monitoring, and impact assessment;
 - Prepare and finalize, in coordination with the PM, Terms of Reference for technical consultantcies and sub-contractors, and assist in the selection and recruitment process;
 - Provide quality assurance and technical review of project outputs
 - Undertake technical review of project outputs (e.g. studies and assessments).
 - In collaboration with PM, coordinate and organize the inception phase including the inception workshop;
 - Supervise the work of national and international experts.
 - Assist the PM to Provide technical supervisory function to the work carried out by the other technical assistance consultants hired by the project.

- In collaboration with PM, coordinate the work of all consultants and sub-contractors, ensuring the timely delivery of expected outputs, and effective synergy among the various sub-contracted activities;
- Prepare and revise in consultation with the PM the Management Plan as well as Annual Work Plans;
- Assist the PM in monitoring the technical quality of project M&E systems (including AWP, indicators and targets).
- Provide advice on best suitable approaches and methodologies for achieving project targets and objectives
- Adjust, in consultation with the PM, the project Results Framework, as required and in line with corporate requirements;
- Coordinate preparation of the periodic Status Report when called for by the PM;
- Prepare, in consultation with the PM, the Combined Project Implementation Review (PIR), inception report, technical reports, quarterly financial reports for submission to UNEP and the GEF and other donors and Government Departments, as required (in English);
- Assist the PM in mobilizing staff and consultants in the conduct of a mid-term project evaluation, and in undertaking revisions in the implementation program and strategy based on evaluation results;
- Assist the PM in liaison work with project partners, donor organizations, NGOs and other groups to ensure effective coordination of project activities;
- Assist in knowledge management, communications and awareness raising and document lessons from project implementation and make recommendations to the PSC for more effective implementation and coordination of project activities;
- Compile and report on lessons learned in project implementation, so as to contribute to international learning and replication in other projects; and
- Perform other tasks as requested by the PM, PSC and other project partners
- Facilitate the development of strategic regional and international partnerships for the exchange of skills and information related to climate change adaptation.

Qualifications

- At least an advanced post-graduate at or above M.Sc. level in climate change adaptation or a related discipline such as disaster risk reduction, environmental management, natural resources management, agriculture, water resources management.
- A minimum of 7 years' experience in a senior technical lead position with planning and management of environmental and/or natural resources management programmes in developing countries.
- A minimum of 5 years in a senior technical position involved in institutional strengthening and capacity-building.
- Demonstrated experience in project development, implementation and management
- Previous similar experiences in provision of technical support to complex bilateral, international donors or to GEF/LDCF/AF projects.
- Experience in arid and semi-arid ecosystems would be an advantage.
- Ability to effectively coordinate a large, multidisciplinary team of experts and consultants;
- Knowledge on ecosystem-based adaptation would be an advantage.
- Experience in West Africa and the Sahel region would be an advantage.
- Good communication and computer skills.
- Fluent in spoken and written English and French.

Duration of the Contract and Terms of Payment

The contract is for 50 working days spread over a year. It will be renewed on a yearly basis according to the performance of the consultant. If the consultant does not provide high quality and timely services and deliverables under his yearly contract, another consultant will be hired.

Payment will be done each trimester after submission by the consultant of a detailed report of activities during the ending trimester.

Reporting

The NTA will report to the chair of the PSC. The NTA will cooperate with the PM to ensure the availability of information on progress and performance in the implementation of the project. In the performance of his/her duties, the NTA will work in close collaboration with TM, and update him/her on the project's progress. Additionally, in consultation with the TM, the NTA will take responsibility for decision-making and implementation of the project.

A 10.4 Terms of Reference of the M&E specialist

Duties and Responsibilities

- establishing a performance monitoring framework to define bi-annual targets for the project to meet the targets defined in the project document by the end of the implementation phase;
- measuring project and AMAT indicators at least 1–2 times per year to evaluate the progress of the project in meeting the targets and the application of gender-disaggregated indicators;
- reporting to the PMU and PSC on the performance of the project according to project and AMAT indicators;
- providing information against project indicators to be used for reporting to GEFSec on a yearly basis (through the PIRs), at the project mid-point (through the MTR) and at the project end-point (through the Terminal Evaluation); and
- participate to the production of the reports described under Appendix 7.

Qualifications

- At least an advanced post-graduate at or above M.Sc. level in climate change adaptation or a related discipline such as disaster risk reduction, environmental management, natural resources management, agriculture, water resources management.
- A minimum of 7 years' experience in a senior technical lead position with monitoring and evaluating the progress, performance and benefits of GEF/AF/WB/EU projects for adaptation to climate change through leading Baseline Studies, Mid-Term Reviews and/or Terminal Evaluations including the development and monitoring of SMART indicators.
- A minimum of 5 years in a senior technical position in the design and implementation of GEF/AF/WB/EU projects for adaptation to climate change.
- Experience in arid and semi-arid ecosystems would be an advantage.
- Knowledge on ecosystem-based adaptation would be an advantage.
- Experience in West Africa and the Sahel region would be an advantage.
- Good communication and computer skills.
- Fluent in spoken and written English and French.

A 10.5 Terms of Reference of the Administrative and Financial Officer (AFO)

The AFO will report to the PM.

Responsibilities

- Standardise the finance and accounting systems of the project while maintaining compatibility with the government and UNEP financial accounting procedures.

- Prepare revisions of the budget with the PM and assist in the preparation of the AWP.
- Comply and verify budget and accounting data by researching files, calculating costs and estimating anticipated expenditures from readily available information sources.
- Prepare status reports, progress reports and other financial reports including co-financing reports.
- Process all types of payment requests for settlement purposes including quarterly advances to the partners upon joint review.
- Prepare periodic accounting records by recording receipts, disbursements (ledgers, cashbooks, vouchers, etc.) and reconciling data for recurring or financial reports and assist in preparation of annual procurement plans.
- Undertake project financial closure formalities including submission of terminal reports, transfer and disposal of equipment, processing of semi-final revisions, and support professional staff in preparing the terminal assessment reports.
- Assist in the timely issuance of contracts and assurance of other eligible entitlements of the project personnel, experts, and experts by preparing annual recruitment plans.

A 10.6 Terms of Reference for the Field Officers (NTAs)

Under the supervision of the PM, two Field Officers (FOs) will be hired to coordinate and monitor implementation of activities at a district level. The FOs will work closely with the PM, the CTA, the DREDDs, local authorities, NGOs and AGLC members to effectively manage the project at local level. To achieve this, they will regularly visit the intervention sites.

Responsibilities

- Act as a liaison and promote dialogue between national, provincial and local stakeholders.
- Oversee and manage project implementation, monitor work progress, and ensure timely delivery of outputs in target wilayas.
- Report to the PM and NTA regarding project progress through regular monthly reports. Reports should contain assessments of the progress of implementing activities, including reasons for delays, if any, and recommendations on necessary improvements.
- Support the PM in developing and facilitating implementation of a comprehensive monitoring and reporting system.
- Support in the preparation of detailed AWP and budgets for approval by PSC.
- Supervise, coordinate and facilitate the work of the technical staff in the targeted wilayas.
- Provide input to management and technical reports, and other documents as described in the M&E plan for the overall project.
- Participate in the PSC meetings and coordinate visits to project sites.
- Promote dialogue between stakeholders particularly at a local level.
- Promote the participation of local communities in project activities.

Qualifications

- Bachelor degree in environment, natural resources management, agriculture or a closely related field.
- A minimum of 5-year relevant work experience.
- Demonstrated solid knowledge of environment and ecological restoration.
- Experience in the public participation development process associated with environment and sustainable development an asset.
- Experience in working and collaborating with local authorities an asset.
- Excellent knowledge of French and at least one of the local languages in the targeted wilayas including writing and communication skills.

A 10.7 General Terms of Reference for International Experts

The international experts will be hired to perform the following tasks (please see Appendix 13 for more information on the project activities that will be undertaken by the consultants):

- Collect data.
- Provide advice relevant to their field and develop implementation protocols if required.
- Guide the implementation of the relevant project interventions.
- Monitor interventions.

International specialist in EbA

Qualifications

- At least an advanced post-graduate degree at or above M.Sc. level in climate change adaptation, environmental management, natural resources management or water resources management.
- A minimum of 7 years' experience in a senior technical lead position with providing expertise in Ecosystem-based Adaptation for projects on adaptation to climate change through planning, designing, implementing and supervising ecosystem restoration activities including in arid and semi-arid ecosystems.
- A minimum of 5 years' experience in monitoring and evaluating the success of restoration activities under adaptation projects.
- A minimum of 3 years' experience in working as a senior technical lead with local communities to design, plan – including the development of local management plans – and supervise the implementation of community-based restoration and ecosystem management interventions.
- Experience in developing training material and providing training on EbA at government and community levels.
- Good knowledge and understanding of Mauritania's climate change risks – both current and future and experience in working in West Africa and the Sahel region.
- Good communication and computer skills.
- Fluent in spoken and written English and French.

International specialist in fire-resilient green breaks

Qualifications

- At least an advanced post-graduate degree at or above M.Sc. level in climate change adaptation, climate-risk management and natural resources.
- A minimum of 7 years' experience in a senior technical lead position with providing expertise in planning, designing and implementing fire-resilient green breaks in arid and semi-arid ecosystems as part of projects on adaptation to climate change.
- A minimum of 5 years' experience in designing and implementing restoration activities for the development of ecosystem-based economic activities.
- A minimum of 3 years' experience in working as a senior technical lead with local communities to design, plan and supervise the implementation of community-based restoration and ecosystem management interventions.
- Experience in developing training material and providing training on the use of plant species against bushfires at government and community levels.
- Good knowledge and understanding of Mauritania's climate change risks – both current and future and experience in working in West Africa and the Sahel region.
- Good communication and computer skills.
- Fluent in spoken and written English and French.

More detailed terms of reference will be developed prior to hiring the international experts.

A 10.8 General Terms of Reference for National Experts

Local expertise will be sourced where possible in place of international expertise in order to strengthen in-country capacity. National experts will be hired by the project to:

- Collect data.
- Provide advice relevant to their field and develop implementation protocols if required.
- Guide the implementation of the relevant project interventions.
- Monitor interventions.

In addition, the national experts must be experts in their field, ideally with experience in climate change, capacity-building, and knowledge development. Additionally, they should have good knowledge and understanding of Mauritania's climate change risks – both current and future –, an appropriate M.Sc. degree and a minimum of 5 years' experience or an appropriate bachelor's degree and 10 years' experience in their field of expertise. National experts need to be fluent in spoken and written English, French and a local language if required to fulfil his/her tasks. More detailed terms of reference will be developed prior to hiring the national experts.

The hiring procedures to be followed for both international and national experts must include a transparent and competitive process based on normal UNEP procedures.

Appendix 11: Co-financing commitment letters from project partners

République Islamique de Mauritanie
 Honneur – Fraternité – Justice
**Ministère de l'Environnement
 et du Développement Durable**



الجمهورية الإسلامية الموريتانية
 شرف – إخاء – عدل
وزارة البيئة والتنمية المستدامة

N° ...0.0.6.9..... / MEDD/SG
 Nouakchott, le: 29 DEC 2014 : انواكشوط في:

Le Secrétaire Général **الأمين العام**

V/Réf :
V/Réf :

A

Dr. Naoko Ishii
CEO & Chairperson
 Global Environment Facility
 1818 H Street, NW
 Washington DC 20433, USA
 Email: nishii@thegef.org

Objet : Engagement du Ministère de l'Environnement et du Développement Durable pour le cofinancement du projet GEF LDCF intitulé « renforcement de la capacité technique et institutionnelle du gouvernement aux niveaux national et local pour réduire la vulnérabilité des communautés locales aux changements climatiques dans les zones de pâturage de Mauritanie »

Le Ministère de l'Environnement et du Développement Durable est chargé de la protection, conservation et du développement des ressources naturelles. A ce titre, il exécute annuellement le « **Programme Annuel de Lutte Contre les Feux de Brousse (APCBF)** ». Ce programme sert de ligne de base au projet GEF LDCF financé à hauteur de 5 Millions de dollars USA.

Cette lettre est destinée à confirmer le cofinancement du projet GEF LDCF par la Mauritanie à hauteur de 600 Millions MRO par an correspondant pour la durée de 4 ans du projet à 2,400 Milliards MRO, équivalents à **8,00 Millions USD** à travers le « **Programme Annuel de Lutte Contre les Feux de Brousse (APCBF)** » exécuté par le Ministère de l'Environnement et du Développement Durable. Un cofinancement à hauteur de 500.000 USD (10% du financement mobilisé par le GEF LDCF) répartis sur la durée du projet est accordé à titre de contrepartie par le budget d'investissement consolidé (BCI) de l'Etat pour renforcer les capacités des structures du Ministère de l'Environnement et du Développement Durable en charge de l'exécution dudit projet.

Ce qui porte le montant du cofinancement total de la Mauritanie à HUIT MILLION CINQ CENT MILLE DOLLARS USA (8.500.000 USD).

Nous nous réjouissons de cette collaboration rapprochée.

Cordialement,

Ampliations :

- MEDD
- PF GEF
- PF UNFCCC

MOHAMED ABDALLAH SALEM OULD AHMEDOUA



ص. ب: 170 - هاتف/ فاكس: (+222) 45 24 31 39 - شارع: 185 - 21 - رقم: 838 - لكسر - انواكشوط - موريتانيا
 B P: 170 - Tél : (+222) 45 24 31 39 - Rue : 21 - 185 N° 838 Ksar - Nouakchott - Mauritanie

Appendix 12: Endorsement letters of GEF National Focal Points

République Islamique de Mauritanie
Honneur – Fraternité – Justice

**Ministère Délégué auprès
du Premier Ministre
Chargé de l'Environnement
et du Développement Durable**

**Direction de la Programmation de la
Coordination et de l'Information
Environnementale**



الجمهورية الإسلامية الموريتانية
شرف – إخاء – عدل

وزارة المنتدبة لدى الوزير الأول
المكلفة بالبيئة والتنمية
المستدامة

إدارة البرمجة والتنسيق
والمعلومات البيئية

N°: 0000159 /DPCIE

N Réf:
V Réf:

رقم: اب ت م

نواكشوط 24 يونيو 2019

Le Directeur المدير

TO / MARYAM NIAMIR-FUELLER
DIRECTOR, GEF COORDINATION OFFICE
UNEP, NAIROBI, KENYA

Endorsement for development of an improved and innovative delivery system for climate resilient livelihoods in Mauritania

In my capacity as GEF Operational Focal Point for Mauritania, I confirm that the above project proposal is (a) in accordance with my government's national priorities including the the priorities identified in the National Adaptation Programme of Action of Mauritania and our commitment to the relevant global environmental conventions and (b) was discussed with relevant stakeholders, including the global environmental conventions focal points.

I am pleased to endorse the preparation of the above Project proposal with support of UNEP. If approved, the proposal will be prepared and implemented by MDEDD-CCPNCC. I request UNEP to provide a copy of the project document before it is submitted to the GEF Secretariat for CEO endorsement.

The total financing from LDCF being requested for this Project is **US\$ 5 584 500**, inclusive of the Project Preparation Grant (PPG), if any, and Agency fees for project cycle management services associated with the total GEF grant. The financing requested for Mauritania is detailed in the table below.

Source of Funds	GEF Agency	Focal Area	Amount (in US dollar)			
			Project Preparation	Project	Fees	TOTAL
LDCF	UNEP	CC	100,000	5 000 000	484 500	5 584 500

Mohamed Yahya LAFDAL
GEF Political and Operational Focal Point

Copy to :
• UNFCCC - NFP

BP : 170- Tél/ Fax : +222 524 31 43 - Rue 21-185- Ksar- Nouakchott – Mauritanie

Appendix 13: Draft procurement plan

National consultants	US\$/per son month	Estimated person months	Tasks to be performed
National specialist in policy-making and adaptation (40 days @ US\$150/day)	3,000	2	<p>The national consultant (NC) with proven expertise in policy development and adaptation to climate change will undertake the following activities:</p> <ul style="list-style-type: none"> i) prepare the National Strategy for Adaptation and organise the validation workshop in collaboration with the CCPNCC and relevant institutions (Activities 1.1.1 and 1.1.2); ii) propose revisions for at least five sectoral strategies and plans to integrate adaptation to climate change into the management of natural resources sustainable development (Activity 1.1.3); and iii) propose revisions for at least four sectoral laws to include adaptation to climate change, according to the National Strategy for Adaptation (Activity 1.1.4). iv) initiate the validation process of the revisions developed for selected strategies, plans and laws under Activities 1.1.3 and 1.1.4 by taking the document through as many steps of the government validation process as possible until project closure (Activity 1.1.5). <p>In addition, the NC will organise one validation workshop for every document produced/revised.</p>
National specialist in local management of natural resources, adaptation and awareness raising (80 days @ US\$150/day)	3,000	4	<p>The NC will:</p> <ul style="list-style-type: none"> i) review and identify gaps in government and community-based organisations in the targeted wilayas to identify where AGLCs need to be established or strengthened (Activity 1.3.1); ii) establish 15 new AGLCs and strengthen the operational framework of 12 existing AGLCs (Activity 1.3.2); iii) Provide training to the 27 AGLC steering committees and local community representatives on EbA interventions for the sustainable management of forest and pastoral resources

			<p>(Activity 1.3.3);</p> <p>iv) collaborate with the national consultant for communication to develop and implement a national awareness-raising campaign on adaptation to climate change and the value of viable ecosystems;</p> <p>v) consult intensively with national stakeholders to develop the awareness-raising campaign (Activity 3.2.1);</p> <p>vi) review the websites currently available to policy- and decision-makers, technical staff and other relevant stakeholders;</p> <p>vii) propose a revised website that improve access to information on adapting to climate change, including documents generated under the project (Activity 3.2.2); and</p> <p>viii) provide technical support for the creation of awareness-raising tools and media (Activity 3.2.1).</p>
National specialist in management of natural resources and adaptation to climate change (30 days @ US\$150/day)	3,000	1.5	<p>The NC will work closely with AGLC members, other rural community members and DREDDs to:</p> <p>i) select AGLCs that will benefit from on-the-ground interventions (Activity 2.1.1);</p> <p>ii) undertake participatory baseline surveys in the management areas of AGLCs established and strengthened under Output 1.3 to determine the level of ecosystem degradation and the productivity of rangelands (Activity 2.1.3);</p> <p>iii) develop and implement at least nine local management plans for forest and pastoral resources (Activity 2.1.5);</p> <p>iv) identify potential sites for replication of successful project activities identified under Activity 3.1.3 (Activity 3.3.1);</p> <p>v) provide training and raise awareness on the use of the successful practices to the AGLCs corresponding to the identified replication sites (Activity 3.3.2); and</p> <p>vi) develop a long-term plan to identify and mobilise funds for the large-scale implementation of best adaptation practices (Activity 3.3.3).</p>
National gender expert (30 days @	3,000	1.5	<p>The NC will identify the gender issues relative to climate change in the AGLCs selected for the implementation of the on-the-ground</p>

US\$150/day)			interventions. Based on this analysis, he will develop recommendations for the project management team to further promote gender equity in the interventions of the project, particularly under Component 2 (Activity 2.1.2).
National expert in geomatics (45 days @ US\$150/day)	3,000	2.3	The NC will produce geo-referenced maps of forest and pastoral resources in the AGLCs selected under Output 2.1 (Activity 2.1.4).
National specialist in pastoralism, agronomics and climate-resilient livelihoods (30 days @ US\$150/day)	3,000	1.5	The NC will: <ul style="list-style-type: none"> i) design and implement set-aside plans for the restoration of 300 hectares of degraded ecosystems, and rainwater retention systems such as rainwater reservoirs, zaï, stone rows and half-moons (Activity 2.2.2); ii) design and implement fixation techniques to prevent sand dune encroachment on 390 hectares of pastoral routes including biological and mechanical fixation (Activity 2.2.3); iii) promote the development of climate-resilient, income-generating activities such as small-scale agriculture and agroforestry (Activity 2.3.2); iv) identify traditional, climate-resilient, non-pastoral livelihood opportunities under the climate change scenario through the consultations of rural communities (Activity 2.3.1); and v) identify the required equipment, and provide local communities with equipment and training for the collection, processing and conservation of natural products to promote the development of the selected traditional, climate-resilient, non-pastoral livelihoods (Activity 2.3.3).
International consultants	US US\$/ person week	Estimated person weeks	Tasks to be performed
National Technical Advisor (NTA)	1,300	10	See Appendix 10.
International	2,500	4	The international consultant (IC) will work closely with DREDDDS,

specialist in EbA (20 days @ US\$500/day; 1 flight @ US\$2500/flight; 15 days in-country @ US\$166/day)			<p>national stakeholders and NGOs to:</p> <ul style="list-style-type: none"> i) provide training to policy- and decision-makers, government technical staff and NGOs including the development of training support such as technical EbA guidelines; ii) provide training and equipment to relevant government staff including the DREDDs and other sectors to collect and analyse data on the efficiency of adaptation practices (Activities 1.2.1, 1.2.2 and 1.2.3); iii) select the natural and agropastoral ecosystems to benefit from the restoration interventions (Activities 2.1.1 to 2.1.4); iv) develop at least nine Local Management Plans for forest and pastoral resources (Activity 2.1.5); and v) implement the restoration activities (Activities 2.2.1 to 2.2.4).
International specialist in fire-resilient green breaks (30 days @ \$500/day; 1 flight @ \$2500/flight; 20 days in-country @ \$166/day)	2,500	6	The IC will develop and implement fire-protection practices – including fire-resilient green breaks – on 20 hectares of rangelands (Activity 2.2.5). This will be done in close collaboration with the management team of the APCBF programme.
International M&E specialist for the baseline assessment	2,500	11	<p>The international consultant will work with the project management team and ensure close collaboration with MEDD and UNEP, the main objective of the consultancy is to establish: i) an updated project logical framework; and ii) baseline information for project and AMAT indicators, against which the project performance and impact will be measured. The consultant is expected to carry out baseline surveys in the 4 wilayas of intervention of the project.</p> <p>The specific tasks of the consultant are to:</p> <ul style="list-style-type: none"> i) assess and briefly describe the status of each of the indicators, and where appropriate, validate or further develop the indicators and targets for each outcome and output included in the project documents according to the adaptation

			<p>results the projects are aiming to generate. Indicators and targets should be SMART (Specific, Measurable, Achievable, Results-based, and Time-bound), results-based and gender-sensitive, and means of verification should be as easy and cost-effective as possible. This will include the following steps:</p> <ul style="list-style-type: none"> ii) collect baseline data for the project indicators established. Baseline values should be fully established for the relevant project indicators on the basis of the data collected. iii) identify data gaps and agree in consultation with UNEP and MHUE on a methodology to fill in the data gaps. The consultant should prepare complete baseline information. Develop a sampling design and a data collection and management protocol. This data sampling protocol should provide a detailed description of the methodology used to obtain values for each indicator so that monitoring of each indicator can be independently replicated by external reviewers – e.g. for Mid Term Reviews, and Terminal evaluations.
International M&E specialist for the mid-term evaluation	2,500	10	<p>The international consultant will:</p> <ul style="list-style-type: none"> i) assess achievements and challenges at mid-point and in particular assess the implementation of planned project outputs and project performance against actual results. The risks to achievement of project outcomes and objectives will also be appraised. ii) focus on identifying the corrective actions needed for the project to achieve maximum impact. Review findings will feed back into project management processes through specific recommendations and 'lessons learned' to date. iii) consider sustainability issues and 'exit strategy'.
International M&E specialist for the final evaluation	2,500	10	<p>The international consultant will assess progress towards achievement of increased resilience/reduced vulnerability, and actions taken to achieve sustainability and replicability. To do so, the consultant will:</p>

		<ul style="list-style-type: none"> i) systematically assess and disclose levels of project or programme accomplishments and will make overall judgments about the extent to which the intended and unintended results were achieved; ii) organize and synthesize experiences and lessons that may help improve the selection, design, implementation, and evaluation of future adaptation projects; iii) identify how project achievements contribute to the mandate of UNEP and GEF; iv) provide feedback into the decision-making process to improve ongoing and future projects, programmes, and policies; and v) assess the relevance, effectiveness, and efficiency of project design, objectives, and performance.
Equipment and materials	Total	Notes
Computer equipment	14,000	Monitors, processors, cables, software packages, printers etc.
Office supplies	13,000	Stationery, office furniture, etc.
Equipment for data collection and analysis	105,000	GPS devices, cameras, species identification books, sampling material and apparatus to measure vegetation indices and water quality
Awareness-raising equipment	119,000	Pamphlets, design materials, presentation materials.
Support for the process of creation of each AGLC	33,997	Projectors and screens, advertising boards. Whiteboards, raw material such as felt pens and paper for awareness-raising exercises
Establishment of tree nurseries for the planting activities	341,188	Seedlings, containers, shading equipment and construction material
Restoration of watersheds including water conservation methods	247,500	Seedlings, seeds, material for planting, transport and maintenance
Establishment of tree nurseries to be planted in 300 hectares of	120,000	Seedlings, containers, shading equipment and construction material

set-aside pastoral lands		
Sowing on 100 ha of set-aside rangeland	20,000	Seeds, nursery materials, planting equipment
Fencing 300 ha of rangeland including the development of a rotation system for setting-aside	510,000	Fencing material, digging equipment
Establishment of tree nurseries to be planted in 390 ha of drifting dunes	120,000	Seedlings, containers, shading equipment and construction material
Dune fixation with stick and trees	546,000	Wooden stakes, digging equipment
Restoration of listed forests including water conservation methods	315,000	Seedlings, seeds, material for planting, transport and maintenance
Restoration of Acacia woodlands including water conservation methods	399,000	Seedlings, seeds, material for planting, transport and maintenance
Establishment of tree nurseries for the fire-resilient green breaks	50,000	Seedlings, containers, shading equipment and construction material
Plantation of fire-resilient green breaks	22,000	Seedlings, planting equipment
Provide the required equipment to adopt agropastoral practices that are climate-resilient	507,900	Seedlings, containers, shading equipment, construction material and irrigation equipment
Provide the required equipment to adopt climate-resilient livelihoods based on NTFPs	270,000	Equipment to collect, process and conserve NTFPs such as an oil press, stocking material, conservation material, drying material, a mill and weighing scales.
Data collection and analysis equipment	40,000	GPS devices, cameras, species identification books, sampling material and apparatus to measure vegetation indices and water

		quality
Archiving equipment	55,827	Hard drives, flash disks, CDs, archiving software, an appropriate IT system and contribution towards the establishment of a consulting room, including the purchase of books.
Purchasing vehicles	85,858	Two vehicles (duty free) and necessary licenses/permits

Appendix 14: Tracking Tools for Climate Change Adaptation Projects

Attached as a separate file.

Appendix 15: Site selection criteria and process

The PIF initially focused on seven wilayas in the southern part of the country, which have the largest population density and greatest agropastoral productivity in Mauritania. Therefore, the effects of climate change in this area will result in considerable negative socio-economic effects. During the PPG phase, the number of targeted wilayas was reduced to four to limit duplication with the ACCMR project initiated in 2014 (see Section 2.6). The latter project is focused on increasing drought resilience in the wilayas of Brakna and Assaba (except the Moughataa of Kankossa). It was subsequently decided by the national stakeholders that it would be preferable to further reduce the number of targeted wilayas – thereby removing Gorgol and Trarza – from the targeted wilayas to focus on: (i) a smaller number of wilayas to facilitate implementation; and (ii) wetland areas that require to be sustainably managed as a priority under climate change. Consequently, the wilayas to be targeted by the LDCF project includes: (i) Guidimaka; (ii) Assaba; (iii) Hodh El Gharbi; and (iv) Hodh El Chargui.

GoM stakeholders advised against specific site selection at the level of communes during the pre-implementation PPG phase. Consequently, the project implementation phase will prioritise the identification of the most vulnerable communes in areas in the targeted wilayas, including those communities which have not benefited from the interventions of other on-going projects. The following criteria will be used to select sites that will benefit from on-the-ground interventions:

- Vulnerability of local communities to the effects of climate change, particularly sand dune encroachment, bushfires and reduced pastoral resources;
- Vulnerability of degraded ecosystems to the effects of climate change and human-induced threats;
- Strong potential for restoration interventions to increase the generation of ecosystem goods and services and to increase the resilience of local communities to climate change;
- Sufficient availability of surface and ground water to implement the project activities and the presence of water-focused projects such as REVUWI (see Section 2.7);
- Strong potential to replicate the interventions in similar and nearby sites;
- Willingness of communities in and near to intervention sites to take ownership of the project;
- Poverty level of communities in and near to intervention sites; and
- Reliance of communities in and near to intervention sites on livelihoods which are particularly vulnerable to climate change.

In addition, priority will be given to:

- Intervention sites of the PNIDDLE project;
- Intervention sites of the APCBF project;
- Ecosystems in close proximity to the biodiverse cross-border area of the Senegal river; and
- Intervention sites that did not benefit from the ProGRN project (particularly in Guidimaka).

Site selection will be undertaken at three levels (see Appendix 16):

- selection of the ecosystems and corresponding rural communities to be prioritised by the activities of the project under Output 2.2 and 2.3;

- identification of the communes that will benefit from the project according to the selected ecosystems, specifically a group of one to three neighbouring communes per wilaya to obtain a maximum of three intervention areas for the project; and
- Delineation of MAs to cover the selected ecosystems within each group of selected communes¹⁵³.

After the identification of priority ecosystems, the selection of a group of communes within each wilaya (with the exception of Assaba, where the Moughataa of Kankossa has already been selected) will be undertaken with the staff of DREDDs, the Wali and other relevant stakeholders, using the criteria listed above. This selection will be discussed during a meeting with relevant stakeholders from the MEDD, MA, ME and MHA, including the focal point for climate change in each ministry, at the inception of the project¹⁵⁴. Thereafter, communal authorities will be consulted to assess whether the proposed communes satisfy the selection criteria. Through this consultation, the project will select one group of communes per wilaya (including all the communes of Kankossa bordering Mali) to participate in the project. Communal authorities, GLCs, other community members and NGOs will then be consulted to identify the sites to be targeted by the project. The corresponding MAs will be created/amended to include the selected intervention sites. In addition, Activity 3.1.2 of the LDCF project will be implemented as a priority during the inception phase to inform the selection process and prevent duplication.

An excel spreadsheet which all the selection criteria will be prepared for each step of the selection process and each site will be formally rated using these templates to ensure transparency of the selection system. Additionally, the PSC will review the scoring tables and validated the decision made through each step of the selection process.

¹⁵³ This will be followed by the establishment and strengthening of the corresponding AGLCs.

¹⁵⁴ This approach will result in the site selection process benefitting from the experience of each sector and ensure that the duplication of interventions is prevented.

Appendix 16: Institutional and geographical organisation for the implementation of the project.

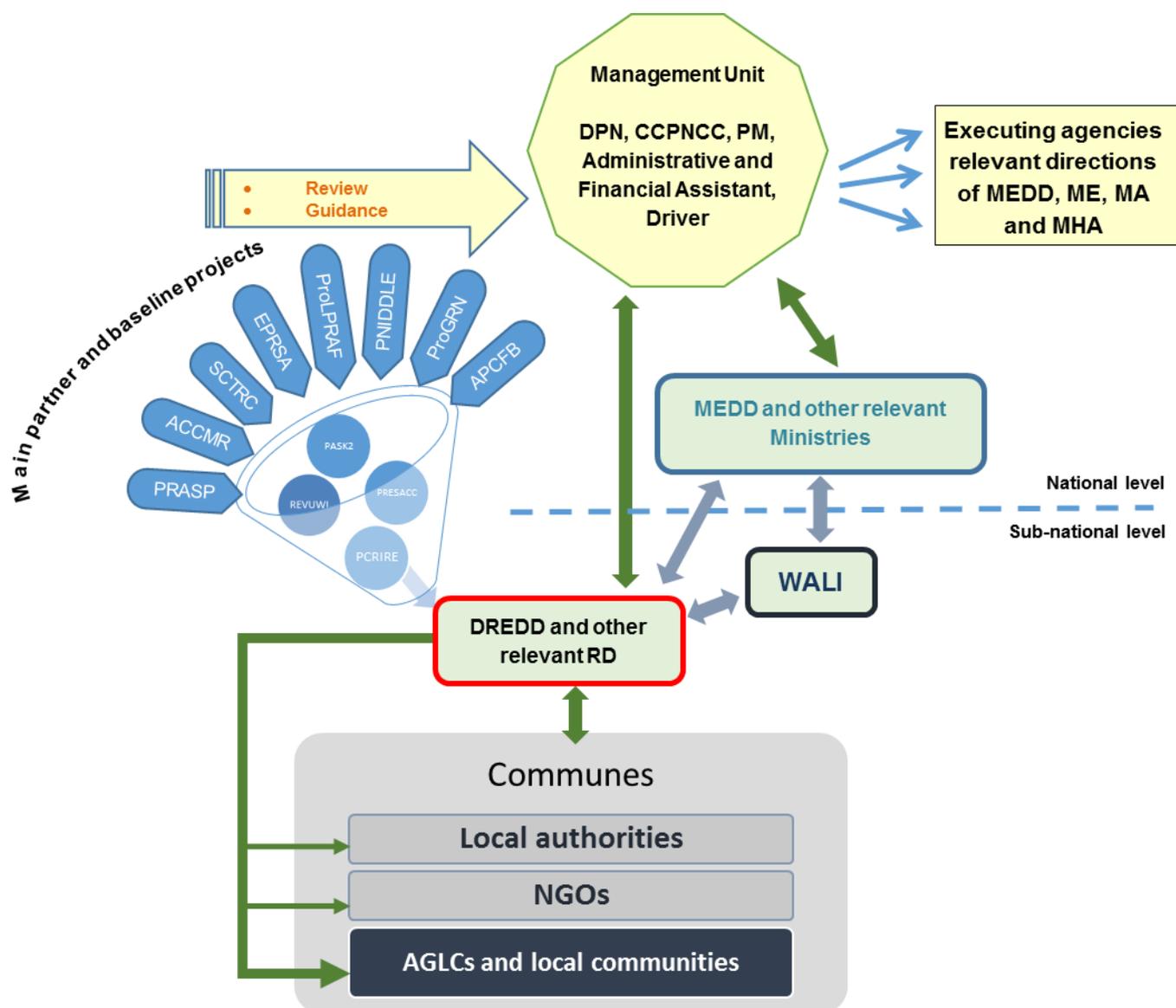


Figure 4. Institutional structures relevant to the project at the national, local and communal level.

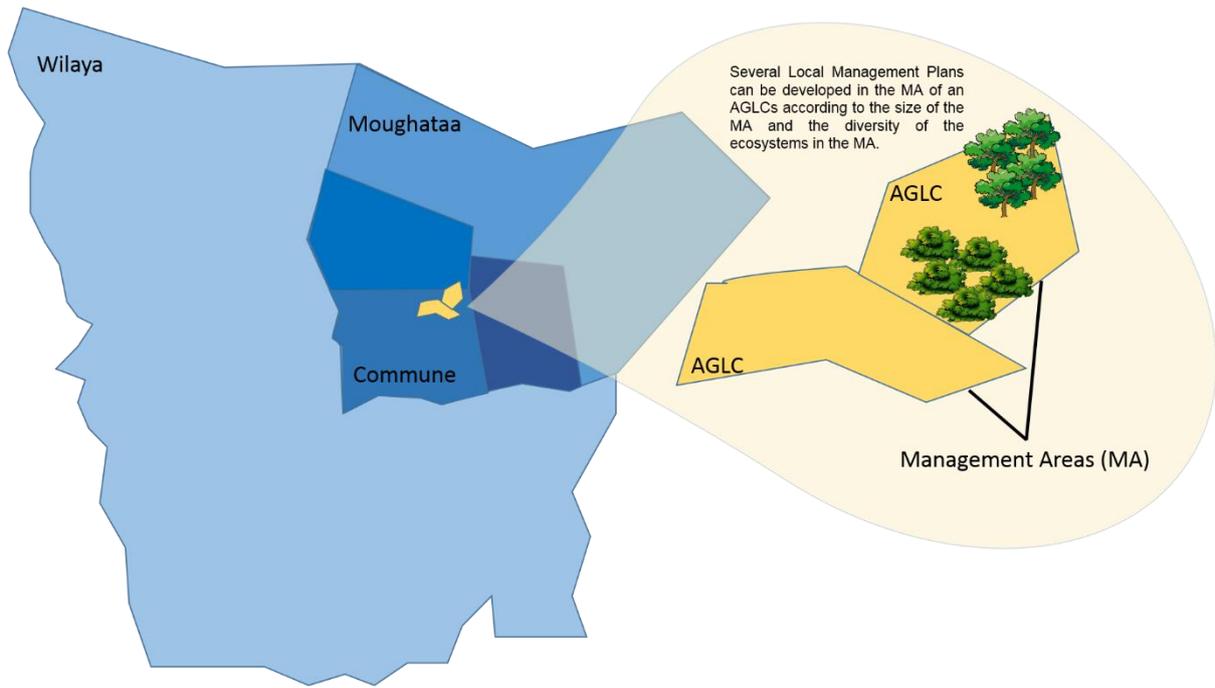


Figure 5. Diagram showing the schematic structure of AGLCs and MAs within communes.

Appendix 17: Environmental and Social Safeguards checklist

Please note that as part of the GEFs evolving Fiduciary Standards that Implementing Agencies have to meet is the need to address 'Environmental and Social Safeguards'.

To address this requirement UNEP-GEF have developed this checklist with the following guidance:

1. Initially filled in during concept development to help guide in the identification of possible risks and activities that will need to be included in the project design.
2. A completed checklist should accompany the PIF
3. Check list reviewed during PPG phase and updated as required
4. Final check list submitted with Project Package clearly showing what activities are being undertaken to address issues identified

Project Title:	Development of an improved and innovative management system for sustainable climate-resilient livelihoods in Mauritania.		
GEF project ID and UNEP ID/IMIS Number	1159	Version of checklist	One
Project status (preparation, implementation, MTE/MTR, TE)	Preparation	Date of this version:	March 2015
Checklist prepared by (Name, Title, and Institution)	Nina Raasakka, Task Manager, GEF CCAU, DEPI UNEP.		

In completing the checklist both short- and long-term impacts shall be considered.

Section A: Project location:

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	Yes/No/N.A	Comment/explanation
Is the project area in or close to a		
- densely populated area	No	The project will be implemented in the Sahelian Acacia Savanna Ecoregion near the Senegal River valley which has a population density of around 10-20 people per km ² . This is more densely populated than the majority of Mauritania that borders the western Sahara desert, but is not as densely populated as the capital, Nouakchott. At least 300 households will be targeted by the on-the-ground interventions of the project. With an average of 6.3 people per household in the project area, at least 1,800 individuals will benefit directly from Component 2. No negative impact is anticipated as the project's interventions aim to build adaptive capacity of national and local government by raising

		awareness on climate risks and rehabilitated ecosystems.
- cultural heritage site	No	
- protected area	No	
- wetland	No	
- mangrove	No	
- estuarine	No	
- buffer zone of protected area	No	
- special area for protection of biodiversity	No	
- Will project require temporary or permanent support facilities?	No	
<i>If the project is anticipated to impact any of the above areas an Environmental Survey will be needed to determine if the project is in conflict with the protection of the area or if it will cause significant disturbance to the area.</i>		

Section B: Environmental impacts, i.e.

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	Yes/No/N.A.	Comment/explanation
- Are ecosystems related to project fragile or degraded?	Yes	The Sahelian Acacia Savanna Ecoregion is considered fragile and is already degraded. Provisioning of ecosystem goods and services is suboptimal. In addition, the current level of degradation is expected to increase with current and future effects of climate change. Consequently, these ecosystems are targeted for rehabilitation and resilience-building under the project.
- Will project cause any loss of precious ecology, ecological, and economic functions due to construction of infrastructure?	No	No infrastructure likely to cause any ecological or economic damages will be built under the project.
- Will project cause impairment of ecological opportunities?	No	This project seeks to increase ecological opportunities.
- Will project cause increase in peak and flood flows? (including from temporary or permanent waste waters)	No	The project will contribute to reduced risk of flooding through planting trees in watersheds.
- Will project cause air, soil or water pollution?	No	No pollution will be generated by the project activities.
- Will project cause soil erosion and siltation?	No	This project will lead to improved soil restoration techniques implemented by local communities.
- Will project cause increased waste production?	No	The project activities will not cause any increase in waste production.
- Will project cause hazardous Waste production?	No	The project activities will not generate any hazardous waste.
- Will project cause threat to local ecosystems due to invasive species?	No	For all planting activities, priority will be given to indigenous species. After indigenous species, priority will be given to resident species. If further species are required, only species that grow in neighbouring countries, in similar

		conditions and do not present an invasion risk will be considered. An in-depth study of invasion risk will be undertaken for each non-indigenous species that is considered for planting.
- Will project cause Greenhouse Gas Emissions?	No	Under the restoration activities of Output 2.2, at least 400,000 trees will be planted. In addition, the construction of green firebreaks will reduce the loss of trees resulting from bushfires. Both of these outputs will reduce the atmospheric concentration of greenhouse gases.
- Other environmental issues, e.g. noise and traffic	No	
<i>Only if it can be carefully justified that any negative impact from the project can be avoided or mitigated satisfactorily both in the short and long-term, can the project go ahead.</i>		

Section C: Social impacts

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	Yes/No/N.A.	Comment/explanation
- Does the project respect internationally proclaimed human rights including dignity, cultural property and uniqueness and rights of indigenous people?	Yes	Consultations with national and provincial government, NGOs and CBOs were held during PPG phase and will continue to ensure alignment with Mauritania's social goals and internationally proclaimed human rights in accordance with UN guidelines.
- Are property rights on resources such as land tenure recognized by the existing laws in affected countries?	Yes	According to the revised Forestry Law, the management of natural resources is the responsibility of local authorities who can delegate it to AGLCs if AGLCs request this mandate. The project will apply this law through organising the project beneficiaries into AGLCs and supporting them in the sustainable management of these resources.
- Will the project cause social problems and conflicts related to land tenure and access to resources?	No	No social problems or conflicts are expected. Firstly, the AGLC system will ensure that all members benefit from the project interventions rather than specific individuals. Secondly, the distribution of material for the development of climate-resilient livelihoods will be undertaken in a transparent manner to ensure widespread understanding of the selection criteria. Thirdly, decision-making for on-the-ground interventions will be undertaken in participatory meetings. If any conflict exists, it is expected to arise during these meetings where solutions will be provided by the management team.
- Does the project incorporate measures to allow affected stakeholders' information and consultation?	Yes	Stakeholders' vulnerability is a major criterion for the selection of project beneficiaries (see Appendix 8.15). All on-the-ground activities will be implemented by local communities. As part of these interventions, local communities will be trained and a participatory approach to

		decision-making will be used. In addition, a national awareness-raising campaign on the effects of climate change, EbA and climate-resilient practices will be undertaken.
- Will the project affect the state of the targeted country's institutional context?	Yes	The focus of Component 1 is the building of institutional and technical capacity in national and local government to assist local communities in the implementation of EbA. This increased capacity, in combination with the establishment of a SNA, the revision of policies, strategies and plans and the development of an upscaling strategy will promote the replication and maintenance of adaptation interventions to build climate-resilient livelihoods, based on an EbA approach. Therefore, the project will be beneficial to Mauritania's institutional context.
- Will the project cause change to beneficial uses of land or resources? (incl. loss of downstream beneficial uses (water supply or fisheries)?	No	The project is designed to enhance ecosystem services and access to resources. This includes increasing water infiltration and reducing erosion.
- Will the project cause technology or land use modification that may change present social and economic activities?	Yes	The project seeks to promote income-generating activities in rangelands that are climate-resilient. Consequently, economic activities are expected to be partly modified. This will happen during the implementation phase.
- Will the project cause dislocation or involuntary resettlement of people?	No	No translocation of people is required for the project activities.
- Will the project cause uncontrolled in-migration (short- and long-term) with opening of roads to areas and possible overloading of social infrastructure?	No	No new roads will be built under the interventions of the project and no movement of people is expected.
- Will the project cause increased local or regional unemployment?	No	No long-term change in formal employment is anticipated to occur as a result of project activities. Community members will be employed for short periods to achieve specific project objectives where necessary. Livelihoods of local communities will be developed in project sites to improve community resilience to the effects of climate change.
- Does the project include measures to avoid forced or child labour?	Yes	The project conforms to national and international guidelines and laws regarding forced labour. All required labour (short-term employment only) will be provided through community engagement and remunerated in accordance with national laws.
- Does the project include measures to ensure a safe and	Yes	The project conforms to all national and international guidelines and laws regarding

healthy working environment for workers employed as part of the project?		health and safety for workers employed as part of the project. Community training for the implementation of on-the-ground interventions will ensure that health and safety regulations are understood and adhered to.
- Will the project cause impairment of recreational opportunities?	No	The planting of species for NTFPs will promote recreational opportunities.
- Will the project cause impairment of indigenous people's livelihoods or belief systems?	No	The project implementations will be undertaken after stakeholder consultation and in accordance with local belief systems. Livelihoods of people in the intervention sites will be improve by the project's activities.
- Will the project cause disproportionate impact to women or other disadvantaged or vulnerable groups?	No	The project will help reduce the exposure of climate vulnerable groups, including women, youth and people reliant on small-scale agriculture and herding to climate risks.
- Will the project involve and or be complicit in the alteration, damage or removal of any critical cultural heritage?	No	
- Does the project include measures to avoid corruption?	Yes	All project disbursements will be monitored by UNEP administrative structures and regular reporting by the project management team will ensure financial and administrative transparency is maintained throughout the project's lifetime.
<i>Only if it can be carefully justified that any negative impact from the project can be avoided or mitigated satisfactorily both in the short and long-term, can the project go ahead.</i>		

Section D: Other considerations

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	Yes/No/N.A.	Comment/explanation
- Does national regulation in affected country require EIA and/or ESIA for this type of activity?	No	There is not a sufficiently large structural component to this project to trigger an EIA.
- Is there sufficient national capacity to ensure a sound implementation of EIA and/or SIA requirements present in affected country?	N/A	
- Is the project addressing issues, which are already addressed by other alternative approaches and projects?	No	The APCBF programme focuses on the reduced frequency and extent of bushfires. However, this project has not considered the effects of climate change or the use of EbA measures to address these effects. The ACCMR project implements similar activities to the project to increase drought-resilience through the sustainable management of natural resources. However as activities of

		the ACCMR project and the project will be implemented in different wilayas, opportunities for synergy and complementarity will arise.
- Will the project components generate or contribute to cumulative or long-term environmental or social impacts?	Yes	The project seeks to increase adaptive capacity in rangelands under the conditions of climate change. This will result in positive social and environmental impacts.
- Is it possible to isolate the impact from this project to monitor E&S impact?	Yes	Indicators were developed during the PPG phase to monitor the E&S effects of the project. Additional indicators will be developed if required during the baseline study to ensure comprehensive monitoring of the project's progress.

Appendix 18: UNEP comparative advantage

UNEP is experienced in the implementation of projects that promote adaptation to climate change at global, regional and national levels. Through the implementation of these projects, UNEP develops innovative solutions for national governments and local communities to adapt to the current and predicted effects of climate change in an environmentally sound manner. This is achieved by: i) providing methods and tools to support decision-making; ii) addressing barriers to implementation; iii) testing and demonstrating proposed solutions; and iv) enhancing climate resilience by restoring valuable ecosystems that are vulnerable to climate change. UNEP is also assisting LDCs and other developing countries to implement the identified NAPA priorities and the National Communications and Technology Needs Assessments. UNEP has accumulated a substantial knowledge base through its experience of implementing previous and ongoing projects. This experience is globally recognised and includes community-based and natural resource management projects. The agency will draw upon this experience during the implementation of the project. UNEP also has strong technical and scientific capacity in the field of climate change. Specifically, the agency's work on climate change adaptation focuses on three main areas: i) Science and Assessments; ii) Knowledge and Policy Support; and iii) Building the Resilience of Ecosystems for Adaptation. More recently, as mandated by its Governing Council, UNEP has initiated the EbA¹⁵⁵ Flagship Programme which focuses on adaptation using an EbA approach.

UNEP's EbA Flagship Programme represents a shift in focus in the realm of adaptation to climate change. In 2011, this programme was commended at the 17th meeting of the Conference of the Parties to the UNFCCC (CoP17). It has also been endorsed by the IUCN, the EC and GEF through the Operational Guidelines on "Ecosystem-Based Approaches to Adaptation"¹⁵⁶. UNEP was therefore an important institution contributing towards a definition of EbA for the UNFCCC negotiations. The EbA approach is multidisciplinary and involves managing ecosystems to enhance their resilience. The approach uses ecosystem services to promote climate change adaptation and disaster risk management. In addition, it provides a platform for engaging a broad range of stakeholders and sectors in the adaptation process. The adaptation interventions of the project are strongly aligned with UNEP's current work on climate change.

The GEF Council paper (C.31/15) outlines the comparative advantages of UNEP. These include: i) providing GEF with the best available science and knowledge upon which to base investments; ii) a proof-of-concept and provision of expertise on the environment and climate change. UNEP also has considerable experience in piloting successful innovative approaches and the implementation of adaptive learning. The project builds upon this comparative advantage. In addition, GEF Council paper (C.28/18) mentions UNEP's comparative advantage of "developing and using climate information to effect changes in relevant sectoral policies based on climate science" which is an area that is addressed by the project.

¹⁵⁵Participants at COP 16 as well as the IUCN have noted that UNEP is an appropriate implementing agency in developing countries and for further developing the EbA concept. At the 2010 United Nations Climate Change Conference (COP 16) the EbA approach adopted by UNEP was noted as vital in playing a role in integrating EbA into the adaptation and development strategies of developing countries. It was also noted at this COP that investing in EbA was one of the most effective ways to address the multiple challenges of vulnerability and poverty. (As reported in the article 'Inspiring action towards a low carbon, climate resilient future'). Available at: http://www.cc2010.mx/en/press-center/press-resources/news_2010112340160.htm.

¹⁵⁶ GEF. 2012. Operational guidelines on Ecosystem-based approaches to Adaptation. Washington, D.C.

UNEP has undertaken numerous projects where innovative solutions and methodologies are demonstrated at regional, national and local levels. All such projects comply with the mandate from the UNEP Governing Council, as detailed in the Bali Strategic Plan for Technology Support and Capacity-building.

The project is consistent with UNEP additional work in the environmental sector. The work is mandated by the UNEP Governing Council and based on the UNEP Climate Change Strategy and Drylands Strategy. It also builds on UNEP's Water and Policy Strategy and Integrated Water Resources Management (IWRM) to contribute to environmental sustainability in the management of water resources. The majority of the infrastructure and restoration interventions of the project will be linked to, and benefit from the Green Economy paradigm led by UNEP. The project will also benefit from ongoing work within UNEP that analyses and documents the ecological foundation of food security. In addition, the project provides synergies with various sub-programmes of the UN, including: i) conflicts and disasters, where the objective is to encourage the country make a green transition towards the sustainable use of natural resources and reduced environmental degradation; ii) the management of ecosystems, taking into account the sustainable management of land, water and biological resources to preserve biodiversity; iii) environmental governance to support the green transition to a sustainable environment; and iv) measuring the state of the environment.

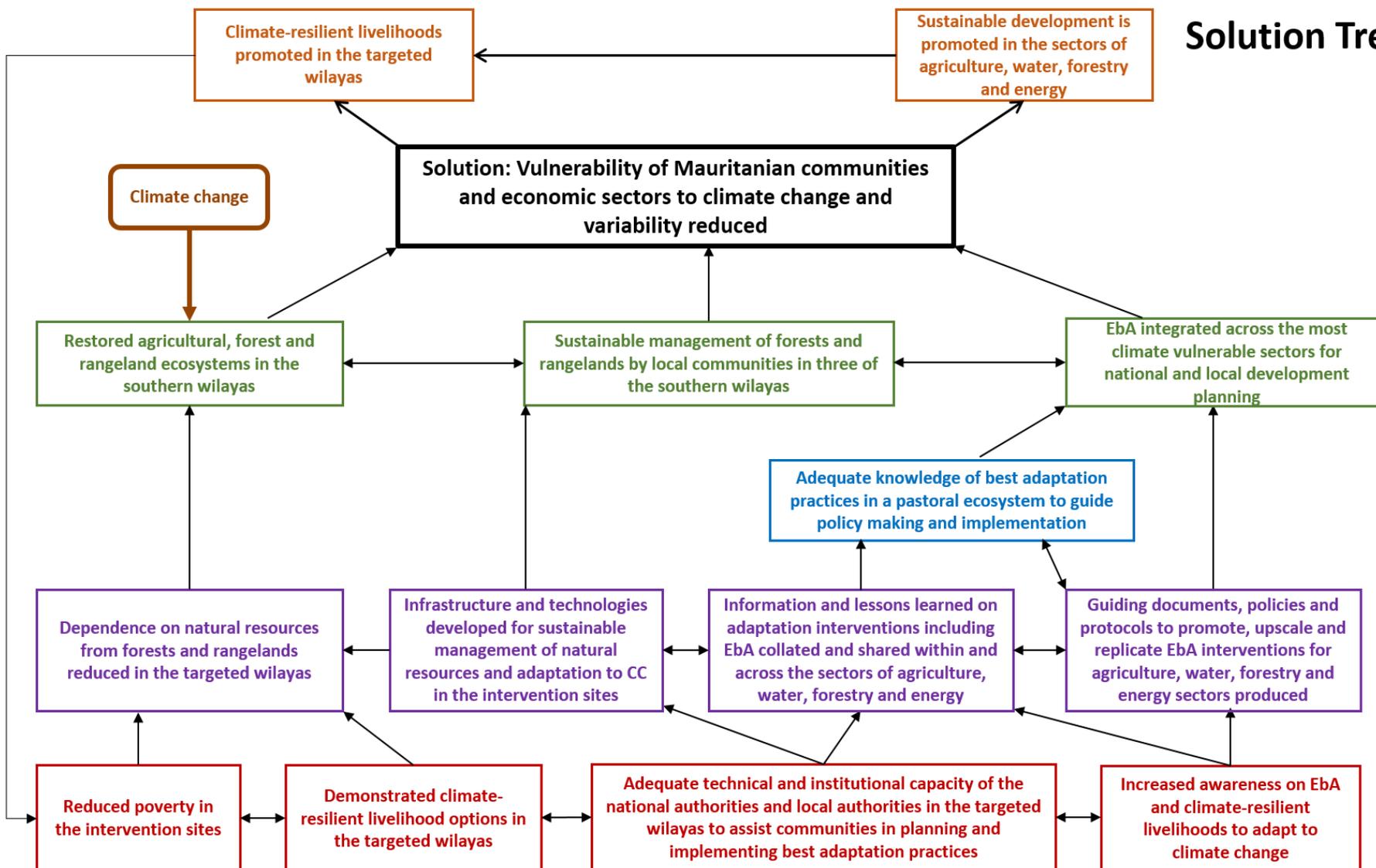
UNEP is uniquely positioned to undertake this innovative environmental work as it operates at the forefront of efforts to address climate change. In terms of adaptation, the activities of UNEP emphasise the integration of planning, financing and the profitability of the adaptation measures and the national development process based on scientific evidence, climate change impacts and local context. Importantly, UNEP differs from other agencies (e.g. FAO, IFAD, WB) in that its core business is providing technical advice on managing environments in a sustainable manner. This gives UNEP a comparative advantage in implementing the project. There are multiple factors affecting ecosystems and managing this complexity requires a dedicated focus as well as in-depth ecological expertise. Ecosystem restoration as a means for adaptation is particularly challenging in this regard (see below). UNEP can provide both the requisite focus and scientific expertise to meet this challenge.

UNEP has facilitated regional partnerships that produce project outputs of great quality in a cost-effective manner. This can be attributed to UNEP's collective capacity and experience. While not benefitting from in-country presence, UNEP works using a "direct" implementation modality in Africa with regional coordination being undertaken by its Nairobi office and assistance being provided by its Addis Ababa office. Expert technical advisors are delegated to a specific country or project to aid implementation.

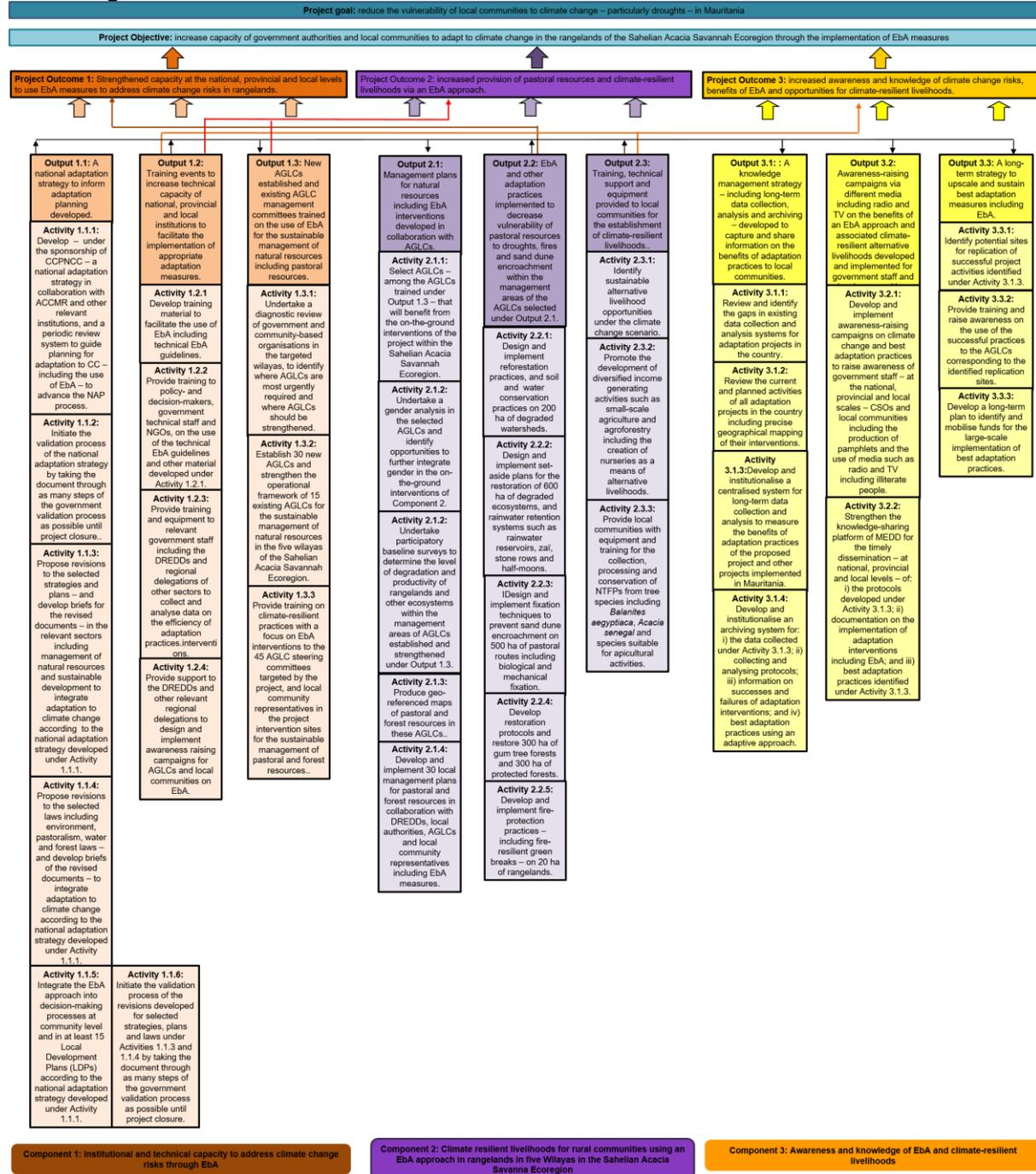
Collaboration with the UN Country Team in Mauritania is desirable during the implementation of the project. UNEP's expertise and support will promote the inclusion of the natural environment in the UN Country Team's work, which will increase the long-term benefits of the project to the environment.

UNEP has a well-established relationship with the GoM and has previously supported the MEDD to implement projects related to climate change adaptation including the SCTRC project. Ongoing relationships have been developed with the MEDD. Partnerships also include international organisations such as the UNDP where collaboration led to the initiation of the Poverty-Environment Initiative country programme in 2005. Finally, UNEP has a history of working with the GoM to address the effects of climate change. This includes national communications to the UNFCCC and the development of the NAPA.

Solution Tree



Appendix 20: Linkage between LDCF project Components, Outcomes and Outputs including related activities.



Appendix 21: Inception and validation workshops

For consultant reports, please see separate document, entitled "Appendix 21. Supplementary material: National Consultant reports"

A21.1 Inception workshop

PROGRAMME DES NATIONS UNIES
L'ENVIRONNEMENT
POUR L'ENVIRONNEMENT
DURABLE

MINISTERE DE POUR
ET DU DEVELOPPEMENT

CELLULE DE COORDINATION DU PROGRAMME NATIONAL SUR LES CHANGEMENTS CLIMATIQUES - CCPNCC

ATELIER DE LANCEMENT DE LA FORMULATION

Du

PROJET : Développement d'un système amélioré et innovant pour la mise en place de
moyens de subsistance résistant au changement climatique en Mauritanie -
DSAI

COMPTE RENDU

**CONCLAVE AVEC LES DELEGUES REGIONAUX DREDD
POUR LE DEMARRAGE DE LA FORMULATION
DIMANCHE 17 AOUT 2014**

ET

**ATELIER DE LANCEMENT TENU LE 20 AOUT 2014
DANS LA SALLE DE REUNION DU MEDD :**

CONCLAVE AVEC LES DELEGUES REGIONAUX DREDD POUR LE DEMARRAGE DE LA FORMULATION

Dimanche 17 août 2014

Ce conclave a été organisé à cette date par le Coordonnateur de la CCPNCC en marge de la Conférence ministérielle des Etats membres de la Grande Muraille Verte qui doit démarrer le 18 août 2014 et à laquelle l'ensemble des délégués régionaux doivent assister. La tenue de ce conclave à cette date se justifiait par : (i) la prise en charge partagée des déplacements des délégués régionaux de l'intérieur du pays vers Nouakchott par les organisateurs de la Conférence ministérielle et du Projet PNUE/FEM pour réduire les coûts à chacun des projets ; (ii) d'offrir l'opportunité à la Team Leader de rencontrer tous les délégués régionaux avant sa visite de terrain prévue pour le Trarza.

Quant à son déroulement, le Coordonnateur de la CCPNCC a ouvert la session par la présentation de l'objectif du projet avant de passer la parole à l'équipe de formulation que dirige Melle Lucille Palazy. Cette dernière a à son tour davantage explicité les contours de cette formulation et ses attentes. Elle a invité les délégués à partager avec l'équipe leurs préoccupations portant sur les moyens humains, matériels et financiers, et la nature et difficultés ou contraintes rencontrées dans l'exercice de leurs fonctions de délégués du MEDD.

Les participants ont chacun exposé la situation de leurs délégations. Les sujets traités comprennent :

- Les moyens financiers jugés très insuffisants et limités à la délégation régionale ;
- Le personnel d'appui de la délégation régionale insuffisant de façon notoire ; un nouveau recrutement vient d'être effectué il y a un an et son déploiement est en cours ;
- Les moyens et équipements de la délégation régionale sont inexistantes ; une annonce est faite par le projet PERSACC en démarrage sur l'équipement de chaque délégation régionale d'un véhicule et des matériels informatiques ; l'inventaire n'est pas connu à ce jour.

Les besoins, contraintes et difficultés sont nombreux et différents selon les wilayas. La RISE (nationale et régionale) est donnée comme principale référence sur l'état des besoins et les contraintes.

ATELIER DE LANCEMENT AVEC LES PRINCIPAUX PARTENAIRES LE 20 AOUT 2014

La cérémonie d'ouverture de cet atelier a été marquée par un mot de bienvenue aux participants prononcé par M. Sidi Mohamed Ould El Wavi, Coordonnateur de la CCPNCC président de séance, avant d'introduire le projet à l'étude en partenariat avec le PNUE et au sujet duquel une équipe a été choisie dirigée par Lucille Palazy. Cette dernière a intervenu juste après pour présenter la démarche qui sera suivie par l'équipe et qui doit aboutir sur une requête adressée au Directeur Général du FEM. Ainsi, les points de compréhension de la méthodologie et des concepts clés, et critères suivants ont fait l'objet d'une présentation détaillée suivie du cadre logique préliminaire.

A. REGLES DE BASE POUR LES PROJETS LDCF (présenté par Lucille)

- Un processus participatif impliquant les parties prenantes, en particulier les communautés locales;
- Une approche multidisciplinaire;

- Une approche complémentaire, qui s'appuie sur des projets existants (lignes de base) et collabore avec d'autres projets d'adaptation;
- Développement durable;
- Egalité des sexes;
- Une approche spécifique au pays;
- Une gestion intelligente de l'environnement;
- Bon rapport coût-bénéfices;
- Simplicité; et
- Flexibilité de la procédure qui dépend du contexte du pays concerné.

Les concepts clés: additionnalité, adaptation fondée sur les écosystèmes

- **Utilisation de l'écosystème comme base pour l'adaptation** au changement climatique.
- **L'adaptation fondée sur les écosystèmes (EbA)** est définie comme "l'utilisation de la biodiversité et des services écosystémiques comme partie intégrante d'une stratégie d'adaptation aux changements climatiques pour aider les communautés à s'adapter aux effets néfastes du climat". Ainsi, l'EbA :
 - **Augmente la résilience**
 - **Fournit une défense physique**
 - **Maximise les bénéfices mutuels**
- L'approche EbA comprend en général la **restauration des écosystèmes**.

B. PROCESSUS DE DEVELOPPEMENT DU PROJET (présenté par Lucille)

Objectifs de l'atelier de lancement

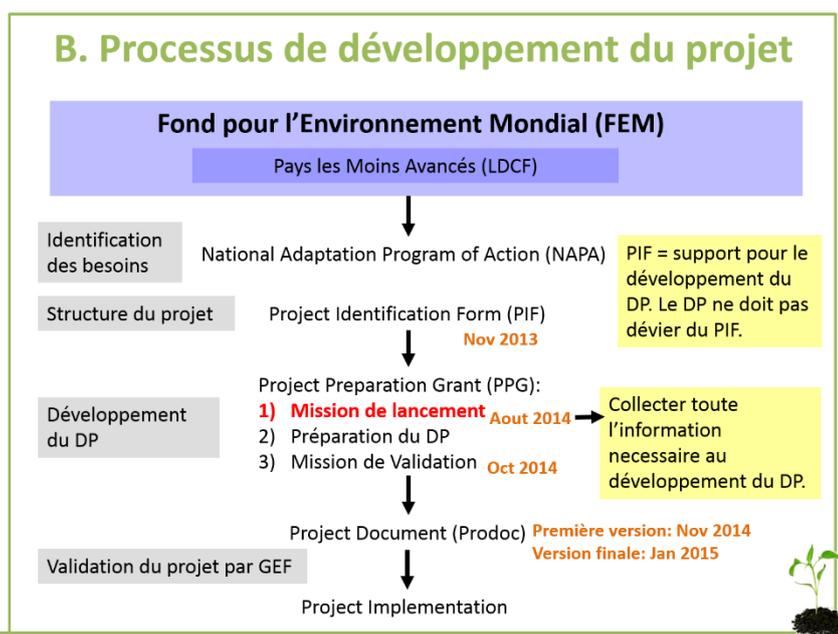
- Une compréhension générale sur les objectifs, résultats et produits du projet
- S'accorder sur:
 - Une liste de sites d'intervention potentiels (d'après les critères de sélection PNUE)
 - La liste des principales interventions à mettre en œuvre par le projet
 - Utiliser l'expérience des parties prenantes dans la mise en œuvre d'interventions similaires (succès, échecs, leçons apprises...)
- Sélection de deux ou trois projets « ligne de base » (d'après les critères de sélection PNUE) et la collecte de toute l'information nécessaire sur les activités de ces projets et opportunités de complémentarité
- S'accorder sur la liste des projets partenaires
- S'accorder sur le plan d'engagement des parties prenantes dans la mise en œuvre du projet

Principaux acteurs pour la mise en œuvre du projet

- Bailleurs de fonds (FEM): sélection les projets et fourni les fonds
- Agence de mise en œuvre (PNUE)
- Agence d'exécution (MEDD) – Focal point: M. El Wavi
- Coordinateur du projet (MEDD): dirige l'équipe du projet, est en charge de la gestion du projet pour les activités soient réalisées avec succès et en respectant le calendrier d'exécution.
- Conseiller Technique Principal: apporte un soutien technique au coordinateur pour la mise en œuvre du projet.

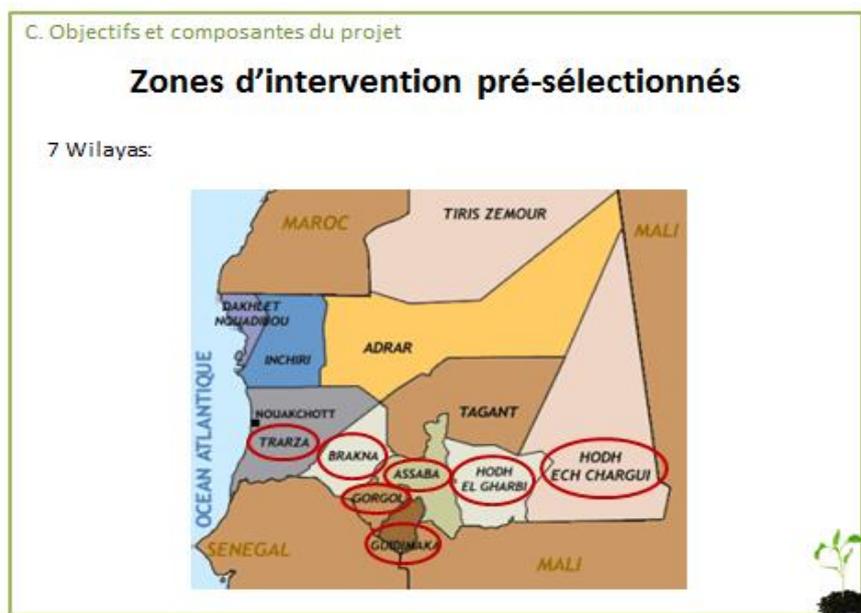
- Comité de pilotage: prend les décisions relatives aux problèmes gestionnaires et techniques pour le projet, s'assure de la bonne orientation du projet, aide à surmonter les barrières pour remplir les objectifs initiaux et respecter les dates limites (se réunit au minimum deux fois par an).

Processus de développement du projet (date indicatives)



C. OBJECTIFS DU PROJET (présenté par Lucille)

- Objectif général du projet: Augmenter la capacité d'adaptation aux changements climatiques en Mauritanie.
- Objectif spécifique: Augmenter la résistance des communautés locale dans les zones pastorales de l'écorégion des savanes à Acacia en renforçant la capacité technique et institutionnelle du gouvernement national et local pour mettre en place des interventions EbA.
- Budget du projet: 5,000,000 USD
- Zones d'intervention



Critères de sélection UNEP/GEF

Disponibilité de données sur **la situation de base** dans le site
 Forte **vulnérabilité des communautés locales** aux effets du changement climatique
 Forte **vulnérabilité des écosystèmes** aux effets du changement climatique
 Forte dégradation des écosystèmes
 Fort potentiel pour que la restauration des écosystèmes réduisent les effets néfastes des catastrophes climatiques
 Fort potentiel pour augmenter la productivité des pratiques traditionnelles
 Fort potentiel pour **complémenter/étendre** les interventions en cours
 Disponibilité de lois et règlements
Volonté de la communauté à s'approprier le projet
 Pauvreté des communautés
Genres et groupes vulnérables (famille dirigée par des femmes seules)
 Proximité des parcs nationaux et potentiel pour bénéficier à la **biodiversité**

Les trois composantes du projet

Composante 1: Augmenter la capacité d'adaptation au changement climatique au niveau central, régional et communal.

Composante 2: Développer des moyens de subsistance des communautés rurales résistantes au changement climatique en utilisant des interventions EbA.

Composante 3: Produire et valoriser les connaissances sur l'adaptation au changement climatique en Mauritanie.

D. LIGNES DE BASE ET CO-FINANCEMENT (présenté par Lucille)

Définitions:

Projet ou programme sur lequel les activités du projet PMA vont être basées
 Budget de la ligne de base appelé «co-financement ».

Lettre de co-financement : confirmation que le projet ligne de base va être mis en œuvre avec le budget indiqué.

Projets ligne de base proposés

- 1) Programme gouvernemental annuel pour combattre les feux de brousse.
Sites d'intervention: 7 Wilayas ;
 - Activités principales: entretien et ouverture des pare-feu mécaniques, lutte contre les feux, construction pare-feu manuels et sensibilisation
 - Période de mise en œuvre: Durée indéterminée
- 2) Projet GIZ « ProGRN » devenu ACCMR
 - Sites d'intervention: 4 Wilayas (Guidimaka, Assaba, Hodh El Gharbi, Gorgol)
 - Activités principales: Renforcer l'application et la diffusion de l'approche GDRN
 - Période de mise en œuvre: 2014-2017
- 3) Programme BAD de renforcement de la résilience à l'insécurité alimentaire et nutritionnelle récurrente au Sahel « P2RS »
 - Sites d'intervention: Régional (tout le pays)
 - Activités principales: Améliorer la productivité et la résilience de l'agriculture, renforcer la capacité des plus démunis
 - Période de mise en œuvre: 2014-2017

E. PRINCIPAUX PROJETS PARTENAIRES (présenté par Lucille)

- Projet SCCF "Renforcement des capacités, connaissances et technologies pour la résilience climatique des pays en développement vulnérables"

- Projet ACCMR “Projet Augmentation des Capacités pour l’Adaptation au Changement Climatique en Milieu Rural”
- Projet PRASP “Projet Régional d’Appui au pastoralisme au Sahel ”
- Projet REVUWI “Amélioration des investissements du secteur de l’eau destinés à la résilience des ressources pastorales et forestières des régions méridionales de Mauritanie”
- Projet PASC2 “Programme Aftout Sud Karakoro II”.

F. LE CADRE LOGIQUE (présenté par Messieurs Ba Amadou et Maouloud N’Diaye)

Titre du projet : Développement d'un système amélioré et innovant pour la mise en place de moyens de subsistance résistant au changement climatique en Mauritanie.					
Objectif du projet: Augmenter la résistance des communautés locale dans les zones pastorales de l'écorégion des savanes a Acacia en renforçant la capacité technique et institutionnelle du gouvernement national et local pour mettre en place des interventions EbA.					
Composantes du projet	Résultats attendus	Produit/service attendus	Budget GEF (\$)	Activités proposées	Indicateurs
1. Capacités des gouvernements centraux, régionaux et communaux pour faire face aux risques climatiques en utilisant une approche EbA dans les zones de pâturage sont renforcées	1. Capacité d'adaptation des services centraux, régionaux et communaux pour faire face aux risques climatiques est renforcée en utilisant une approche EbA dans les zones pastorales.	1.1 Les stratégies et plans de développement centraux et communaux sont révisés pour intégrer l'approche EbA.	1,425,000	<ul style="list-style-type: none"> • Elaborer une stratégie nationale d'adaptation au CC • Intégrer l'approche EbA dans des stratégies sectorielles • Intégrer l'approche EbA dans les textes de loi relatifs à l'environnement • Intégrer l'approche EbA dans les plans de développement communaux et les PRLP 	<ul style="list-style-type: none"> • La stratégie d'adaptation au CC • Au moins trois stratégies sectorielles (SNDD, Eau, SNDR, Sécurité alimentaire,) • Nombre de lois auditées • Nombre de textes ayant intégré l'approche EbA • Nombre de PDC audités • Nombre de PDC ayant intégré l'approche EbA
		1.2 La sensibilisation et la formation technique au niveau central, régional et communal pour faciliter l'adaptation au CC à travers l'utilisation de l'approche EbA sont promues.		<ul style="list-style-type: none"> • Développer et distribuer des lignes directrices ; • Former le personnel du MEDD sur l'approche EbA • Former le personnel du MEDD sur le suivi des ressources pastorales et forestières, la lutte contre les feux de brousse y compris le SIG ; • Former le personnel du MEDD sur les techniques d'exploitations durables des ressources naturelles • Vulgariser les techniques 	<ul style="list-style-type: none"> • Nombre d'ateliers de formation ou de sensibilisation organisés et nombre de personnes formées et sensibilisées

				d'exploitations durables des ressources naturelles auprès des communautés cibles	
		1.3 Les AGLC sont en place/ renforcées pour la mise en œuvre d'interventions EbA.		<ul style="list-style-type: none"> • Sensibiliser les communautés cibles sur l'approche EbA. • Faire l'inventaire des AC (associations communautaires) existantes; • Créer de nouvelles AC • Former le personnel de nouvelles AGLC et les AGLC à renforcer 	<ul style="list-style-type: none"> • Nombre d'AC créées et opérationnelles • Nombre d'AGLC et leurs personnels renforcés
2. Les moyens de subsistance (ou d'existence) des communautés rurales résistantes au changement climatique en utilisant des interventions EbA dans les zones pastorales de 4 wilayas dans l'écorégion des savanes d'Acacia.	2. La résilience des écosystèmes est renforcée avec l'approche EbA pour améliorer durablement les moyens de subsistance des communautés rurales face au changement climatique.	2.1 Des plans d'aménagement et de gestion des ressources pastorales incluant des interventions EbA sont mis en place en collaboration avec les AC.	2,600,000	<ul style="list-style-type: none"> • Entreprendre des études de référence participatives pour déterminer l'état et la dynamique des écosystèmes (Evaluation intégrée des écosystèmes : EIE) • Identifier/Développer des méthodes et des techniques innovantes pour l'adaptation au changement climatique incluant l'approche EbA pour promouvoir le pastoralisme, lutter contre les feux de brousse et promouvoir les moyens de subsistance alternatifs, en collaboration avec les communautés locales, les chercheurs et les réseaux internationaux de scientifiques et de praticiens. 	<ul style="list-style-type: none"> • Cartes géo-référencées des parcours, des axes de transhumance' des points d'eau et des pare-feu dans la zone d'intervention du projet • Modes de gestion actuels des ressources pastorales et technologies EbA actuelles recensées • Quantification des zones dégradées et leurs causes... • La vulnérabilité des terres de parcours au changement climatique • , La charge animale et les différents usages, la productivité des pâturages (quantité et qualité) • Avantages économiques associés à l'exploitation des parcours et • Pertes de biens et services écosystémiques en rapport avec

				<ul style="list-style-type: none"> • Mettre en place des plans d'aménagement et de gestion des ressources pastorales en collaboration avec les AC, les DREDD, les acteurs communaux, les autorités administratives, etc. 	<p>les feux de brousse</p> <ul style="list-style-type: none"> • Durabilité des modes de gestion existants, etc. • Recueil des technologies et de protocoles de Technologies adaptées, incluant l'EbA. • Cartes géo-référencées des AC et des ressources pastorales • Les plans d'aménagement et de gestion
		2.2 La résilience des ressources pastorales est renforcés à travers une gestion durable des terres et la lutte contre les feux de brousse en utilisant une approche EbA.		<ul style="list-style-type: none"> • Appuyer la mise en œuvre de mesures EbA • Mettre en place des écoles pilotes en collaboration avec AC afin de démontrer les avantages de l'EBA au profit des communautés locales 	<ul style="list-style-type: none"> • Protocoles techniques pour guider la mise en œuvre des interventions EBA. • Capacités techniques des AC aux protocoles techniques pour la gestion durable des ressources pastorales • Voyages d'études et d'échanges • Technologies appropriées par les communautés rurales • Technologies développées et performances dans : <ul style="list-style-type: none"> - Restauration des terres, - Gestion des feux de brousse, et - Diversification/renforcement des moyens de subsistance des communautés rurales. • Niveaux de performance socioéconomique et écologique et des mesures d'adaptation introduites ou

					renforcées
		2.3 Les moyens de subsistance des communautés rurales sont diversifiés et renforcés selon une approche EbA		<ul style="list-style-type: none"> • Entreprendre des évaluations socio-économiques et études de filières afin d'orienter les choix sur les moyens de subsistance EbA alternatifs à développer (produits forestiers non ligneux, agroforesterie, etc.) • Appuyer les AC pour le renforcement et la diversification des moyens de subsistance (formation, équipement, crédits etc.) 	<ul style="list-style-type: none"> • Situation de référence • Diversification des sources de revenus et sécurité alimentaire • Niveaux des sources de revenu • Durabilité et répliquabilité des mesures EbA introduites
		3.2 Lignes directives pour la mise en œuvre d'interventions EbA pour les décideurs, le personnel technique du gouvernement et les communautés locales.		<ul style="list-style-type: none"> • Develop guidelines on the Wilaya -specific climate threat and the EbA interventions to be implemented to address these threats. 	Mettre dans C1
3. Production et valorisation des connaissances sur les pratiques d'adaptation incluant l'approche EbA .	3.1 De bonnes pratiques incluant l'approche EbA sont partagées	3.1 Un Plan de collecte et d'analyse de données à long terme pour mesurer l'impact de l'approche EbA est mis en place	750,000	<ul style="list-style-type: none"> • Faire l'inventaire des systèmes de collecte et d'analyse existant ; • Développer un système d'analyse incluant l'approche EbA ; • Institutionnaliser le système d'analyse (y compris TDRs et formation) 	
		3.2 Une stratégie de communication au niveau central, régional et communal incluant une campagne médiatique sur l'approche EbA est développée		<ul style="list-style-type: none"> • Définir les groupes cibles; • Elaborer les messages en fonction des cibles ; • Organisation des campagnes médiatiques ; • Créer un cadre de mutualisation des données de toutes les parties prenantes au projet ; • Mettre en place un système de collecte de données • Collecter les 	

				informations sur la mise en œuvre du projet (rapports); • Créer une page sur le site web du MEDD ;	
		3.4 Stratégie pour la mise en échelle, le maintien et la réplication de bonnes pratiques d'adaptation incluant l'approche EbA est mise en place		<ul style="list-style-type: none"> • Identifier les bonnes pratiques • Identifier les sites où ces bonnes pratiques peuvent être répliquées; • Identifier les sources de financement potentiel ; 	
Sous-Total			4,775,000		
Coût de gestion du Projet (PMC)			225,000		
Coûts totaux du projet			5,000,000		

G. OUVERTURE SUR LA DISCUSSION ET DEMANDE D'INFORMATION

- Opinion des parties prenantes sur:
 - Les activités proposées pour le projet
 - Les sites d'intervention potentiels
 - Les projets lignes de base et partenaires
- Apporter des suggestions sur les activités et en proposer d'autres si nécessaire
- Aider à définir un plan d'engagement des parties prenantes dans la mise en œuvre
- Discuter de moyens complémentaires potentiels pour augmenter la capacité des délégations régionales?
- Autres commentaires?

SYNTHESE DES DISCUSSIONS

1. Les projets partenaires :

Les projets suivants doivent être ajoutés dans la liste de projets partenaires présentés :

- Projet PARSACC (Projet PAM et du Fond d'Adaptation) est certainement un projet partenaire au plus haut degré car les principales composantes de ce projet sont d'augmenter la capacité d'adaptation aux changements climatiques au niveau du gouvernement décentralisé incluant de l'équipement, et développer des plans d'adaptation basés sur les AC ;
- D'autres projets d'adaptation doivent être examinés sur les formes de partenariat :
 - Project AMCC de l'UE (Projet Alliance) mis en œuvre par PNUD (SGP et Art Gold) et GIZ (avec cofinancement)
 - Le PIF en préparation sur les zones humides (UICN/FPMA)
 - Le PIF en préparation sur l'Agence Nationale de la Grande Muraille Verte (FAO/FPMA)
- Projet PNISER (BAD) devrait être cité à la place du projet REVUWI (BAD/FPMA).

2. Les activités du projet:

Remarques d'ordre sémantique :

- Au lieu de parler de promouvoir « l'approche EbA » dont on connaît encore très peu de choses, il est préférable de dire « les pratiques d'adaptation au CC incluant l'approche EbA ».
- Dans les composantes 1 et 3, les termes « gouvernement central » doit être remplacé par « gouvernement national » pour éviter toute confusion.

Remarques d'ordre budgétaire :

- Les fonds utilisés pour les études doivent être réduits autant que possible dans le projet au profit des interventions de terrain. Par exemple, il faut consulter les études réalisées par d'autres projets tels que le PAM pour réduire le nombre d'études à réaliser. Dans le même objectif, les activités « soft » qui sont dans la Composante 2 pourraient être incluses dans la Composante 1 et le budget de la Composante 2 devrait être augmenté, à au moins US\$3,000,000.

Remarques d'ordre stratégique :

Composante 1 :

- Beaucoup de projets stipulent qu'ils vont augmenter la capacité d'adaptation des délégations régionales, il faudrait bien collaborer pour éviter toute duplication. Si un certain matériel est fourni mais il n'y a pas les locaux pour installer ce matériel, cela ne sert à rien.
- Dans le produit 1.1, il faut réaliser des consultations pour affiner l'activité et spécifier quels sont les secteurs concernés (potentiellement le secteur du développement rural).
- Dans le produit 1.2, la formation proposée pour les maires devrait également inclure les leaders communautaires.
- Dans le produit 1.2, les communes ne peuvent pas à l'heure actuelle s'impliquer dans des activités agricoles, forestières ou pastorales. Il faudrait réviser les textes de loi pour leur permettre de le faire (information à vérifier).
- Dans le produit 1.2, la Direction de la Protection de la Nature (DPN) a également besoin d'un réseau de communication entre le système central et décentralisé pour la gestion des feux.
- Dans le produit 1.3, les AC et les AGLC sont des organisations différentes. Les AC sont communautaires alors que AGLC vont au-delà du niveau communautaire. Il faudrait plutôt appuyer sur l'approche utilisée : la « Gestion Décentralisée des Ressources Naturelles » et/ou « accompagner la transition des structure communautaires vers un système décentralisé ».
- L'approche GDRN devrait être intégrée dans l'approche EbA.
- Dans le produit 1.3, les AGPO et ADC pourraient aussi être valorisées par le projet.

Composante 2 :

- Dans le produit 2.1, avant de faire les études proposées, il faut vérifier ce que le projet du PAM a déjà réalisé/prévu en terme d'études.
- Les indicateurs proposés pour la Composante 2 ne sont pas SMART. Il est nécessaire de les retravailler (ex : stratégie d'échange/de diffusion de l'information).
- Le PIF utilise plus les termes « conservation de l'eau et du sol » que les « termes EbA ». Etant donné que ces méthodes de conservation de l'eau et du sol sont bien maîtrisées à l'échelle nationale et qu'on sait que ces méthodes marchent, il serait préférable d'utiliser ces termes et capitaliser sur ce qu'on a appris plutôt que d'intégrer toujours de nouvelles méthodes.
- L'approche EbA est une approche écosystémique censée être complète. Il ne faut donc pas oublier que les trois écosystèmes pastoraux englobent plusieurs types d'écosystèmes et sont eux-mêmes partie intégrante d'autres écosystèmes.
- Les activités et indicateurs de la Composante 2 doivent être affines et quantifiées.

Composante 3 :

- Dans le produit 3.1, un système de collecte et d'analyse de données sur les projets en cours existe déjà à la GIZ. Il faut les rencontrer pour préciser cette activité. Il faudrait donc changer le terme « développer » dans l'activité par « intégrer au système existant 'SEPA'... ».
- Dans le produit 3.2, il faut reformuler car si on l'appelle « stratégie de communication », cela ne devrait pas inclure le « cadre de mutualisation ».

3. Structure de mise en œuvre:

- M. El Wavi est chargé de mission, il n'appartient pas à une Direction spécifique au sein du MEDD. Il est nécessaire d'identifier avec le Ministre du MEDD, la/les directions les plus appropriées pour prendre en charge le projet.

COMMENTAIRES SPECIFIQUES DES PARTICIPANTS

Intervenant	Institution	Questions	Commentaires/contribution
Ethmane BA	UE	Pourquoi former les Maires sur le cadre réglementaire? Financement des PDC dans le CC	Les Maires n'ont pas de compétence sur la gestion des RN. Améliorer formulation des indicateurs de la Composante 2 (Indicateurs SMART)
Limame Abdawa	PNUD	Sur quelle base il est distingué entre les projets lignes de base de ceux partenaires ?	Observation de forme sur la formulation : Produits 1.1 Parler de plans nationaux au lieu de plans centraux Produit 3.2 Parler seulement de stratégie de communication sans préciser les niveaux où cette stratégie va être développée Produits 3.2 : Ajouter à la liste des indicateurs la stratégie qui va être élaborée
Mamadou DIOP	FAO		Produit 1.1 : L'élaboration d'une stratégie ne relève pas de la compétence d'un projet mais du département ministériel donc écrire appuyer l'élaboration de la stratégie nationale d'adaptation au CC Produit 1.1 : En plus de la formation des Maires former également les leaders communautaires Produits 3.2 : Le cadre de mutualisation n'a pas sa place au niveau de ce produit et doit être déplacé
Ghazy	PERSACC/ FAB/PAM/ MEDD	Quelle stratégie va être adoptée pour développer l'approche EbA ? La Stratégie Nationale d'Adaptation va concerner quels secteurs ?	IL y a beaucoup de complémentarité et de synergie avec le PARSAC Parler plutôt d'adaptation au CC incluant l'approche EbA Le PARSAC prévoit aussi d'équiper les DREDD
Boubacar DIOP	DPN/MED D	Ancrage opérationnel du projet ?	Préciser clairement la ou les structures qui va ou vont être chargé (es) de la coordination des activités du projet ; Réfléchir sur la possibilité d'équiper les DREDD qui sont dépourvues de tout (locaux, matériel, etc.) ; Limiter autant que faire se peut les études et accorder une priorité aux activités hard
Vincent	GIZ		AC et AGLC sont deux concepts différents. Les AC sont plutôt orientées vers le développement communautaire et les AGLC la gestion décentralisée des RN. IL est donc nécessaire d'accompagner les AC pour qu'elles s'orientent vers la gestion décentralisée des RN Produit 3.2 : Ecrire « Une stratégie de communication au niveau central, régional et communal incluant une campagne médiatique intègre l'approche EbA » .
Amadou Demba BA	SGP/PNUD	Qui sera chargé de la mise en œuvre du	Les Coopératives et les GIE doivent associés à la mise en œuvre du projet

		projet ?	<p>Limiter autant que possible le volet soft au bénéfice des actions concrètes au bénéfice des communautés ciblées</p> <p>Modalités de mise en œuvre et implication des communautés bénéficiaires et des acteurs de proximité</p>
Alioune FALL	PERSACC/ FAB/PAM/ MEDD	Pourquoi l'approche EbA qui est très difficile à mettre en œuvre ?	Pourquoi acheter du matériel qui ne va pas être utilisé car les DREDD manquent de personnel qualifié
Sidi Mohamed Wavi			<p>Limiter autant que possible le volet soft au bénéfice des actions concrètes au bénéfice des communautés ciblées</p> <p>Proposition d'augmenter le budget composante (3 M\$US)</p>

Intervenant	Institution	Questions	Commentaires/contribution
Ethmane BA	UE	Pourquoi former les Maires sur le cadre réglementaire? Financement des PDC dans le CC	<p>Les Maires n'ont pas de compétence sur la gestion des RN.</p> <p>Améliorer formulation des indicateurs de la Composante 2 (Indicateurs SMART)</p>
Limame Abdawa	PNUD	Sur quelle base il est distingué entre les projets lignes de base de ceux partenaires ?	<p>Observation de forme sur la formulation :</p> <p>Produits 1.1 Parler de plans nationaux au lieu de plans centraux Produit 3.2 Parler seulement de stratégie de communication sans préciser les niveaux où cette stratégie va être développée Produits 3.2 : Ajouter à la liste des indicateurs la stratégie qui va être élaborée</p>
Mamadou DIOP	FAO		<p>Produit 1.1 : L'élaboration d'une stratégie ne relève pas de la compétence d'un projet mais du département ministériel donc écrire appuyer l'élaboration de la stratégie nationale d'adaptation au CC</p> <p>Produit 1.1 : En plus de la formation des Maires former également les leaders communautaires Produits 3.2 : Le cadre de mutualisation n'a pas sa place au niveau de ce produit et doit être déplacé</p>
Ghazy	PERSACC/ FAB/PAM/ MEDD	Quelle stratégie va être adoptée pour développer l'approche EbA ? La Stratégie Nationale d'Adaptation va concerner quels secteurs ?	<p>IL y a beaucoup de complémentarité et de synergie avec le PARSAC</p> <p>Parler plutôt d'adaptation au CC incluant l'approche EbA Le PARSAC prévoit aussi d'équiper les DREDD</p>
Boubacar DIOP	DPN/MED D	Ancrage opérationnel du projet ?	<p>Préciser clairement la ou les structures qui va ou vont être chargé (es) de la coordination des activités du projet ;</p> <p>Réfléchir sur la possibilité d'équiper les DREDD qui sont dépourvues de tout (locaux, matériel, etc.) ;</p> <p>Limiter autant que faire se peut les études et accorder une priorité aux activités hard</p>
Vincent	GIZ		AC et AGLC sont deux concepts différents. Les AC sont plutôt orientées vers le développement communautaire et les AGLC la gestion décentralisée des RN. IL est donc nécessaire d'accompagner les

			<p>AC pour qu'elles s'orientent vers la gestion décentralisée des RN</p> <p>Produit 3.2 : Ecrire « <i>Une stratégie de communication au niveau central, régional et communal incluant une campagne médiatique intègre l'approche EbA</i> » .</p>
Amadou Demba BA	SGP/PNUD	Qui sera chargé de la mise en œuvre du projet ?	<p>Les Coopératives et les GIE doivent associés à la mise en œuvre du projet</p> <p>Limiter autant que possible le volet soft au bénéfice des actions concrètes au bénéfice des communautés ciblées</p> <p>Modalités de mise en œuvre et implication des communautés bénéficiaires et des acteurs de proximité</p>
Alioune FALL	PERSACC/ FAB/PAM/ MEDD	Pourquoi l'approche EbA qui est très difficile à mettre en œuvre ?	Pourquoi acheter du matériel qui ne va pas être utilisé car les DREDD manquent de personnel qualifié
Sidi Mohamed Wavi			<p>Limiter autant que possible le volet soft au bénéfice des actions concrètes au bénéfice des communautés ciblées</p> <p>Proposition d'augmenter le budget composante (3 M\$US)</p>

LANCEMENT DE LA FORMULATION DU PROJET : Développement d'un système amélioré et innovant pour la mise en place de moyens de subsistance résistant au changement climatique en Mauritanie

LISTE DE PRESENCE DES DELEGUES REGIONAUX AU CONCLAVE
ORGANISE A L'OCCASION DU LANCEMENT DE LA FORMULATION
17 AOUT 2014

NOMS ET PRENOMS	INSTITUTION	EMAIL / TELEPHONE
Limam Fadel	Délégué Régional Hodh Echarghi	6654 5222
Mohamed el Moktar Chérif NDiaye	Délégué Régional Hodh el Gharbi	4655 5765
Ely Samba Kor	Délégué Régional Assaba	2241 2157
Sow Mamadou Samba	Délégué Régional Brakna	4694 2849
Mohamed Sidi Mohamed	Délégué Régional Gorgol	2297 2044
Mohamed Lelle dit Daballahi	Délégué Régional Guidimaka	4674 9733
Tombo Mamadou	Délégué Régional Trarza	4684 9064

LISTE DE PRESENCE A L'ATELIER DE LANCEMENT
20 AOUT 2014

NOMS ET PRENOMS	INSTITUTION	EMAIL
Ba Ethmane	Chargé de Programme à la DUE	Ethmane.BA@eeas.europa.eu
Ba Amadou	Coordonnateur SGP Mauritanie PNUD	amadou.ba@undp.org
Mamadou Diop	FAO – Unité Changement Climatique	Mamadou DIOP Mamadou.Diop@fao.org
Ghazi Gader	Coordonnateur PERSACC PAM/FAB/MEDD	GADER, Ghazi TN ghazi.gader@gmail.com ghazi.gader@gmail.com
Limam Abdawa	Chargé de Programme Changement Climatique au PNUD	Limam Abdawa limam.abdawa@undp.org
Fall Alioune	Assistant au Coordinateur du PERSACC	lunef@yahoo.com
Sidi Mohamed EL Wavi	Chargé de Mission, Coordonnateur CCPNCC, Point Focal CCNUCC	'El wavi sidi mohamed' elwavi.sm@gmail.com
Mme Laroumagne Charlotte	Assistante Technique France Volontaires - GIZ	laroumagnecharlotte@yahoo.fr
Vincent Frémondrière	Conseiller Technique Programme Energie - GIZ	vincent.fremondriere@giz.de
Diop Boubacar	Directeur Direction de la Protection de la Nature	boubacardiop@hotmail.com
Toumbo Mamadou	Délégué Régional EDD, Trarza	
Lemina mint Mouhamedou	Assistante Administrative CCPNCC	
Ba Amadou	Consultant PNUE	Bÿffffe2 Amadou gaonadio@yahoo.fr
Maouloud Ndiaye	Consultant PNUE	Maouloud n'diaye ndiaye.maouloud@gmail.com
Lucille Palazy	Consultante Internationale, chef de mission de formulation	Lucille Palazy lucille.palazy@c4es.co.za
Fall Oumar	Consultant national principal PNUE	oumarfall09@gmail.com
Loughmane	Chef de service à la DPCID	

A21.2 Validation workshop



FONDS POUR L'ENVIRONNEMENT
MONDIAL



PROGRAMME DES NATIONS UNIES
POUR L'ENVIRONNEMENT



MINISTERE DE
L'ENVIRONNEMENT ET DU
DEVELOPPEMENT DURABLE

CELLULE DE COORDINATION DU PROGRAMME NATIONAL SUR LES CHANGEMENTS
CLIMATIQUES - CCPNCC

COMPTE RENDU DE L'ATELIER DE VALIDATION
DU PROJET DIDS "RENFORCEMENT DE LA CAPACITE TECHNIQUE ET INSTITUTIONNELLE
DU GOUVERNEMENT AUX NIVEAUX NATIONAL ET LOCAL POUR REDUIRE LA
VULNERABILITE AU CHANGEMENT CLIMATIQUE PAR L'APPROCHE D'ADAPTATION
ECOSYSTEMIQUE DES COMMUNAUTES LOCALES DES ZONES PASTORALES DE
MAURITANIE".

Jeudi 18 décembre 2014
Hôtel Royales

INTRODUCTION

Le jeudi 18 décembre 2014 s'est tenu à l'hôtel Royales l'atelier de validation du Projet de développement d'un système amélioré et innovant en Mauritanie pour la mise en place de moyens de subsistance résilients au changement climatique – DIDS. Cet atelier a regroupé les Points Focaux Sectoriels des départements sectoriels et les partenaires techniques et financiers (PTF) intervenants dans les domaines de l'environnement et du changement climatique dont la liste est jointe en annexe.

Trois grandes étapes marquèrent cette consultation technique des parties prenantes du projet avant la clôture: (i) la cérémonie d'ouverture ; (ii) présentations des résultats de la formulation par les consultants ; (iii) Débats ; (iv) Recommandations.

1. CEREMONIE D'OUVERTURE

La cérémonie d'ouverture a été présidée Monsieur Sidi Mohamed El Wavi, Chargé de Mission auprès du MEDD et Coordinateur de la Cellule de Coordination du Programme National sur le Changement Climatique (CCPNCC) en présence de plusieurs Directeurs Centraux du MEDD, des Points Focaux Sectoriels pour la thématique du changement climatique et des représentants des PTF.

Dans son mot d'ouverture, le Chargé de Mission a remercié tous les participants de leur présence et a souligné l'importance qu'accorde le MEDD à l'aboutissement de ce projet qui dira-t-il vise à améliorer la capacité de résilience au CC des communautés ciblées au sein de quatre wilayas agropastorales, lourdement affectées par une forte incidence de la pauvreté et le changement climatique, du sud mauritanien.

Le chargé de mission a tenu à souligner que le projet DIDS a retenu l'approche basée sur les services écosystémiques (EbA) dans le souci d'accompagner la dynamique naturelle d'adaptation au changement climatique et renforcer l'efficacité des interventions prévues. Il a par la suite mis en relief la nécessité d'impliquer tous les acteurs (nationaux, régionaux et locaux) pour mieux identifier les synergies et éviter les duplications. Après avoir salué la qualité du travail effectué par l'équipe de formulation du projet, il a déclaré ouvert et souhaité plein succès aux travaux de l'atelier de validation du Projet DIDS.

2. PRESENTATION DES RESULTATS DE LA FORMULATION

Les résultats de la formulation ont donné lieu à des présentations structurées en trois séquences comme suit :

- a. Une introduction sur le processus de développement du projet, y compris un rappel à la fois des étapes précédant la formulation du projet.
- b. Le projet et ses composantes :
 - La composante 1 : Renforcement des capacités des gouvernements centraux, régionaux et communaux pour faire face aux risques climatiques en utilisant une approche EbA dans les zones de pâturage ;
 - La composante 2: Développement par l'approche EbA de sources de subsistance pour les communautés rurales résilientes au changement climatique dans les zones pastorales de 4 wilayas de l'écorégion des savanes d'Acacia (3.403.000 USD).
 - La composante 3: Gestion des savoirs sur les risques climatiques et la prise en compte des avantages de l'approche EbA pour rendre résilientes les pratiques pastorales et forestières au changement climatique. 0.68 Millions USD EbA
 - Les critères de sélection des sites d'intervention
 - Le schéma du dispositif institutionnel proposé pour la mise en œuvre à l'échelle nationale, régionale et locale y compris l'identification des principales parties prenantes.

- c. Présentation des étapes ultérieures à la formulation qui se définissent par les échanges avec le PNUE précédant la soumission de la requête au FEM laquelle donnera lieu à d'autres échanges éventuelles.

DEBATS

Ensuite, ce fut les débats qui ont été organisés selon : (i) les points d'éclaircissement ; (ii) les points posés par les participants nationaux ; (iii) les commentaires des PTF ; (iv) Les réponses aux questionnements apportées par l'équipe de consultants et commentaire final précisant la position et les orientations du Ministère.

Les parties du document ne faisant pas l'objet de commentaire sont considérées comme adoptées.

a. Les points d'éclaircissements :

Plusieurs participants ont demandé des éclaircissements sur :

- L'approche EbA, la définition qui lui est accordée et ses avantages. Ce qui a été rendu par les consultants, précise que lorsque le site fonctionne comme un écosystème, il délivre des services à des bénéficiaires ; ces derniers pour soutenir l'offre durable de ces services ont tout intérêt à sauvegarder et conserver l'écosystème dans ses états naturels. C'est sur la base d'une telle hypothèse que le projet agira avec ces bénéficiaires de l'écosystème qui tirent profit pour engager des activités de restauration dont ils sont seuls à garder le secret et le bénéfice.
- Forêt. Des participants ont insisté sur la nécessité de définir ce qui peut être entendu par *écosystèmes forestiers* ou *forêt* en Mauritanie ; le terme agrosylvopastoral est suggéré comme terminologie plus appropriée compte tenu de la complexité de la définition de forêt en zone aride.

b. Les points exposés par les participants nationaux

- Sur les indicateurs, la question s'est posée sur la pertinence de viser 20 personnes à former parmi le personnel des DREDD lorsque les effectifs ne dépassent guère 4 par DREDD.
- Aussi, il a été demandé pourquoi 30 AGLC supplémentaires sont prévues par le projet alors qu'il en existe déjà 150.
- Pourquoi la réduction des effets négatifs des événements climatiques extrêmes grâce aux pratiques d'adaptation mises en œuvre n'ont-elles pas bénéficié d'un système intégré de collecte de données en vertu de la stratégie de gestion des connaissances ?
- La sélection des bénéficiaires n'a pas été soigneusement traitée surtout que le niveau d'analphabétisme et de pauvreté reste élevé et différencié chez les communautés locales
- L'affectation des 2/3 du budget du projet à l'investissement dans les infrastructures de base est hautement appréciée.
- La prise en compte des connaissances traditionnelles en termes d'adaptation est d'une importance majeure.
- Il a été demandé s'il y avait un ordre chronologique entre les composantes.
- Le critère de sélection des sites portant sur l'absence d'autres projets d'adaptation, est considéré inapproprié et mérite d'être éliminé pour ne pas

pénaliser les sites qui ont bénéficié du mécanisme Small Grant Programme dont l'échelle d'intervention ne dépasse guère \$50,000.

- Il a été souligné par un participant que la Stratégie d'Adaptation au changement climatique proposée par l'Activité 1.1.1 pourrait bien inclure la révision des politiques, stratégies et plans d'actions nationaux et sectoriels de l'Activité 1.1.2 pour ainsi épargner une activité de trop. Cette même remarque a été soulevée par un autre participant qui s'interrogeait sur la nature de l'appropriation par les populations d'un tel projet lorsque l'EbA est encore mal comprise. La Stratégie Nationale d'Adaptation au changement climatique est aujourd'hui devenue un impératif surtout que les approches commencent à se diversifier ; il est important que les bénéficiaires soient renforcées pour savoir quelle approche appliquée par rapport au stress climatique prévalent, le milieu exposé et le secteur visé. Il est important aussi que cette stratégie précise le rôle des différentes parties prenantes dans la mise en œuvre dans les projets et non à chaque projet de définir les rôles. Cette stratégie devrait enfin couvrir tous les secteurs, notamment l'agriculture, le pastoralisme, la pêche, l'élevage, etc.
- Les structures et projets suivants sont cités absents dans la figure et doivent figurer comme projets partenaires : la DCE au MEDD, le CREDD, DRA, DRE, DRHA, ACCMR, AMCC, PASK2

c. Les points exposés par les PTF

- Le responsable du PNA au siège de la GIZ

La stratégie d'adaptation (SNA) proposée sous l'Activité 1.1.1 est une démarche obsolète à l'heure où la Convention a introduit à la place ce qui est convenu d'appeler le Plan National d'Adaptation (PAN) ; ceci dénote un manque de coordination entre les partenaires en Mauritanie. Selon ce même participant, le processus du PAN devrait maintenant faire partie de toutes les interventions d'adaptation parce qu'il est la clé de l'efficacité de l'adaptation au changement climatique dans tous les pays. A ce sujet, il fait remarquer que la Mauritanie est très en retard par rapport aux 77 pays des pays en développement qui ont déjà souscrit pour recevoir des fonds du GCF. Il a ajouté que la plupart des pays les moins avancés (PMA) ont commencé leur processus PAN à l'exception de la Mauritanie. Enfin, il a informé les participants qu'une session de formation sur le processus PAN sera organisée en Mars 2014 pour tous les secteurs.

- La responsable de l'adaptation à la GIZ en Mauritanie (Mme Britta)
 - Elle reconnaît que le MEDD a réussi à accéder à d'importants montants financiers à travers les nombreux projets d'adaptation financés par le Fonds des PMA (LDCF) du FEM ou du Fonds d'Adaptation ; mais regrette au même moment le chevauchement engendré par ces mêmes projets qui visent tous l'adaptation à travers des activités qui se ressemblent toutes.
 - En ce qui concerne les activités EbA, elle a dit qu'elles ne devraient pas concerner seulement les forêts et les parcours ; parce EbA devrait être une approche plus intégrée et intersectorielle. Elle a ajouté que toutes les institutions appropriées devraient être associées à l'identification des activités à promouvoir.
 - Elle a indiqué l'existence d'un manuel détaillé sur l'EbA qui a été produit par la FAO et s'interroge si ce manuel sera mis à contribution par le projet ou s'il y aura une démarche différente.

- Elle s'est interrogée sur la restriction du choix des sites du projet à l'existence d'une AGLC.

d. Les réponses apportées par l'équipe des consultants

Répondant aux questions et observations l'équipe de consultants a tout d'abord rassuré les participants sur la prise en compte de l'ensemble des préoccupations avant d'éclaircir les définitions et de répondre aux questions posées ou observations formulées.

A ce titre, il a été mentionné à l'assistance que le choix définitif des zones d'intervention du DIDS obéira à une démarche et des critères qui figurent dans l'aide-mémoire signé avec le MEDD et impliquera les acteurs locaux (autorités administratives, communales, CREDD, communautés locales). Aussi, l'approche du PNIDDLE, appuyé par la Banque Mondiale et l'Union Européenne, qui a retenu l'attention de l'équipe sera mise à contribution étant donné qu'elle promeut la décentralisation et prend comme pivot les collectivités territoriales.

e. Position et orientations du MEDD

Le MEDD considère impératif de mettre en place une stratégie nationale pour la prise en compte du changement climatique dans toutes ses interactions. Une stratégie d'adaptation sera prioritairement formulée pour doter le pays d'un instrument de réponse planifiée aux différents aléas du climat assorti d'un plan national d'adaptation qui prend en compte les court, moyen et long termes. Le projet DIDS apportera sa contribution à ce schéma politique envisagé auquel seront conviés tous les partenaires techniques et financiers stratégiques du MEDD.

3. RECOMMANDATIONS

Les propositions de recommandations suivantes ont été faites :

- Supprimer le profil de Conseiller Technique Principal (CTP) du projet proposé sauf si ce dernier est pris en charge par le PNUE et non sur le budget du projet.
- Il est proposé de rajouter au staff du projet un assistant financier
- Il est d'ores et déjà permis de préciser le rôle privilégié à accorder à la CCPNCC en tant que DNP du projet et/ou structure responsable des activités de sensibilisation et de formation.
- l'importance pour le projet de collaborer avec le programme PNIDDLE qui prône le développement local et l'usage du PDL, qu'il soit cofinancier au DIDS ou non ;
- établir un lien étroit entre la Stratégie Nationale d'Adaptation et le plan national d'adaptation (PNA).
- Il a également suggéré d'ajouter le secteur privé dans l'Activité 2.2.5 pour la mise en œuvre d'activités de fauche pour lutter contre les feux de brousse.
- Il est essentiel de s'appuyer sur l'expérience déjà acquise par d'autres projets tels que le projet des gommiers;
- Combler la formation des inspecteurs dans les DREDD parce qu'ils ne savent même pas comment utiliser un ordinateur.
- Il a également été suggéré d'ajouter une cartographie (localisation) de tous les projets mis en œuvre en Mauritanie comme une activité du projet pour éviter les doublons.
- L'ONM a souligné qu'aucune activité liée au climat n'a été proposée pour le Plan de Développement Local alors que l'adaptation au changement climatique est sensée intégrer des outils sur le suivi du climat. Par conséquent, il propose d'intégrer les risques climatiques dans les activités. Cela pourrait se faire à

travers la promotion d'outils ou activités météorologiques qui pourraient renseigner sur le climat futur ou observé similairement au projet AMCC.

- Le système d'alerte précoce est absent comme activité du projet ; ceci est d'autant plus important que le milieu aride connaît des péjorations climatiques très accentuées. Cette activité doit être présente dans tous les projets.
- L'option pour le projet de travailler directement avec les AGLC sans l'intermédiation des ONG devrait figurer comme alternative là où les bénéficiaires donnent la preuve de pouvoir mener le travail avec efficacité mais aussi pour réduire les charges de gestion des ONG

4. Cérémonie de Clôture

La cérémonie de clôture a été présidée par Monsieur Sidi Mohamed El Wavi, Chargé de Mission au MEDD et Coordinateur de la CCPNCC. Dans son mot de clôture le Chargé de Mission/CCPNCC s'est d'abord félicité de la richesse des débats et de la pertinence des observations, remarques et recommandations faites par les participants. Il a souligné que l'ensemble de ces observations, remarques et recommandations qui ont obtenu le consensus des participants seront intégrées dans la version finale du document de projet.

C'est au nom du MEDD qu'il a remercié tous les participants et déclaré clos les travaux de l'atelier de validation du document du projet Développement d'un système amélioré et innovant pour la mise en place de moyens de subsistance résistant au changement climatique en Mauritanie-DIDS.

Appendix 22: Supplementary material: Reports of the National Consultants involved in the development of the project during the PPG phase.

Please see separate word file.

