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Report No: PAD1077

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED TRUST FUND GRANT IN THE AMOUNT OF US\$4.81 MILLION
FROM THE GLOBAL ENVIRONMENT FACILITY

TO THE

ISLAMIC REPUBLIC OF MAURITANIA

FOR A

SUSTAINABLE LANDSCAPE MANAGEMENT PROJECT
UNDER THE SAHEL AND WEST AFRICA PROGRAM

July 17, 2015

Environment and Natural Resources Global Practice (GENDR)
Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective June 29, 2015)

Currency Unit = Mauritanian Ouguiya (MRO)

US\$1.00 = MRO 325.05

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

APEFE	Association for the Promotion of Education and Training Abroad (<i>Association pour la Promotion de l'Education et de la Formation à l'Etranger</i>)
BD	Biodiversity Focal Area
BP	Bank Policy
BRICKS	Building Resilience through Innovation, Communication and Knowledge Services
CAS	Country Assistance Strategy
CILSS	Permanent Inter-State Committee for Drought Control in the Sahel (<i>Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel</i>)
CPMP-SR	Public Procurement Commission of the Rural Sector
CPS	Country Partnership Strategy
CSO	Civil Society Organization
DA	Designated Account
DAF	Directorate of Administrative and Financial Affairs
DNP	Directorate of Nature Protection
EA	Environmental Assessment
EIA	Environmental Impact Assessment
ERR	Economic Rate of Return
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FM	Financial Management
GDP	Gross Domestic Product
GEF	Global Environment Facility
GOM	Government of Mauritania
GRS	Grievance Redress Service
IBRD	International Bank for Reconstruction and Development
ICB	International Competitive Bidding
IDA	International Development Association
IRR	Internal Rate of Return
IUCN	International Union for the Conservation of Nature
KPI	Key Performance Indicator
LD	Land Degradation

LGDP	Local Government Development Project
MDG-F	Millennium Development Goal Achievement Fund
M&E	Monitoring and Evaluation
MEDD	Ministry of Environment and Sustainable Development (<i>Ministère de l'Environnement et du Développement Durable</i>)
NCB	National Competitive Bidding
NGO	Non-Governmental Organization
NPV	Net Present Value
NRM	Natural Resource Management
NSC	National Steering Committee
O&M	Operation and Maintenance
OP	Operational Policy
OSS	Sahara and Sahel Observatory (<i>Observatoire du Sahara et du Sahel</i>)
PA	Project Account
PACV	Community Based Watershed Management Project
PAN-LCD	National Action Plan to Combat Desertification
PDO	Project Development Objective
PMP	Pest Management Plan
PMU	Project Management Unit
PNIDDLE	National Integrated Program for Decentralization, Local Development and Employment (<i>Programme National Intégré pour la Décentralisation, le Développement et l'Emploi</i>)
PRAPS	Regional Sahel Pastoralism Support Project
PRSP	Poverty Reduction Strategy Paper
RCU	Regional Coordination Unit
REDD	Reducing Emissions from Deforestation and Forest Degradation
REPSAHEL	Improving the Sahelian Populations' Resilience to Environmental Changes Project
RFP	Request for Proposal
RPF	Resettlement Policy Framework
SAWAP	Sahel and West Africa Program
SBD	Standard Bidding Documents
SDC	Swiss Agency for Development and Cooperation
SFM	Sustainable Forest Management
SLM	Sustainable Landscape Management
SLWM	Sustainable Land and Water Management
SSS	Single Source Selection
TTL	Task Team Leader
UNDB	United Nations Development Business

Regional Vice President:	Makhtar Diop
Country Director:	Louise J. Cord
Senior Global Practice Director:	Paula Caballero
Practice Manager:	Benoit Bosquet
Task Team Leader:	Dahlia Lotayef

Islamic Republic Of Mauritania
Sustainable Landscape Management Project under the SAWAP

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PAD DATA SHEET

Islamic Republic Of Mauritania

Sustainable Landscape Management Project Under the SAWAP¹ (P144183)

PROJECT APPRAISAL DOCUMENT

AFRICA REGION

Report No.: PAD1077

Basic Information			
Project ID P144183	EA Category B-Partial Assessment	Team Leader Dahlia Lotayef	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints []		
	Financial Intermediaries []		
	Series of Projects []		
Project Implementation Start Date 4-Aug-2015	Project Implementation End Date 31-Jan-2021		
Expected Effectiveness Date 31-Oct-2015	Expected Closing Date 31-Jan-2021		
Joint IFC: No			
Practice Manager/Manager	Senior Global Practice Director	Country Director	Regional Vice President
Benoit Bosquet	Paula Caballero	Louise J. Cord	Makhtar Diop
Recipient: ISLAMIC REPUBLIC OF MAURITANIA			
Responsible Agency: Directorate of Nature Protection of the Ministry of Environment and Sustainable Development			
Contact:	Mr. Boubacar Diop	Title:	Director, Directorate of Nature Protection
Telephone No.:	+ 222 46416051	Email:	boubacardiop@hotmail.com
Safeguards Deferral (from Decision Review Decision Note)			
Will the review of Safeguard be deferred? Yes [] No [X]			
Project Financing Data (in USD Million)			
[] Loan	[] IDA Grant	[] Guarantee	
[] Credit	[X] Grant	[] Other	

¹ The project was titled “Sustainable Land and Water Management Project” in the SAWAP Program Framework Document that was approved by the GEF, dated May 20, 2011.

Total Project Cost:	4.81	Total Bank Financing:				
Financing Gap:	0.00					
Total Cofinancing:	1.35					
Financing Source						
			Amount			
Recipient			1.35			
Global Environment Facility (GEF)			4.81			
Total			6.16			
Expected Disbursements (in USD Million)						
Fiscal Year	2016	2017	2018	2019	2020	2021
Annual	0.8	1.3	1.0	1.0	0.51	0.2
Cumulative	0.8	2.1	3.1	4.1	4.61	4.81
Institutional Data						
Practice Area / Cross Cutting Solution Area						
Environment and Natural Resources						
Cross Cutting Areas						
<input checked="" type="checkbox"/> Climate Change <input type="checkbox"/> Fragile, Conflict & Violence <input checked="" type="checkbox"/> Gender <input checked="" type="checkbox"/> Jobs <input type="checkbox"/> Public Private Partnership						
Sectors / Climate Change						
Sector (Maximum 5 and total % must equal 100)						
Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %		
General Agriculture, Fishing and Forestry	Forestry	50	80			
	General Agriculture	50	40			
Total		100				
<input type="checkbox"/> I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.						
Themes						
Theme (Maximum 5 and total % must equal 100)						
Major Theme	Theme	%				
Environment and Natural Resources Management	Land administration and management	30				
	Water resources management	30				
	Biodiversity	20				

	Other environment and natural resources management	20
Total		100
Proposed Project Development Objective(s)		
The Project Development Objective (PDO) is to strengthen sustainable landscape management in targeted productive ecosystems in Mauritania.		
Components		
Component Name	Cost (USD Millions)	
Component 1: Sustainable Landscape Management Knowledge, Governance and Partnerships	1.31	
Component 2: Sustainable Landscape Management Practice	3.26	
Component 3: Project Management	1.59	
Systematic Operations Risk–Rating Tool (SORT)		
Risk Category	Rating	
1. Political and Governance	Moderate	
2. Macroeconomic	Moderate	
3. Sector Strategies and Policies	Low	
4. Technical Design of Project or Program	Low	
5. Institutional Capacity for Implementation and Sustainability	Substantial	
6. Fiduciary	High	
7. Environment and Social	Moderate	
8. Stakeholders	Substantial	
9. Other: Program and Donor	Low	
OVERALL	Substantial	
Compliance		
Policy		
Does the project depart from the CAS in content or in other significant respects?	Yes []	No [X]
Does the project require any waivers of Bank policies?	Yes []	No [X]
Have these been approved by Bank management?	Yes []	No []
Is approval for any policy waiver sought from the Board?	Yes []	No [X]
Does the project meet the Regional criteria for readiness for implementation?	Yes [X]	No []
Safeguard Policies Triggered by the Project		
	Yes	No
Environmental Assessment OP/BP 4.01	X	
Natural Habitats OP/BP 4.04	X	
Forests OP/BP 4.36	X	
Pest Management OP 4.09	X	
Physical Cultural Resources OP/BP 4.11	X	
Indigenous Peoples OP/BP 4.10		X
Involuntary Resettlement OP/BP 4.12	X	

Safety of Dams OP/BP 4.37			X
Projects on International Waterways OP/BP 7.50			X
Projects in Disputed Areas OP/BP 7.60			X
Legal Covenants			
Name	Recurrent	Due Date	Frequency
Accountant		November 30, 2015	
Description of Covenant The Recipient shall, not later than one (1) month after the Effective Date, recruit an accountant with qualifications and experience acceptable to the World Bank.			
Name	Recurrent	Due Date	Frequency
Accounting System		December 31, 2015	
Description of Covenant The Recipient shall, not later than two (2) months after the Effective Date, acquire, install and, at all times during Project implementation, maintain an accounting system acceptable to the World Bank.			
Name	Recurrent	Due Date	Frequency
Internal Auditor		February 29, 2016	
Description of Covenant The Recipient shall, not later than four (4) months after the Effective Date, recruit an internal auditor, with qualifications and experience acceptable to the World Bank, in accordance with Section C.III of Schedule 2 to the Financing Agreement.			
Name	Recurrent	Due Date	Frequency
External Auditor		April 30, 2016	
Description of Covenant The Recipient shall, not later than six (6) months after the Effective Date recruit an external auditor, with qualifications and experience acceptable to the World Bank, in accordance with Section C.III of Schedule 2 to the Financing Agreement.			
Conditions			
Source of Fund	Name	Type	
GEF	Establishment of a Project Management Unit	Effectiveness	
Description of Condition Article IV. 4.01. The Recipient has established the Project Management Unit.			
Source of Fund	Name	Type	
GEF	Establishment of Regional Coordination Units	Effectiveness	
Description of Condition Article IV. 4.01. The Recipient has established three (3) RCUs.			
Source of Fund	Name	Type	
GEF	Adoption of Project Manuals	Effectiveness	

Description of Condition					
Article IV. 4.01. The Recipient has adopted the Project Manuals in accordance with the provisions of Section I.B of Schedule 2 to the Financing Agreement.					
Source of Fund		Name		Type	
GEF		Establishment of a National Steering Committee		Effectiveness	
Description of Condition					
Article IV. 4.01. The Recipient has established the National Steering Committee in accordance with the provisions of Section I.A of Schedule 2 to this Agreement.					
Team Composition					
Bank Staff					
Name		Title		Specialization	
Dahlia Lotayef		Lead Environmental Specialist		Environment and NRM, TTL	
Brahim Sall		Senior Rural Development Specialist		Agriculture and Rural Development	
Siobhan McInerney-Lankford		Senior Counsel		Legal	
Medou Lo		Consultant		Safeguards	
Salamata Bal		Sr. Social Development Specialist		Social development and social safeguards	
Fatou Fall		Sr. Social Development Specialist		Social development and social safeguards	
Fatou Fall Samba		Financial Management Specialist		Financial Management	
Mohamed El Hafedh Hendah		Procurement Specialist		Procurement	
Moustapha Ould El Bechir		Senior Procurement Specialist		Procurement	
Sylvestre Bea		Consultant		Economist	
Jayne Angela Kwengwere		Program Assistant		Program Assistance	
Batouly Dieng		Program Assistant		Program Assistance	
Ayala Peled Ben Ari		Consultant		Operations	
Non Bank Staff					
Name		Title		City	
Locations					
Country		First Administrative Division		Location	
Mauritania		Trarza, Brakna, Gorgol		Planned Actual Comments	
				X X X	

I. STRATEGIC CONTEXT

A. Country Context

1. Mauritania is a lower-middle income country with an economic outlook which is affected by demographic transformation characterized by growing urban populations, and climatic challenges. Mauritania is mostly a desert country, with a population of about 3.5 million and a Gross Domestic Product (GDP) per capita of US\$1,270 in 2013; Mauritania's average GDP growth rate was 4.9 percent between 2003 and 2013, and is estimated at 5.4 percent in 2014. Economic growth depends on both renewable and non-renewable natural resources, with mining, fishing and livestock accounting for 38, three and 20 percent of GDP, respectively.² Recently, the economy has benefited from strong growth in the mining sector, a trend which is anticipated to continue over the next three years. Over the last decade, however, more than two-fifths of the population have lived below the national poverty line, while in 2008 almost half of the population lived on US\$2 a day or less.³ Both extreme levels of poverty and highest number of people living in poverty (70 percent) are found in rural areas.

2. Weak agricultural productivity has affected most of the country's rural areas: the Government of Mauritania's (GOM) Food Security Strategy (2011-12) and Third Poverty Reduction Strategy (PRSP III, 2011) show that 26 percent of the population is affected by food insecurity, with the most vulnerable groups being women and young children. This situation is aggravated by the overall level of poverty, lack of investment in social and other productive sectors, harsh climatic conditions, low and unreliable rainfall, poor agricultural water management systems, and a very low level of irrigation development.

3. The 2011 PRSP III (2011-2015) addresses the need to integrate the non-renewable (mineral mining) and renewable natural resources (fishing, livestock, forestry, cropping) production sectors. This new direction dictates promotion of sustainable use of ecosystems' production and services functions while enhancing mitigation and adaptability to climate change; development of financing mechanisms to allow such practices and demonstration of the economic performance of those green investments. Consequently in June 2014, the GOM finalized, with the support of the World Bank, a *Green Growth Policy Note*.⁴ The Policy Note guides the GOM's transition toward a more inclusive and green economic growth. An assessment of strategies and policies related to the natural resource base demonstrated that sustainable economic growth would very much depend on development of income-generating activities which rely on renewable resources.

B. Sectoral and Institutional Context

Sectoral Context

4. *Desertification and Land Degradation*: Mauritania is one of the Sahelian countries most severely affected by the periods of drought that have been occurring since 1968. The desert

² World Bank. *Note de Politique - La Transition vers une Croissance Verte Inclusive en Mauritanie*. Nouakchott, 2014.

³ World Bank. *Mauritania Economic Update*. Issue 1 (Report No. 90043). Washington DC, 2014.

⁴ World Bank. *Note de Politique - La Transition vers une Croissance Verte Inclusive en Mauritanie*. Nouakchott, 2014.

landscape now covers two-thirds of the country's land area. The impact of the droughts has been exacerbated by unsustainable human exploitation practices, resulting in fragmentation of natural habitats and loss of animal and plant species.

5. *Renewable Natural Resources:* The value of Mauritania's renewable natural resources (through fishery, agriculture, forestry and livestock holding) is estimated at 30 percent of the total national wealth stock.⁵ However, the condition of land, water, forests and biodiversity continues to deteriorate due to the combined effect of harsh climatic conditions and continued exploitation pressure such as deforestation for agriculture, timber and fuel needs and growing concentration of sedentary livestock in vulnerable areas. Added to this is weak environmental governance, i.e., institutional, material, financial and human resources available to the authorities in charge of environmental management. Despite these challenges, the existing natural resource potential can be harnessed to support progress towards achieving the goals of development and poverty reduction in the country.

6. *Gum Arabic Producing Ecosystems:* Geographically positioned at the frontline of the southward-expanding Sahara Desert, a transitional area between the Sahara and Sahel zones, Gum Arabic producing ecosystems span 16.5 million hectares (1,100 km in length and 150 km in width), north of the Senegal River Valley. They cover the administrative regions of Trarza, Brakna, Assaba, Guidimaka, Gorgol, Hodh Ech Chargui and Hodh El Gharbi. Mauritania was the second largest exporter of Gum Arabic with an average annual production of 5,700 tonnes between 1968 and 1972. Later, gum production dwindled as a result of droughts and over exploitation of gum, wood, food and fodder. At present, Gum Arabic production stands at about 500 tonnes annually.⁶ Gum Arabic is of both local and international use while demand on the global market has been rising.

7. Gum Arabic is produced from two tree species: Acacia Senegal and Acacia Seyal. Acacia Senegal, which is the more prevalent species in Mauritania, produces higher gum quality. Both species are known to help fight desertification due to their adaptability to arid environments and easy establishment, as well as soil enriching and soil and water retaining qualities. Gum Arabic is usually obtained in open access sylvo-pastoral land, but it has also been successfully planted on small scale agro-sylvo-pastoral land (agroforestry). Two harvesting techniques are commonly used: extensive low impact gathering and more destructive "deep bleeding". Acacia Senegal is a protected species according to Forest Law No. 97-007 of January 20, 1997. However, in practice low impact gum gathering is accepted and development programs covering Gum Arabic production have been allowed.

8. The gum production sector currently faces a number of constraints at both local and national levels: local constraints are related to the production systems and their economic characteristics, as well as weak socio-economic status of communities leading to opportunistic behaviors, cultural practices and ecological constraints; national constraints include disorganized marketing channels, the absence of a suitable marketing financing structure, lack of research and

⁵ World Bank. *Mauritania: Counting on Natural Wealth for a Sustainable Future*. Policy Research Working Paper No. 6887. Washington DC, 2014.

⁶ MEDD. *FAO 2010, Etude de la filière Acacia Sénégal et Acacia Seyal pour la production de gomme arabique*. Nouakchott, 2014.

personal capacity to develop locally suitable production technologies, improper data management, and low quality extraction techniques.

Institutional Context

9. Mauritania is divided into 13 administrative regions (*wilaya*), each headed by a governor. Each region is divided into departments (*moughataa*, 53 in total), headed by a prefect (*hakim*). The departments are again divided into 216 local governments, of which 53 are classified as urban and 163 are rural according to common classification. The regions and departments act as both the representatives of the state at the local level and as the local authority. As such, they are provided with responsibilities to oversee and coordinate development activities in their territory, and they are financed by the state. Effective decentralization in Mauritania and the building of local government capacities have been constrained by systems weaknesses, ambiguities in functional assignments and fiscal stress at the local government level. The 2010 “Declaration of the Policy of Decentralization and Local Development” has guided the GOM in addressing these constraints, dictating legal, institutional and fiscal reforms. In 2012, the GOM initiated the formulation of the National Integrated Program for Decentralization, Local Development and Employment (PNIDDLE) in support of the decentralization process: the first phase of the PNIDDLE, focusing on capacity support to national, regional and local level institutions, has been financially supported by a World Bank-funded Local Government Development Project (LGDP, 2013-2019).

10. The Ministry of Environment and Sustainable Development (MEDD) is the entity in charge of environmental management services. MEDD prepares and implements government policies for environmental protection. At the technical level, MEDD includes a number of technical directorates in charge of nature protection (DNP), protected areas, coastal environmental control, planning coordination and information management, and pollution management. Environmental assessment is overseen by MEDD’s Environmental Control Department, which enforces the government’s environmental evaluation policy. MEDD has regional representation through Regional Delegations of the Environment; they are recipients of support from the LGDP, which includes a set of capacity supporting activities to strengthen their mandate and capacity for service delivery.

11. Despite a firm political will to combat desertification and sustain the country’s natural resources, past regional and national efforts have been mostly unsuccessful due to climatic events, weak civil capacity and widespread poverty. In 1980, the Permanent Inter-State Committee for Drought Control in the Sahel (CILSS) designed a drought control and development strategy for its member countries, with the main objective of promoting food self-sufficiency and environmental balance. However, implementation of the strategy did not have the anticipated results because of the complexity of the desertification problem and countries’ weak implementation capacities. Consequently, the GOM decided to incorporate desertification control and sustainable management of its natural resources into an overall sustainable development process: a broad range of planning and management tools were developed, including (i) the National Action Plan to Combat Desertification (PAN-LCD), (ii) the National Strategy for Sustainable Development (NSSD), the National Action Plan for the Environment (NAPE) and various donor-supported projects aimed at ensuring sustainable conservation and development of natural resources. However, most initiatives have failed to meet expectations due to weak implementation, management, and monitoring and evaluation capabilities.

C. Higher Level Objectives to which the Project Contributes

12. The project is one of eleven investments under the GEF/World Bank Sahel and West Africa Program in Support of the Great Green Wall Initiative (SAWAP).⁷ The GEF has provided support to the SAWAP in the amount of US\$100.8 million for participating West African and Sahelian countries to expand sustainable land and water management and adaptation in targeted landscapes and in climate vulnerable areas. The program supports the implementation of a country-driven vision for integrated natural resource management for sustainable and climate resilient development in the Sahel region. The program is one of the contributions to the Great Green Wall Initiative, which was adopted by the Assembly of the African Union in January 2007. The Initiative's goal is to address land degradation and desertification in the Sahel and Sahara, boost food security, and support communities to adapt to climate change.

13. The project supports the World Bank Group's corporate goals of ending extreme poverty and boosting shared prosperity by improving the quality of life and resilience of the most vulnerable and poorest communities in the targeted three regions; and providing them with sustainable livelihoods opportunities using their natural resource assets.

14. The project contributes to the World Bank Group's action priorities as outlined in its Environment Strategy for 2012-2022⁸; in particular, it finances actions that test the market's willingness to encourage protection of critical habitat areas while also providing carbon storage benefits, and invests in innovative work on forests and land use linked to the Reducing Emissions from Deforestation and Forest Degradation (REDD+) program. Both actions are expected to support greener, more-inclusive growth and poverty reduction while protecting biodiversity and ecosystems, which is the focus of the World Bank's Green Agenda. From a regional perspective, the project and the SAWAP as a whole support the goal of improving African people's food, income, and livelihood security.

15. The project is consistent with the World Bank's Strategy for Africa (March 2011). Within its Second Pillar "Vulnerability and Resilience", the World Bank harnesses its comparative advantage in building resilience to the cumulative effects of several shocks such as food shortages and climate change through financial support, knowledge, global experience and technical assistance. In particular, the Strategy establishes that the World Bank will provide knowledge, finance, advocacy and convening power in helping countries adapt to climate change. At the national level, the project is consistent with the World Bank/IFC/MIGA Country Partnership Strategy (CPS) for FY2014-2016 (Report No: 75030-MR) for Mauritania, which was discussed by the Board of Executive Directors on October 1, 2013. In particular, the project contributes to CPS Pillar One "Growth and Diversification", which aims at increasing productivity and expanding the productive base of the economy as well as helping to unleash the potential of the

⁷ The SAWAP is a second generation investment under TerrAfrica. The participating countries are Benin, Burkina Faso, Ethiopia, Ghana, Mali, Mauritania, Niger, Nigeria, Senegal, Sudan and Togo. In addition, the program supports a regional project on "Building Resilience through Innovation, Communication and Knowledge Services" (BRICKS). For more information, go to <http://www.terrafrica.org/great-green-wall/>.

⁸ *Toward a green, clean, and resilient world for all: a World Bank Group environment strategy 2012 - 2022*. Washington DC; World Bank. <http://documents.worldbank.org/curated/en/2012/05/18119837/toward-green-clean-resilient-world-all-world-bank-group-environment-strategy-2012-2022>.

agriculture sector. The project is included in the operational activities of the CPS under Outcome 7 “Resilience to climate change integrated in Mauritania’s overall development agenda” since it introduces sustainable land management (SLM) measures, integration of ecosystems and biodiversity valorization in land management, and integration of climate-induced risk mitigation measures in farming practices.

16. While the Great Green Wall Initiative is consistent with GEF’s mandate under the Focal Areas of land degradation (LD), climate change mitigation, biodiversity (BD) and international waters (IW), the project is consistent in specific with the GEF-5 (GEF 5th envelope) LD and BD strategies as well as the sustainable forest management (SFM) strategies. In particular, the project is aligned with the GEF LD-3 objective of reducing pressures on natural resources by managing competing land uses in the wider landscape, and specifically with Outcome 3.2 concerning the integrated landscapes management practices adopted by local communities. The project is also aligned with the GEF BD-2 objective of mainstreaming biodiversity conservation and sustainable use into production landscapes, seascapes and sectors, and specifically with Outcome 2.1 concerning the increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation. Finally, the project is aligned with SFM-1 objective of reducing pressures on forest resources and generating sustainable flows of forest ecosystem services, and specifically with Outcome 1.2 concerning good management practices applied in existing forests. Although not specifically targeted, the project also has links with the GEF-5 focal area strategies of: i) Climate Change, by enhancing carbon sequestration through promotion of Gum Arabic tree production; ii) International Waters, by promoting the establishment of a tree barrier between the southward expanding Sahara Desert and the international Senegal River Basin; and iii) Cross-Cutting Capacity Development, by supporting various Sustainable Landscape Management capacity building, communication and ecological monitoring and evaluation (M&E) activities involving government and non-governmental agencies at national and local levels.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

17. The Project Development Objective (PDO) is to strengthen sustainable landscape management in targeted productive ecosystems in Mauritania.

18. Sustainable landscape management is defined as the use of land and water resources, taking into account both the needs of production and service functions of the ecosystem within the larger landscape. The project’s targeted productive ecosystems are degraded ecosystems with high potential for preservation and regeneration of Acacia Senegal and Acacia Seyal. The project targets respectively the following production and services functions of these ecosystems: i) Gum Arabic, other non-timber forest products and fodder production; and ii) biodiversity conservation, water and soil conservation and vegetation and soil carbon storage.

B. Project Beneficiaries

19. The project will focus on the regions of Trarza, Brakna and Gorgol, targeting 39 communes with a total beneficiary population of 480,000, 52 percent of whom are female. These regions were

selected on the basis of their landscape characteristics, poverty levels and the experience and complementarity with other programs of similar objectives. Project direct beneficiaries of a total of 160,000 (a third of the targeted areas' total population) are inhabitants of targeted communes benefitting from knowledge building and knowledge sharing products (workshops and training, radio programs, documentary movies, newsletter) and SLM investment activities supported by the project. As the targeted rural communes in these regions experience major migration movements, in particular of male individuals towards urban areas, both inside and outside the country (e.g. Mali and Senegal), the remaining women taking care of the household and agricultural activities will be the prime beneficiaries of the project.⁹

C. PDO Level Results Indicators

20. The achievement of the PDO will be measured by the following results indicators:

- (a) Land area where sustainable land management practices have been adopted as a result of the project (hectares) (Core Sector Indicator)
- (b) Average vegetation cover in intervention areas¹⁰ (%)
- (c) Project beneficiaries (number) of which female (percentage) (Core Indicator)

III. PROJECT DESCRIPTION

A. Project Components

21. The project focuses on promoting sustainable landscape management practices for the regeneration of productive ecosystems, with special emphasis on Acacia species producing the Gum Arabic. These activities are expected to enhance biodiversity, water and soil conservation and vegetation and soil carbon storage on the one hand, and improve the livelihoods resilience of communities involved in the production and sale of Gum Arabic and other sought after natural products (non-timber forest products and fodder), on the other. The latter is expected to strengthen the sustainability of supported SLM practices. The project also aims to enable the development of a sustainable Gum Arabic value chain by enhancing access to commercial markets. The project will monitor the changes in ecosystem productivity and services as a result of various SLM practices supported by the project, and disseminate results and lessons learned to other projects under the SAWAP.

22. The project will be implemented over five and a half years (2015-2021). Project-financed activities are grouped into the following three components: (i) Component 1: Sustainable Landscape Management Knowledge, Governance and Partnerships; (ii) Component 2: Sustainable Landscape Management Practice; and (iii) Component 3: Project Management. Following is a summary of the three components. For further details, see Annex 2.

⁹ *Etude Socio-économique de la filière Acacia Senegal et Acacia Seyal pour la production de la gomme arabique.* Nouakchott, 2014.

¹⁰ Vegetation cover change of the soil represents a proxy for enhanced management of all three environmental services targeted by the Project: biodiversity conservation, soil and water conservation, and vegetation carbon storage.

Component 1: Sustainable Landscape Management Knowledge, Governance and Partnerships (US\$1.31 million)

23. Expected outcome: Strengthened SLM knowledge base among various stakeholders, an improved governance system and more effective partnerships to support the development of the sector.

24. Knowledge, governance and partnerships among stakeholders (national and local government agencies, local communities, non-profit organizations and the private sector) involved in SLM in general, and in the Gum Arabic value chain in particular, will be enhanced via the following sub-components:

25. Sub-component 1.1: Building Sustainable Landscape Management Capacity, Governing Tools and Knowledge Sharing: Institutional and capacity support will be provided to relevant national and local governmental agencies to enhance their ability to mainstream principles of SLM into the valorization and regeneration of degraded ecosystems, with special attention to degraded Gum Arabic ecosystems. Communities involved in Gum Arabic production will receive relevant training. The project will also support MEDD in formulating a number of governance tools, finance awareness raising activities on social and environmental requirements, support regional exchanges between targeted local SLM associations, workshops and outreach activities, and develop knowledge sharing products to reach a larger audience and make the knowledge accessible.

26. Sub-component 1.2: Strengthening Monitoring of Ecosystem Services: The MEDD, in specific the Department of Planning, Intersectoral Coordination and Data, and local partners will receive technical and financial support from project funds, that would allow them to monitor changes in production of Gum Arabic and other non-timber forest products and fodder, and changes in biodiversity conservation, water and soil conservation, and vegetation and soil carbon storage capacity using a participatory approach. To achieve this, the project will finance and put in place a monitoring system to enable the evaluation of the impact of the various SLM practices supported by sub-component 2.1.¹¹ The results of the impact evaluation under this sub-component will guide further project-funded SLM investments, and will be disseminated by MEDD to communities involved in SLM practices. This sub-component will also support a more in-depth assessment of the geographic distribution of Gum Arabic producing ecosystems and the potential for future up-scaling of regeneration practices in terms of water availability. In addition, this sub-component will support the acquisition of some necessary materials, equipment and vehicles for access, aimed at facilitating the operationalization of the M&E system and the monitoring of project activities in the three participating remote regions where the project will be implemented.

27. Sub-component 1.3: Enabling Development of a Sustainable Gum Arabic Value Chain: This sub-component initiates the development of a sustainable Gum Arabic value chain by evaluating the current situation and making policy and regulatory recommendations for improvement, which will subsequently be submitted to the GOM for validation.

¹¹ The proposed system will be part of the national environmental data management system, currently implemented in the context of the Improving the Sahelian Populations' Resilience to Environmental Changes Project (REPSAHEL) by the Sahara and Sahel Observatory (OSS) for the benefit of the MEDD, and funded by the Swiss Agency for Development and Cooperation (SDC).

Component 2: Sustainable Landscape Management Practice (US\$3.26 million)

28. Expected outcome: Strengthened management of Gum Arabic producing landscapes, and enhanced integration of SLM considerations in local development planning in the regions of Trarza, Brakna and Gorgol.

29. Component 2 supports investments in SLM practices in degraded Gum Arabic producing ecosystems and their integration into local development planning, for mutual reinforcement. The objective is to promote and evaluate various SLM practices which aim to recover degraded Gum Arabic ecosystems. By increasing the productivity of Gum Arabic through regeneration and conservation, and exploitation control activities as well as enrichment of other dwindling and sought after woody and herbaceous species that produce non-timber forest products and fodder, the component is expected to result in enhanced biodiversity, soil and water conservation, and vegetation and soil carbon storage. Within the regions of Trarza, Brakna and Gorgol, a list of 116 sites with strong regeneration potential has been pre-identified for SLM interventions; this list will be further narrowed to 60 sites of around 50 hectares each through consultation with local governments and communities. Special awareness and promotional material targeting women will be developed to create demand and increase the number of women benefiting from the investment activities.

30. Sub-component 2.1: Investing in Sustainable Landscape Management: This sub-component provides sub-grants to targeted communes to finance SLM investments in the selected 60 sites along two categories of sub-projects: (i) Participatory SLM investments which support the regeneration of degraded Gum Arabic producing ecosystems; and (ii) Investments which respond to immediate local needs and enhance sound environmental management of land and water resources; activities under this category will only be funded in conjunction with the first category investments and not as stand-alone.

Types of SLM sub-projects supported by the project

Category 1: Participatory SLM investments
<u>Exploitation control:</u>
<ul style="list-style-type: none"> Fencing and/or guarding of plots
<u>Regeneration of Gum Arabic producing tree species:</u>
<ul style="list-style-type: none"> Establishment of Gum Arabic tree nurseries Planting of juvenile Gum Arabic trees in plots
<u>Enrichment/revegetation with other indigenous woody species for non-timber products:</u>
<ul style="list-style-type: none"> Establishment of tree nurseries with e.g., <i>Adansonia digitata</i>, <i>Ziziphus Mauritania</i>, <i>Ziziphus Mauritanica</i>, <i>Commiphora Africana</i>, <i>Sclerocarya birrea</i>
<u>Enrichment/revegetation with indigenous herbaceous species for fodder production: <i>Panicum turgidum</i>, <i>Aristida pungens</i></u>
<u>Soil and water conservation practices:</u>
<ul style="list-style-type: none"> Stone bunds, half-moon structures, traditional mini-water catchment practices (Zai), sand dune fixation, gully stabilizing measures (reshaping, filling, revegetation), riverbank repair (structural support, revegetation).
<u>Bush-fire control/prevention measures (<i>par feux</i>)</u>

Category 2: Immediate local support Community Sub-projects¹²
<u>Enhancement of vegetable gardening:</u>
<ul style="list-style-type: none"> • Establishment of vegetable gardens • Improving planting practices
<u>Improvement of watering facilities:</u>
<ul style="list-style-type: none"> • Repair of existing water pumps • Small-scale irrigation measures (new shallow water wells)
<u>Provision of improved fuel stoves and/or gas burners and solar energy equipment</u>
<u>Establishment of local community boutiques to sell natural products</u>
<u>Support income generating activities (dairy, fish farming, beekeeping, etc.)</u>

31. Sub-component 2.2: Integrating Sustainable Landscape Management Practices in Local Development Planning: This sub-component supports the integration of project objectives and activities into local communal plans for mutual reinforcement, in collaboration with the LGDP and the just-approved (May 26, 2015) Regional Sahel Pastoralism Support Project (PRAPS). Up to six sub-regional local development plans integrating SLM, each one concerning a number of communes in one of the regions Trarza, Brakna and Gorgol, will be developed while building on previous efforts where possible.

Component 3: Project Management (US\$1.59 million, of which GEF: US\$0.24 million and Government in-kind contribution: US\$1.35)

32. Expected outcome: Effective project management and M&E.

33. This component provides project management support to the MEDD by financing: (i) a project management and administration training workshop, including procurement; (ii) a project launch workshop; (iii) the hiring of an M&E consultant and a technical advisor for capacity enhancement within the MEDD; (iv) hiring of an external auditing firm to carry out annual external audits; and (v) operating costs associated with project management at the central and local levels (preparation of annual work plans, procurement plans and budgets, coordination of activities, preparation of progress and financial reports, procurement and financial management). Project management will be augmented with civil servant staff (project coordinator, two assistants and technical staff).

B. Project Financing

34. The project's total cost is US\$4.81 million, financed by a GEF grant. In-kind co-financing will be provided by the Government of Mauritania in the amount of US\$1.35 million, which represents the cost of the Project Management Unit's civil servant staff (project coordinator, two assistants and technical staff from the MEDD information and administrative departments), Regional Coordination Units' (RCU) staff, project premises, utilities, a vehicle for overall coordination which will be assigned to the project for its duration and the operational expenses of the vehicles to be provided to facilitate the ecological monitoring sub-component. Complementary investments in the project areas will be provided by the ongoing IDA-funded LGDP and the PRAPS, estimated at US\$11.22 million and US\$6.63 million respectively. See Annex 5 for further details on project financing.

¹² This list is exhaustive.

C. Project Cost and Financing

Project Components	Project Cost		Financing (%)	
	GEF Financing (US\$ million)	Government of Mauritania	GEF	Government of Mauritania
1. Sustainable Landscape Management Knowledge, Governance and Partnerships	1.31		21	
2. Sustainable Landscape Management Practice	3.26		53	
3. Project Management	0.24	1.35	4	22
Sub-Total	4.81	1.35		
Total Project Costs	6.16		78	22

D. Lessons Learned and Reflected in the Project Design

35. The design of the project conforms to the SAWAP's defined targets, i.e., increase in land area with sustainable land and water management practices, increased vegetation cover, and increase in carbon accumulation rates in biomass and soil. The SAWAP is also influenced by lessons from the United Nations Environment Program's (UNEP) In-situ Conservation of Wild Crop Relatives through Enhanced Information Management and Field Application Project on linking agriculture, food security and biodiversity interventions. While the SAWAP country projects have not produced lessons as of yet (being in an early implementation phase), lessons from other SLM projects in the region and from the Mauritania Community Based Watershed Management Project (PACV, closed in March 2013) were used in the design of the proposed project. The key lessons are as follows:

- (a) *Success of SLM interventions is more likely under an integrated approach which combines investments in landscape management and income generating activities, since the latter reduces pressure on natural resources and sustains SLM practices in the long term.* This lesson is reflected in Component 2, where some of the identified SLM investments (category 1) will also support livelihoods (such as planting of tree nurseries); in addition, immediate needs investments (category 2) that contribute to communities' livelihoods in the short term has been agreed on.
- (b) *Maintenance of ecosystem services and production functions is more likely through ongoing evaluation of SLM practices' cost effectiveness.* The project will finance an analysis of the socio-economic status of the Gum Arabic value chain, including cost effectiveness analysis of SLM of Gum Arabic ecosystems under Component 1.
- (c) *For the gum producing sector in specific, mechanisms for broad community member engagement, including women, youth and marginalized groups, should be identified from the outset, thus allowing for equitable access to- and benefit from project interventions.* Local level interventions will be facilitated by Regional Coordination Units which will sensitize communities on project activities and help them participate in and benefit from SLM sub-projects. Special awareness and promotional material targeting women will be developed to create demand and increase the number of women benefiting from the investment activities.

- (d) *Once communities are organized in associations and are open to innovation, they stand to benefit from extension advice on increasing yields through SLM practices, taking both the ecosystems services and production functions into account.* Especially in the maintenance phase, close follow-up and technical and sometimes financial backstopping are critical. The local population has a considerable and continuous need for learning on an extensive range of subjects, from technical to administrative matters. Local SLM investments under Component 2 will be planned, designed and implemented by the targeted communes, through the regional and communal structures, with the assistance of specialized public and private sector providers.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

36. The project will be implemented by the MEDD, through the DNP. Project coordination and monitoring tasks will be carried out by a Project Management Unit (PMU) anchored in the MEDD. The PMU will comprise a core team of DNP staff, and staff from other MEDD units. The PMU will be led by the DNP Director who will act as Project Coordinator, and include at minimum: (i) a natural resource management (NRM) and biodiversity specialist to also act as Deputy Coordinator; (ii) a communication and gender specialist; (iii) an environmental and social safeguard specialist; (iv) a M&E specialist; (v) a procurement specialist; and (vi) a financial management (FM) specialist. The procurement and FM specialists will be from MEDD's administrative and financial department, and work under the direct supervision of the Chief Financial Officer.

37. The PMU will employ a part time technical advisor/environmental specialist and a full time agro-forestry specialist and other consultants as needed to provide technical assistance to the PMU and RCUs for tasks related to monitoring of ecosystem services under Component 1 and SLM investments under component 2, as well as to the beneficiaries for the identification and implementation of sub-projects, in sub-component 2.1.

38. At the local level, project coordination will be carried out by three RCUs – one in each of the three intervention regions of Trarza, Brakna and Gorgol. The RCUs will comprise decentralized MEDD staff who will report to the PMU, and work in close collaboration with the hakims and mayors of communes located within the project intervention areas. Each RCU will be headed by a local MEDD Delegate and assisted by a hired Administrative and Financial Assistant. The RCUs will represent the PMU at the regional level and coordinate all activities in the field. The members of the RCU will more specifically support and supervise the implementation of the local community investments, oversee the preparation of the community and municipal plans, support and coordination, and coordinate data collection for the project M&E system. Regional technical facilitators will be identified and mobilized by the RCUs if needed.

39. The project will be overseen by a broad, multi-stakeholder National Steering Committee (NSC). The NSC will be in charge of policy guidance, review and approval of annual work plans and budgets, financial and program performance assurance, and ensuring a uniform understanding of project activities by all stakeholders. The PMU will act as the Secretariat of the NSC, which

will meet every six months. For further detail on institutional and implementation arrangements, see Annex 3.

B. Results Monitoring and Evaluation

40. M&E will be carried out at three integrated levels, i.e., *at the project level*, looking at the performance of the project in general and per component in accordance with the project results framework (See Annex 1); *at the GEF Focal Area level* by tracking performance using the Biodiversity, Land Degradation, and Sustainable Forest Management tracking tools, and *at the ecosystem level*, evaluating productivity and services functions' changes as a result of various combinations of SLM practices and disseminating results to a wide audience of SLM practitioners.

41. The project's M&E Manual has been prepared with the support of the Sahara and the Sahel Observatory (*Observatoire du Sahara et du Sahel*, OSS) and the SAWAP knowledge and information support project (Building Resilience through Innovation, Communication and Knowledge Services, or BRICKS). The Manual describes the methodologies for information gathering, analysis and dissemination, training needs, administrative tasks, responsibilities and timelines for M&E and reporting at all three levels.

42. The PMU will have the overall M&E and reporting responsibility, including for the GEF tracking tools, which have been integrated in the Project M&E Manual. During the first year it will receive M&E capacity reinforcement by a hired M&E consultant, who will conduct training for the relevant MEDD functions, who will then take over this responsibility. Progress on the ground in the three targeted regions will be tracked through the RCUs, NGOs and community members, who will receive technical assistance and capacity building support for this purpose through a special arrangement with OSS and the SAWAP/BRICKS project. For further information on project M&E, see Annex 2 and Annex 3.

C. Sustainability

43. The project is designed to ensure institutional, financial, social and environmental sustainability of investments. Institutional sustainability will be achieved by increasing the capacity of national and local entities responsible for Gum Arabic production and marketing at both national and local levels, strengthening data management using existing data management systems, and promoting local partnerships. With regard to regional landscape management planning, emphasis will be put on strengthening existing plans and merging new plans into existing community plans; communities will be enabled to implement the agreed plans through tailored training, including training for Gum Arabic producing communities on best practices of selection and conservation of Gum Arabic tree seeds and of Gum Arabic harvest and storage methodologies. Importantly, the project will finance the review of policy, legislative, regulatory and financial frameworks to identify opportunities for sustainable reform along the gum value chain. Boosting the Gum Arabic value chain and enhancing income generation for involved stakeholders will ensure the financial sustainability of SLM investments. Emphasis will be put on empowering local communities, of which 52 percent are women, to better integrate in the value chain, thereby economically enhancing their livelihoods. Finally, environmental sustainability is at the center of project design, focusing on biodiversity conservation, land and water resource conservation, combating desertification and enhancing carbon storage.

V. KEY RISKS AND MITIGATION MEASURES

A. Risk Rating Summary Table

Risk Categories	Rating
Political and Governance	Moderate
Macroeconomic	Moderate
Sector strategies and policies	Low
Technical design of project or program	Low
Institutional capacity for implementation and sustainability	Substantial
Fiduciary	High
Environmental and Social	Moderate
Stakeholders	Substantial
Other: Program and Donor	Low
Overall	Substantial

B. Overall Risk Rating Explanation

44. The overall project risk rating is *Substantial*. Institutional capacity risk is rated *Substantial* due to MEDD's lack of extensive experience in implementing World Bank-funded projects. This risk is partly mitigated by the similarity of the project's technical approach to that of the Community Based Watershed Management Project (closed in 2013), in which MEDD was closely involved during the period 2006-2013. In addition, the LGDP (approved in May 2013) is expected to strengthen the role of the Department of Environmental Control in MEDD in overseeing project safeguard compliance. MEDD also has the basic infrastructure to undertake ecological monitoring and surveillance activities. Another risk relates to the institutional set-up, whereby the project is anchored at the central level while implementation of key activities will take place at the local level, where there is an obvious lack of human and financial resources and capacity. To mitigate this risk, local-level activities will be coordinated by the RCUs (one in each intervention region), who will receive technical and safeguard-related training to perform this task. Fiduciary risk is rated *High* since the MEDD has no previous extensive experience in implementing World Bank - funded projects and does not have strong financial management and procurement teams. Action plans have been prepared to mitigate identified financial management and procurement weaknesses, including by, designing and conducting training workshops. Stakeholder risk is rated *Substantial* due to the multiplicity and overall low capacity of project stakeholders, which include governmental entities, local municipalities, NGOs, village communities, inter-village associations, civil society and the private sector, to manage the relatively new landscape approach in dealing with natural resources management. The assessment of stakeholder capacity translated into the development of a multitude of institutional strengthening and capacity building activities under Component 1; and the integration of sustainable landscape management practices in local development is to be considered learning by doing, or on the job training.

45. The environmental and social risk is rated *Moderate* since the conditions in which the project will operate are conducive in terms of social acceptance and willingness to engage in the project, and the adaptability of the Acacia trees to the prevailing natural conditions. The project is not expected to pose significant negative social or environmental risks, but rather have minimal adverse impacts which are easily identified, minimized and mitigated by simple interventions. In terms of climate change risks, the historic climate variability and projected climate change in the area adds to the challenges faced by local communities and the environment; climate variability and change in the Sahel has impacted agriculture and land-use, ecosystems and biodiversity, human settlements, diseases and health, and hydrology and water resources. Against this backdrop, the project's approach toward landscape management is considered an essential intervention for sustaining a range of ecosystem services that are directly linked to people's livelihoods.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

46. The project is composed of two main components aimed at preserving and regenerating targeted ecosystems in three Mauritanian regions, through expansion and strengthening of selected SLM practices. SLM practices planned in Component 2 are expected to increase the productivity of Acacia Senegal trees existing in the targeted areas by 50 percent and cause new introduced plants to produce Gum Arabic 33 percent more than the existing trees, thereby significantly increasing the sector value chain creation and income generation for the intended project beneficiaries. Financial and economic analyses conducted for the project focus on a cost-benefit analysis and zeroes in on SLM investments financed under Component 2. The analyses cover 30 years, including five years of project implementation, and take into account only quantifiable benefits and costs streams. The financial viability of productive investments and the economic attractiveness of the project at the country level are verified through the computation of Net Present Values (NPVs) and Internal and Economic Rates of Return (IRR/ERR) and their comparison to the associated capital investment and the opportunity cost of World Bank funds, estimated at twelve percent. Results of the analyses are summarized below.

Financial Analysis		Economic Analysis	
IRR	NPV (in US\$)	ERR	NPV (in US\$)
15%	655,000	14%	342,000

47. **The project's overall expected contribution to the country's socioeconomic development.** In addition to the anticipated commercial revenues accruing to targeted local communities involved in the Gum Arabic industry, the project is expected to contribute to the preservation/creation of up to 7,200 local jobs. Over a 30 year period, the project is expected to generate US\$45,000 in total annual salary income for the project area.¹³ Furthermore, project activities aimed at supporting the sector ministry, local governments and associations and private sector actors involved in the Gum Arabic industry, through the development of sectoral governing

¹³ 10 percent of annual sale revenue based on past studies in Mauritania. Total estimated salary income generation over a 30 year span: MRO 438,000,000 (US\$1,350,000). Annual average: 1,350,000/30 = US\$45,000. The total annual salary income is lower in the initial years but is expected to increase from year six onwards, when the results of the enrichment and regeneration of degraded Gum Arabic producing ecosystems will start to fully materialize.

tools, partnerships, knowledge sharing and training, will catalyze stakeholders' energies to envision and develop a more ambitious program of reviving the Gum Arabic sector, building on the results and lessons learned from the project.

48. **The rationale for public sector provision:** The involvement of the public sector in Mauritania is critical for a number of reasons. Formal market economies have limited suitability in protecting the global environment. It is therefore important that the Government helps foster a more conducive environment to sustainable economic development and use of natural resources. Moreover, given the country's vulnerability to climate change variability, and associated devastating impacts, as exemplified by the threatening advance of sand dunes and their negative effects on the environment, the livelihoods of local communities and on the entire country's economy, the GOM has an important role to play in the transition to a more sustainable and stable economic development. This project recognizes the important role the public sector has in the achievement of the broad objective of ensuring equitable distribution and access to public services and valuation of ecosystem services. Further, public sector leadership is essential because protected areas and communal lands in Mauritania are vested in government ownership.

49. **World Bank's value added.** The World Bank's added value is substantial, encompassing capacity building, technical expertise, coordination support, and channeling global knowledge. For the project, this will include direct technical expertise through intensive implementation support; support for the coordination required, through a Bank team that incorporates members from all relevant sectors; and the channeling of global knowledge through connections to World Bank teams and counterparts working on similar projects (past or present) in other low-middle income or fragile states. The project is also part of the World Bank's commitment to the SAWAP, which supports the Great Green Wall Initiative endorsed by the Sahel Heads of State. Additionally, the project builds on the TerrAfrica Platform for SLM. TerrAfrica is an African-driven global partnership program to scale up sustainable land and water management across sectors in over 23 sub-Saharan countries, by reinforcing investments, institutions and information at country and regional levels. The project is therefore a key building block in the World Bank's strategic and programmatic approach in addressing sustainable development, climate-smart agriculture and resilience across the Africa region. In this regard, the World Bank is bringing international expertise on SLM through the engagement in the SAWAP and TerrAfrica to benefit the project. For further details on the economic and financial analyses, see Annex 6.

50. **Value Added of GEF and Global Benefits.** Since degraded Gum Arabic producing ecosystems occur everywhere in the SAWAP region (the transitional zone between the Sahara Desert and the Sahel region), the project's development and environmental impacts are likely to significantly surpass its lifespan and geographic reach. In Mauritania, degraded Gum Arabic producing ecosystems are geographically positioned between the southwards expanding Sahara Desert and the biodiversity richer Senegal River Valley. As such, by promoting the establishment of a tree barrier, the project is expected to protect the Senegal River Valley against desertification, preserve biodiversity and enhance the condition of international waters. Results of the monitoring of changes in environmental services linked to varying SLM practices, best practices and lessons learned from the project will be broadly shared and disseminated within the SAWAP program (through the BRICKS) and more broadly via the Swiss Agency for Development and Cooperation (SDC) - funded Improving the Sahelian Populations' Resilience to Environmental Changes Project (REPSAHEL), a project which is implemented by the Sahara and Sahel Observatory (OSS).

B. Technical

51. The project design builds upon successful approaches and practices developed by the closed PACV and other donor-funded programs. It promotes participatory SLM practices, which take into account both the production and service functions of the ecosystems. As such, it addresses simultaneously social, economic and environmental concerns. By targeting ecosystems with high potential for regeneration of Gum Arabic tree species, it directly combats the expansion of the Sahara Desert. This transitional zone hosts relatively high numbers of people living in extreme poverty; integrated support to the development of a sustainable Gum Arabic value chain will, therefore, be of significant social and economic benefit.

52. SLM practices will include various combinations of interventions such as: i) temporarily controlling exploitation pressures (through fencing); ii) vegetation enrichment with young Gum Arabic tree species, other woody species sought for their non-timber products, and herbaceous species for fodder; and iii) soil and water conservation practices. These practices enhance the services function of the ecosystems in terms of water and soil retention, biodiversity preservation and carbon storage capacity while simultaneously enhancing the production of Gum Arabic, and other non-timber forest products and fodder. In addition, specifically related to Gum Arabic production, training will be given on how to improve seed selection, harvesting and storage technologies.

53. The project includes a robust monitoring component, embedded in the national environmental data system, which would allow the evaluation of the cost-effectiveness of SLM practices. Through collaboration with the BRICKS, the project will share good practices among the other eleven SAWAP projects. Since such ecosystems occur in all countries under the Great Green Wall Initiative, the replication potential of project achievements is high.

C. Financial management

54. An assessment of the FM capacity of the MEDD was conducted in accordance with World Bank requirements under OP/BP 10.00 and the financial management (FM) manual. A qualified financial officer and an accountant team already in place are handling MEDD's FM tasks, however they are unfamiliar with World Bank procedures. The implementing agency (MEDD) has no previous extensive experience in implementing World Bank - funded projects and does not have a strong FM team. The FM capacity of the MEDD presents the following weaknesses: (i) lack of experience of the FM team in place; (ii) lack of accounting software; (iii) weak internal control function: lack of internal audit; and lack of financial, administrative and accounting procedures manual. A number of actions have been agreed on to mitigate the above-mentioned risks; these include (i) developing a manual of financial, accounting and administrative procedures prior to effectiveness; (ii) recruiting a qualified accountant satisfactory to the World Bank within one month after effectiveness; (iii) acquiring a well set up accounting software; and (iv) recruiting a part-time internal auditor within four months after effectiveness. For further detail, see Annex 3.

D. Procurement

55. The procurement capacity assessment was conducted for the DNP and the Directorate of Administrative and Financial Affairs (DAF) of the MEDD, and the Public Procurement

Commission of the Rural Sector (CPMP-SR) that will be in charge of procurement activities. Both DNP and DAF have no significant previous experience in management of World Bank projects. Therefore, they will handle only contracts that amount to less than US\$33,000 equivalent. Any contract above US\$33,000 equivalent will be procured under law N° 2010-044 from 22/07/2010 on Public Procurement Code and implementing legislation, and thus by the CPMP-SR. An action plan was prepared to strengthen the capacity of DNP and DAF, including preparing a procurement manual, providing procurement training for the involved staff, and technical assistance in procurement will be hired to assist MEDD to manage the procurement processes in accordance with World Bank procurement guidelines. For further detail, see Annex 3.

56. Procurement under the project will be carried out in accordance with the World Bank's (i) "Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers", dated January 2011, as revised in July 2014; (ii) "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers", dated January 2011, as revised in July 2014; and (iii) "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006, as revised in January 2011, as well as the provisions stipulated in the Financing Agreement.

E. Social (including Safeguards)

57. The population in the three targeted districts is relatively young and accounts for almost a third of the population of Mauritania. It comprises a small majority of women due to inter and intra-regional migration of men in search of jobs, higher growth rate and a higher average household size, giving them a more prominent role in the management of natural resources. The project is expected to strengthen traditional systems of environmental and social management, empower local governance structures and CSOs by providing them with tools and mechanisms for environmental management. Targeted communities are expected to benefit from increased income from Gum Arabic production, and increased involvement in the entire value chain. Importantly, communities will assume a key role in local-level decision making and implementation of project-funded activities as a key elements of sustainability and social empowerment.

58. The project will not support land acquisition or physical relocation of people, but it may support activities that restrict access to resources within protected areas; therefore, the project triggers OP/BP 4.12 on Involuntary Resettlement. Accordingly, the GOM has prepared a Resettlement Policy Framework (RPF, dated April 2015) which was disclosed in-country and at the InfoShop on June 4, 2015. The RPF outlines the activities necessary to consult with users about potential access restrictions, identifies potential losses as a result of the restrictions, and develops alternatives to offset these potential losses. The RPF details also the consultation process undertaken with relevant stakeholders.¹⁴ Where applicable, a simplified Resettlement Action Plan will be prepared.

F. Environment (including Safeguards)

59. The project has been designed with a view to maximizing environmental benefits in the target regions, with potential for additional positive environmental impact at the national, regional

¹⁴ See Annex 3.

and global levels. From an environmental perspective, the project is expected to promote restoration and conservation of natural resources through regional planning, capacity building and on the ground investments, thereby helping to prevent land erosion, enhancing habitat restoration, and regeneration of flora and fauna populations in both the short-and long-term. Increased vegetation cover will lead to greater carbon sequestration. Nonetheless, the project may invest in activities that have the potential for minimal adverse environmental impact, such as small-scale rehabilitation sub-projects or small-scale irrigation infrastructure (see Annex 2 for a list of potential investments and sub-projects). Adverse impacts from these small-scale operations are easily identified, minimized and mitigated by simple interventions. Therefore, the project triggers OP/BP 4.01 on Environmental Assessment (EA) and it is classified as an EA Category B project, requiring partial assessment. Accordingly, the Government prepared an Environmental and Social Management Framework (ESMF, April 2015), which screens potential investments for adverse environmental impacts, guides execution of any activities such that adverse impacts are avoided, minimized, and mitigated, and describes the standard mitigation activities for the types of project interventions possible. The ESMF was disclosed in country and at the InfoShop on June 9, 2015.

60. The project triggers OP/BP 4.04 on Natural Habitats due to expected (positive) changes in management of natural habitats in the targeted areas; OP 4.36 on Forests is triggered due to forest management activities funded by the project, which are expected to improve the management and status of forests in the three project areas; OP/BP 4.09 on Pest Management is triggered because investments in re-vegetation and agroforestry activities may require the use of pest control methods and pesticides management on the part of local producers; and OP/BP 4.11 on Physical Cultural Resources is triggered to reflect the possibility that artifacts could be revealed during field work. To address OP/BP 4.11, the ESMF includes a clause of "Chance Find" that will be included in the companies' contracts in case any chance finds occurs. The Pest Management Plan (PMP, February 2015) is based on the PMP of the Agriculture Development and Food Price Response Project (Additional Financing, P128994), was disclosed in country and at the InfoShop on June 4, 2015.

G. World Bank Grievance Redress

61. Communities and individuals who believe that they are adversely affected by a World Bank - supported project may submit complaints to existing project-level grievance redress mechanisms or the World Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the World Bank's independent Inspection Panel, which determines whether harm occurred, or could occur, as a result of World Bank non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and World Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate GRS, please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

Annex 1: Results Framework and Monitoring
Mauritania: Sustainable Landscape Management Project under the SAWAP (P144183)

Project Development Objective (PDO): to strengthen sustainable landscape management in targeted productive ecosystems in Mauritania.												
PDO Level Results Indicators	Core	Unit of Measure	Base-line	Cumulative Target Values					Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	YR5				
1. Land area where sustainable land management practices have been adopted as a result of the project	X	Ha	0	0	500	1000	2000	3000	Annual	National Environmental Services Monitoring System data and GEF tracking tools data of BD, LD and SFM based on direct observation and key-informants interview	MEDD, RCUs	Total targeted area under sustainable landscape management ¹⁵ supported by investments related to both agro-pastoral and agro-sylvo-pastoral lands.
2. Average vegetation cover in intervention areas ¹⁶	<input type="checkbox"/>	%	0	0	0	5	10	20	Annual (rainy season)	Line intercept method will be used and results reflected in the reports of the National Environmental Services Monitoring System	Local communities, RCUs, MEDD	Change in soil coverage, either by the canopy of woody species or herbaceous vegetation, in the targeted areas of sustainable landscape management investments.
3. Beneficiaries:	X	Number (%)	0	10,000 (20)	50,000 (25)	80,000 (35)	120,000 (45)	160,000 (52)	Semi-annual	Project reports	MEDD, RCUs	Direct beneficiaries: number of inhabitants of

¹⁵ Sustainable landscape management is defined as the use of land (including forests) and water resources, taking into account both the needs of production and service functions of the ecosystem within the larger landscape. The project targets respectively the following production and services functions of these ecosystems: i) Gum Arabic, other non-timber forest products and fodder production; and ii) biodiversity conservation, water and soil conservation and vegetation and soil carbon storage.

¹⁶ Change in vegetation cover of the soil represents a proxy for enhanced management of all three environmental services targeted by the Project: biodiversity, soil and water conservation and vegetation and soil carbon storage.

Project beneficiaries , of which female												targeted communes benefiting from knowledge building and knowledge sharing products (workshops and training, radio programs, documentary movies, newsletter) and investment activities of the Project, reaching an estimated 30 percent of the targeted areas' total population of 480,000.
INTERMEDIATE RESULTS												
Intermediate Result Indicators Component 1: Sustainable Landscape Management Knowledge, Governance and Partnerships												
<i>Intermediate Result Indicator One:</i> Stakeholders benefiting from knowledge building products provided by the project	<input type="checkbox"/>	Number	0	120	300	450	525	600	Semi-annual	Project reports	MEDD, RCU, training agencies/consultants	Stakeholders include: national and local government (100 total), regional NGO representatives (125 total), community representatives (300 total), Gum Arabic producers and private sector representatives and traders (75 total). Knowledge building products: workshops and training sessions.
<i>Intermediate Result Indicator Two:</i> An ecological monitoring system of Gum Arabic Ecosystems designed and institutionalized	<input type="checkbox"/>	Yes/No	No	No	Yes	Yes	Yes	Yes	Annual	Review of ecological monitoring data and data sources	Local communities, RCU, MEDD	The monitoring system will analyze changes in the Gum Arabic Acacia species ecosystem productivity and service functions linked to various SLM practices. Data will be provided by community participatory monitoring activities at the

												intervention sites (sub-component 2.1). This system will be integrated in the existing data gathering system of the MEDD.
Intermediate Result Indicators Component Two: Sustainable Landscape Practice												
<i>Intermediate Result Indicator Three:</i> Participatory SLM investment activities	<input type="checkbox"/>	Number	0	0	10	20	40	60	Annual	Project reports, financing agreements	RCUs	Number of participatory SLM investment activities implemented by the project to increase the total land area under sustainable landscape management in the three regions of intervention of the project.
<i>Intermediate Result Indicator Four:</i> Local needs investment activities	<input type="checkbox"/>	Number	0	0	20	40	80	100	Annual	Project reports, review of financing agreements	RCUs	Number of investments of immediate interest and benefits to the local community, promoting sound and sustainable environmental management.
<i>Intermediate Result Indicator Five:</i> Local development plans integrating landscape management approach	<input type="checkbox"/>	Number	0	0	0	2	4	6	Annual	Review of local development plans	RCUs, MEDD	Sub-regional local development plans integrating SLM, each one concerning a number of communes in one of the regions of Trarza, Brakna and Gorgol.

Annex 2: Detailed Project Description

Mauritania: Sustainable Landscape Management Project under the SAWAP

A. Project Development Objective

1. **The Project Development Objective (PDO)** is to strengthen sustainable landscape management in targeted productive ecosystems in Mauritania.
2. Sustainable landscape management is defined as the use of land and water resources, taking into account the needs of both the production and service functions of the ecosystem within the larger landscape. The project targets degraded ecosystems with high potential for preservation and regeneration of Gum Arabic producing tree species, *Acacia Senegal* and *Acacia Seyal*. These ecosystems are geographically positioned at the frontline of the southward-expanding Sahara Desert between the Sahara and the Sahel, covering a land swath of 16.5 million hectares (1,100 km in length and 150 km in width), located north of the Senegal River Valley. Annual rainfall ranges between 150 and 400 mm. This area hosts the majority of the country's livestock, primarily camels, cattle, goats and sheep. The production systems in this zone vary from sylvo-pastoral to agro-sylvo-pastoral, involving agricultural activities, livestock holding and collection and hunting of wood and non-wood natural products for shelter, food, fodder, medicinal purposes and household fuels.
3. Mauritania was the second largest exporter of Gum Arabic in the world with an average annual production of 5,700 tonnes between 1968 and 1972. Since the droughts of the 1970s, Gum Arabic production in Mauritania has dwindled, with additional pressure posed by growing human and livestock numbers in need of shelter, wood, food and fodder. At present, Gum Arabic production stands at about 500 tonnes annually.¹⁷ *Acacia Senegal* is the more prevalent Gum Arabic species in Mauritania, and is known to produce higher quality gum. Gum Arabic is harvested by the most vulnerable parts of the population (e.g., herders) in open access lands, usually as a supplemental source of income. It is of both local and international use, and demand in the global market has been rising.
4. The Gum Arabic production sector has been facing a number of constraints related to the degradation of the ecosystems; weak socio-economic status and organization of producing communities leading to opportunistic behaviors such as unsustainable harvesting and storage practices; disorganized marketing channels; absence of a suitable financing structure; and lack of research, data and capacity to develop suitable production technologies.
5. With focus on degraded Gum Arabic ecosystems, the project will finance SLM activities that address the needs of the production systems (in terms of production of Gum Arabic, non-timber forest products and fodder), and maintain and enhance three selected ecosystem services: biodiversity conservation, soil and water conservation, and vegetation and soil carbon storage. By improving the production and sale management of Gum Arabic and other sought after natural products (in particular non-timber forest products and fodder), the dual objective of SLM and more

¹⁷ MEDD. *Etude de la filière Acacia Sénégal et Acacia Seyal pour la production de gomme arabique*. Nouakchott, 2014.

resilient livelihoods is expected to be achieved. The project also aims to catalyze development of a sustainable Gum Arabic value chain to enhance the sector's access to commercial markets. Changes in ecosystem productivity and services linked to supported SLM practices and lessons learned from the project will be broadly shared within the overall Sahel and West Africa Program in Support of the Great Green Wall Initiative (SAWAP). Finally, since Gum Arabic producing ecosystems are present across the entire transitional zone between the Sahara and the Sahel, the project's development and environmental impacts are likely to surpass the project's geographic scope and lifetime.

B. Project Beneficiaries

6. The project will focus on the regions of Trarza, Brakna and Gorgol, while targeting 39 communes with a total population of about 480,000 (see Table 1), 52 percent of whom are women. These regions and communes were selected on the basis of their landscape characteristics, poverty levels and the experience and complementarity with other programs of similar objectives. About one third of this population is considered direct beneficiaries of the project (160,000). These include communities and civil society environmental organizations, who in addition to benefitting from investment activities, will engage in site selection processes (see sub-component 2.1), local development planning, capacity building activities, SLM implementation and knowledge sharing events. As the targeted rural communes in these regions have experienced migration, particularly of male individuals to national and international (Mali and Senegal) urban areas, the women who remain to take care of the rural household and agricultural activities are the prime beneficiaries of the project.¹⁸ Furthermore, representatives of relevant national and local governmental agencies and Gum Arabic private sector representatives will also benefit from these activities. For the project map, see Annex 7.

C. PDO Level Results Indicators

7. The achievement of the PDO will be measured by the following results indicators:
- (a) Land area where sustainable land management practices have been adopted as a result of the project (hectares) (Core Sector Indicator)
 - (b) Average vegetation cover in intervention areas¹⁹ (%)
 - (c) Project beneficiaries (number) of which female (percentage) (Core Indicator)

D. Project Description

8. The project will be implemented over five and a half years, and will include the following three components: 1. Sustainable Landscape Management Knowledge, Governance and

¹⁸ *Etude Socio-économique de la filière Acacia Senegal et Acacia Seyal pour la production de la gomme arabique.* Nouakchott, 2014.

¹⁹ Vegetation cover change of the soil represents a proxy for enhanced management of all three environmental services targeted by the project: biodiversity conservation, soil and water conservation, and vegetation carbon storage.

Partnerships; 2. Sustainable Landscape Management Practice; and 3. Project Management.

Component 1: Sustainable Landscape Management Knowledge, Governance and Partnerships (GEF US\$1.31 million)

9. Knowledge, governance and partnerships among stakeholders (national and local government agencies, local communities, non-profit organizations and the private sector) involved in SLM in general, and in the Gum Arabic value chain in particular, will be enhanced via the following sub-components:

Sub-component 1.1: Building Sustainable Landscape Management Capacity, Governing Tools and Knowledge Sharing (GEF US\$0.60 million)

10. Institutional and capacity support will be provided to relevant national and local governmental agencies to enhance their ability to mainstream principles of SLM into the valorization and regeneration of degraded ecosystems, with special attention to degraded Gum Arabic ecosystems. Communities involved in Gum Arabic production will receive different forms of training, including training in best practices of Gum Arabic tree seed selection and conservation, gum harvest and storage methodologies. Training will take into consideration available modules developed by previous projects involved in sustainable land and water management, including the Association for the Promotion of Education and Training Abroad (APEFE), the Community Based Watershed Management Project (PACV) and the Mauritania Millennium Development Goal Achievement Fund (MDG-F).

11. This sub-component will also provide support to the Ministry of Environment and Sustainable Development (MEDD) in formulating governance tools, namely: i) Environmental and Social Impact Assessment (ESIA) guidelines for investment projects in the field of production and processing of Gum Arabic; and ii) best practices for forest preservation and regeneration. Awareness raising activities on social and environmental requirements to be considered will be conducted. Furthermore, this sub-component will support: i) regional exchanges between targeted local SLM associations; ii) workshops and outreach activities involving national and international stakeholder networks; and iii) developing knowledge sharing products to reach a larger audience and make the knowledge accessible (e.g., radio programs, documentary films, newsletters, etc.). Activities will be carried out in close collaboration with the SAWAP cross-country project, the Building Resilience through Innovation, Communication and Knowledge Services (BRICKS).

Sub-component 1.2: Strengthening Monitoring of Ecosystem Services (GEF US\$0.44 million)

12. The MEDD, in specific the Department of Planning, Intersectoral Coordination and Data, and local partners (local government, decentralized technical services and communities) will receive support that would allow them monitor changes in production of Gum Arabic and other non-timber forest products and fodder, and changes in biodiversity conservation, water and soil conservation, and vegetation and soil carbon storage capacity using a participatory approach. To achieve this, a monitoring system will be put in place to enable the evaluation of the impact of the various SLM practices supported by sub-component 2.1. This system will be aligned with and inform the existing national environmental data management system, currently implemented in the

context of the Improving the Sahelian Populations' Resilience to Environmental Changes Project (REPSAHEL) by the Sahara and Sahel Observatory (OSS) for the benefit of the MEDD, and funded by the Swiss Agency for Development and Cooperation (SDC). Monitoring activities will also feed information into the Biodiversity, Land Degradation and Sustainable Forest Management GEF tracking tools. Monitoring training sessions will be provided to local government representatives, decentralized technical services and communities to enhance their data management capacity. The results of the SLM impact evaluation will guide further project-funded SLM investments, and will be disseminated by MEDD to communities involved in SLM practices. Furthermore, this sub-component supports a more in-depth assessment of the geographic distribution of Gum Arabic producing ecosystems and the potential for future up-scaling of regeneration practices in terms of water availability, by developing a GIS-based Gum Arabic landscape monitoring tool, covering social, landscape and infrastructural parameters put in place at the MEDD for cross-sectoral discussion and programming purposes. The BRICKS and the TerrAfrica Platform for Sustainable Landscape Management will provide technical assistance to this activity. In addition, this sub-component will support the acquisition of some necessary materials, equipment and vehicles for access, aimed at facilitating the operationalization of the M&E system and the monitoring of project activities in the three participating remote regions where the project will be implemented.

Sub-component 1.3: Enabling Development of a Sustainable Gum Arabic Value Chain (GEF US\$0.27 million)

13. The focus of this sub-component is on initiating the development of a sustainable Gum Arabic value chain by evaluating the current situation and making policy and regulatory recommendations for improvement, which will subsequently be submitted to the Government of Mauritania (GOM) for validation. The identity of the Government entities involved will be determined based on the nature of the recommendations. In specific, the following activities will be funded: i) analysis of the socio-economic status of the Gum Arabic value chain²⁰, including cost-benefit analysis, both within the value chain and its weight in the national economy (e.g., contribution to GDP); ii) review of the relevant policy, legislative, regulatory (e.g., the Forestry and Pastoral Codes, *Code Forestière 2007*, *Code Pastoral*) and financial frameworks to identify opportunities for reform; iii) two multi-stakeholder discussion platform events for Gum Arabic growers, harvesters, traders, financiers as well as government and civil society organizations involved in the sector, which would address the challenges and opportunities of the Gum Arabic value chain; and iv) training of Gum Arabic producers on how to manage their enterprises and develop entrepreneurial associations. Funded activities are expected to receive reinforcement from the Regional Sahel Pastoralism Support Project (PRAPS), which will strengthen the organizational capacity of pastoralists, who are often involved in gum harvesting.

14. Expected outcome: Strengthened SLM knowledge base among various stakeholders, an improved governance system and more effective partnerships to support the development of the sector.

²⁰ Including cost effectiveness analysis of SLM of Gum Arabic ecosystems.

15. Expected key outputs:

- (a) SLM knowledge building products: training and knowledge sharing workshops on SLM practices, focusing on biodiversity conservation, water and soil conservation and sustainably managing forest resources; sectoral guidelines for Environmental Impact Assessments (EIAs) and standardized environmental and social safeguards related to SLM practices;
- (b) An ecological monitoring system which evaluates linkages between SLM practices and ecosystem production and services functions, aligned with and feeding into the MEDD environmental data gathering system; ecological data monitoring and management training sessions;
- (c) Multi-stakeholder sessions on needs and constraints along the Gum Arabic value chain;
- (d) A GIS-based Gum Arabic landscape development monitoring system; and
- (e) A report which contains recommendations for facilitating the engagement of the private sector in the Gum Arabic value chain.

Component 2: Sustainable Landscape Management Practice (GEF US\$3.26 million)

16. Component 2 supports investments in SLM practices in degraded Gum Arabic producing ecosystems and their integration into local development planning, for mutual reinforcement. The objective is to promote and evaluate various SLM practices which aim to recover degraded Gum Arabic ecosystems, by increasing the productivity of Gum Arabic, non-timber forest products and fodder while enhancing biodiversity conservation, soil and water conservation, and vegetation and soil carbon storage.

17. Within the regions of Trarza, Brakna and Gorgol, a list of 116 sites with strong regeneration potential (see Table 1) has been pre-identified for SLM interventions; this list will be further narrowed to 60 sites of around 50 hectares each through consultation with local governments and communities. The full list of sites covers both sylvo-pastoral (80 percent) and agro-sylvo pastoral areas (20 percent).

Table 1: Project intervention areas and high potential regeneration sites (Source: MEDD and Office National de la Statistique Mauritanie, 2013 Census)

Region	Province	Commune	Population	High potential areas (ha)	Number of sites
Trarza	R'kiz	Tékane	22,447	800	1
		Lexeiba II	12,973	700	4
		R'kiz	11,617	300	2
	Merderdra	Khatt	5,783	1700	6
		Taghilalett	2,659	200	1
		Boere Toress	1,998	400	1
		Mederdra	7,421	100	2
	Kermacene	Mbalal	15,647	3,500	7
		Rosso	51,026	200	1
		JiderElmohguen	6,700	100	1
Sub-total			138,271	8,000	26
Brakna	Mbagne	Niabina	12,989	200	2
		Débaye el Hijaj	7,489	350	2
		Bagodine	11,263	100	1

	Bababé	Haéré Mbar	16,270	400	4
	Boghé	Boghé	42,759	350	4
		Dar el Barka	12,667	100	1
Sub-total			103,437	1,500	14
Gorgol	Monguel	Monguel	6,010	250	3
		Bokol	10,314	200	3
		Melzemeichott	7,599	250	3
		Azgueilim	12,949	100	2
	Kaédi	Ganki	7,294	350	4
		Toufondé-civé	8,097	200	1
		Lexeiba*	22,453	450	4
		Diowol	14,425	500	3
	Maghama	Maghama	16,102	400	4
		Touel	8,604	150	2
		Vraalitama	4,639	150	3
		Beilouguetlittama*	4,152	150	3
		Dolol	5,072	250	3
		Daou	7,050	150	2
	M'bout	M'bout	11,407	100	2
		Soufa	7,296	250	5
		Lahraje	10,280	200	4
		Ndiadjibinné	10,597	150	3
		Chelkha Tiyab	8,306	250	5
		Tikobra	10,965	200	4
		Taringuel	9,645	200	4
		Débaye Ehl guélaye	11,475	150	3
		VoumGleita	22,531	300	6
Sub-total			237,262	5,350	76
Total			478,970	14,850	116

* Significant presence of Acacia Seyal in addition to Acacia Senegal trees.

Sub-component 2.1: Investing in Sustainable Landscape Management (GEF US\$3.03 million)

18. This sub-component finances SLM investments in the selected 60 sites along two categories of community beneficiary sub-projects: (i) Participatory SLM investments which support the regeneration of degraded Gum Arabic producing ecosystems; and (ii) Investments which respond to immediate local needs and enhance sound environmental management; activities under this category will only be funded in conjunction with the first category investments and not as stand-alone. Special awareness and promotional material targeting women will be developed to create demand and increase the number of women benefiting from the investment activities. Activities under this component will be planned, designed and implemented by the targeted communes, through the regional and communal structures, with the assistance of specialized public and private sector providers.

19. The project will provide sub-grants, on a non-reimbursable basis, to community beneficiaries to finance these sub-projects; which will be selected in accordance with the eligibility criteria and the selection procedures included in the Project Implementation Manual; and implemented with sound technical, economic, financial, managerial, environmental and social standards. Procurement of goods, works and services to be financed out of the sub-grants in the context of these sub-projects will be made in accordance with the provisions of the overall project's

GEF Grant Agreement; Requests for investments will be considered on a case by case base, taking into account environmental and social safeguards.

- (a) Category 1: Participatory SLM investments (US\$2.12 million): Participatory SLM practices on selected land parcels within the sites (either sylvo-pastoral or agro-sylvo-pastoral), involving various combinations and methodologies of the following practices: (i) exploitation control; (ii) regeneration and conservation of Gum Arabic producing tree species (*Acacia Senegal* and *Acacia Seyal* tree populations); (iii) enrichment and revegetation with other dwindling and sought after woody species (e.g., *Adansonia digitata* (Baobab), *Ziziphus mauritiana* and *Ziziphus mauritiaca*, *Sclerocarya birrea* and *Commiphora Africana*); (iv) enrichment and revegetation with indigenous herbaceous species for fodder production (e.g. *Panicum turgidum*, *Aristida pungens*); (v) implementation of soil and water conservation and recovery practices (e.g., stone or earth bunds/lines, ‘demi-lune”, zai and other planting pit technologies suitable for (semi-) arid ecosystems); and (vi) implementation of bush-fire control and prevention measures (*par feux*). As such, most sites will involve the establishment of a relevant tree nursery inside or outside the selected land parcels. Through the BRICKS project, and with support from the TerrAfrica Program²¹, the project initiated the preparation of a technical pre-feasibility study to provide supplementary guidance on the various regeneration options of *Acacia* species and best practices to be considered by the project. The study is prepared by the International Union for the Conservation of Nature, and should be available at the time of project effectiveness.
- (b) Category 2: Immediate local support investments (US\$0.91 million): The following investments are expected to sustain targeted communities’ engagement in SLM until the benefits of category 1 investments become visible. The investments are: (i) enhancement of vegetable gardening; (ii) repair or improvement of watering facilities; (iii) provision of improved fuel stoves, gas burners and solar energy equipment; (iv) establishment of local community boutiques to sell natural products; and (v) support of income generating activities (dairy, fish farming, beekeeping, etc.).²² Only sub-projects to be implemented in conjunction with investments from Category 1 sub-projects will be considered by the project.

Table 2: Types of SLM sub-projects supported by the project

Category 1: Participatory SLM investments
<u>Exploitation control:</u> <ul style="list-style-type: none"> • Fencing and/or guarding of plots
<u>Regeneration of Gum Arabic producing tree species:</u> <ul style="list-style-type: none"> • Establishment of Gum Arabic tree nurseries • Planting of juvenile Gum Arabic trees in plots
<u>Enrichment/revegetation with other indigenous woody species for non-timber products:</u> <ul style="list-style-type: none"> • Establishment of tree nurseries with e.g., <i>Adansonia digitata</i>, <i>Ziziphus Mauritania</i>, <i>Ziziphus Mauritanica</i>, <i>Commiphora Africana</i>, <i>Sclerocarya birrea</i>

²¹ TerrAfrica is a NEPAD-led partnership present in 24 countries on the African continent that supports innovative solutions to sustain landscapes, address land and water degradation and adapt to a changing climate.

²² The list provided in Table 2 below is exhaustive.

<u>Enrichment/revegetation with indigenous herbaceous species for fodder production: <i>Panicum turgidum</i>, <i>Aristida pungens</i></u>
<u>Soil and water conservation practices:</u> <ul style="list-style-type: none"> • Stone bunds, half-moon structures, traditional mini-water catchment practices (Zai), sand dune fixation, gully stabilizing measures (reshaping, filling, revegetation), riverbank repair (structural support, revegetation).
<u>Bush-fire control/prevention measures (<i>par feux</i>)</u>
Category 2: Immediate local support investments
<u>Enhancement of vegetable gardening:</u> <ul style="list-style-type: none"> • Establishment of vegetable gardens • Improving planting practices
<u>Improvement of watering facilities:</u> <ul style="list-style-type: none"> • Repair of existing water pumps • Small-scale irrigation measures (new shallow water wells)
<u>Provision of improved fuel stoves and/or gas burners and solar energy equipment</u>
<u>Establishment of local community boutiques to sell natural products</u>
<u>Support income generating activities (dairy, fish farming, beekeeping, etc.)</u>

Sub-component 2.2: Integrating Sustainable Landscape Management Practices in Local Development Planning (GEF US\$0.23 million)

20. This sub-component supports the integration of project objectives and activities into local communal plans for mutual reinforcement (e.g., for infrastructure development and water access). This will be carried out in close collaboration with the Local Government Development Project (LGDP). Natural resources management activities funded by the Regional Sahel Pastoralism Support Project (PRAPS) (e.g., identification and establishment of livestock corridors, watering facilities) will be taken into account and coordinated with as well. As the project works with local government and partners, project stakeholders will attend relevant LGDP and PRAPS meetings to ensure collaboration, synergy and alignment of investments by all projects. Up to six sub-regional local development plans integrating SLM, each one concerning a number of communes in one of the regions Trarza, Brakna and Gorgol, will be developed while building on previous efforts where possible (e.g., in Gorgol by PACV).

21. Expected outcome: Strengthened management of Gum Arabic producing landscapes, and enhanced integration of SLM considerations in local development planning in the regions of Trarza, Brakna and Gorgol.

22. Expected key outputs:

- (a) SLM investments in 60 sites in the regions of Trarza, Brakna and Gorgol; and
- (b) Sub-regional local development plans integrating landscape management approach.

Component 3: Project Management (US\$6.16 million, of which GEF US\$0.24 million and Government in-kind contribution: US\$1.35)

23. This component provides project management support to the MEDD by financing: (i) a project management and administration training workshop, including procurement; (ii) a project launch workshop; (iii) the hiring of an M&E consultant and a technical advisor for capacity enhancement within the MEDD; (iv) hiring of an external auditing firm to carry out annual external

audits; (v) hiring of three full time local administrative and financial assistants; and (vi) operating costs associated with project management at the central and local levels (preparation of annual work plans, procurement plans and budgets, coordination of activities, preparation of progress and financial reports, procurement and financial management). The Government of Mauritania will provide in-kind contribution in the amount of US\$1.35 million, which represents the cost of the Project Management Unit’s civil servant staff (project coordinator, two assistants and technical staff from the MEDD information and administrative departments), Regional Coordination Units’ (RCU) staff, project premises, utilities, a vehicle for overall coordination which will be assigned to the project for its duration and the operational expenses of the vehicles to be provided to facilitate the ecological monitoring sub-component.

24. Expected outcome: Effective project management and M&E.

25. Expected key outputs: Training and project launching workshops, semi-annual, mid-term and completion reports, Interim unaudited Financial Reports, internal and external financial audits, annual work plans, budgets and procurement plans.

Table 3: Detailed Project Costs

Components	Cost (US\$)		Source of Funding			
	Costs	%	GEF	%	GOM	%
Component 1: Sustainable Landscape Management Knowledge, Governance and Partnerships	1,310,000	100	1,310,000	21		
1.1 Building Sustainable Landscape Management Capacity, Governing Tools and Knowledge Sharing	600,000	46	600,000			
1.2 Strengthening Monitoring of Ecosystem Services	440,000	34	440,000			
1.3 Enabling Development of a Sustainable Gum Arabic Value Chain	270,000	21	270,000			
Component 2: Sustainable Landscape Management Practice	3,260,000	100	3,260,000	53		
2.1 Investing in Sustainable Landscape Management	3,030,000	93	3,030,000	49		
2.2 Integrating Sustainable Landscape Management Practices in Local Development Planning	230,000	7	230,000			
Component 3: Project Management	1,590,000		240,000		1,350,000	22
TOTAL COST	6,160,000		4,810,000		1,350,000	

Annex 3: Implementation Arrangements
Mauritania: Sustainable Landscape Management Project under the SAWAP

Project Institutional and Implementation Arrangements

1. The project will be implemented by the Ministry of Environment and Sustainable Development (MEDD), through the Directorate of Nature Protection (DNP). Although MEDD does not have extensive experience in implementing World Bank-funded projects, it has been closely involved in the implementation of the Mauritania Local Government Development Project (LGDP, 2013-2019). In this capacity, MEDD has participated in the preparation of the project's safeguards documents, and benefitted from World Bank training on environmental and social safeguards.
2. Project management and coordination and monitoring activities will be carried out by a Project Management Unit (PMU) anchored in the MEDD. The PMU will comprise a core team of DNP staff, and staff from other MEDD units. The PMU will be led by the DNP Director who will act as Project Coordinator, and comprise at minimum: (i) a natural resource management (NRM) and biodiversity specialist to also act as Deputy Coordinator; (ii) a communication and gender specialist; (iii) an environmental and social safeguard specialist; (iv) a monitoring and evaluation specialist, (v) a procurement specialist; and (vi) a financial management (FM) specialist. The procurement and FM specialists will be from MEDD's administrative and financial department, and work under the direct supervision of the Chief Financial Officer.
3. The project will seek the services of a senior technical advisor with an environmental and natural resources management background to provide overall guidance to the project's team on all activities. An agro-forestry specialist will also be hired to provide technical support for tasks related to monitoring of ecosystem services under Component 1 and SLM investments under component 2.
4. The project will support the acquisition of some of the necessary material and equipment and vehicles aimed at facilitating project management and the operationalization of the M&E ecosystem and the monitoring of project activities in the three remote participating regions where it will be implemented. The GOM will contribute to the project's operational costs including inter-alia the operational expenses of the vehicles to be provided by the project to the Regional Coordination Units in each of the three regions to facilitate the ecological monitoring sub-component (fuel, repairs, periodic maintenance, etc.).
5. At the local level, project coordination will be carried out by three Regional Coordination Units (RCUs) – one in each of the three intervention regions of Trarza, Brakna and Gorgol. The RCUs will comprise decentralized MEDD staff who will report to the PMU, and work in close collaboration with the hakims and mayors of communes located within the project intervention areas. Each RCU will be headed by a local MEDD Delegate and assisted by a hired Administrative and Financial Assistant. The RCUs will represent the PMU at the regional level and coordinate all activities in the field. The members of the RCU will more specifically support and supervise the implementation of the local investments, oversee the preparation of the community and municipal plans, and coordinate the data collection for the project M&E system.

6. The project will be overseen by a broad, multi-stakeholder National Steering Committee (NSC). The NSC will be in charge of policy guidance, review and approval of annual work plans and budgets, financial and program performance assurance, and ensuring a uniform understanding of project activities by all stakeholders. It will comprise representatives from the following entities:

- a) Ministry of Environment and Sustainable Development
- b) Ministry of Agriculture
- c) Ministry of Economic Affairs and Development
- d) Ministry of Livestock
- e) Ministry of the Interior and Decentralization
- f) National Agency of the Great Green Wall Initiative
- g) Association of Mayors of Mauritania
- h) The three wilayas (Trarza, Brakna, Gorgol)
- i) Civil society (NGOs)
- j) Private Sector (Representatives of the Association of Producers of Gum Arabic)

7. The PMU will act as the Secretariat of the NSC, which will meet every six months.

8. **The Project Operational Framework** also includes regional structures of the communes in the three zones of intervention which will play an important role in the selection, design implementation and follow-up of the activities, including the Regional Development Committees, chaired by the Governor (Wali), the Community Development Associations of the Village Communities; and the technical decentralized services of the ministries of Environment and Sustainable Development, of Agriculture and of Livestock. Regional technical facilitators will also be identified and mobilized by the RCUs, as needed, to help with project implementation, and act as mediators with the project beneficiaries. Facilitators could either be resource persons, associations, NGOs, or consultancy firms.

9. The Project Implementation Manual to be finalized and adopted prior to project effectiveness includes a detailed description of the functional mandates and responsibilities of the regional and communal structures in project planning, implementation, supervision and monitoring and evaluation of the results.

Project Stakeholder Assessment

10. Under the auspices of the NSC and the overall management of the PMU, project activities will be implemented by several governmental entities, local municipalities, NGOs, village communities, inter-village associations (such as the watershed associations), civil society and the private sector. Assessment of stakeholders' capacity has led to the development of institutional strengthening and capacity building activities to be supported under Component 1. The following table describes stakeholders' engagement in the project in detail:

Table 4: Roles of stakeholders in the implementation of the Project

Component	Stakeholder	Role in Project	Remarks
Component 1: Sustainable Landscape Management Knowledge, Governance and Partnerships			
1.1: Building Sustainable Landscape Management Capacity, Governing Tools and Knowledge Sharing	MEDD and relevant project partners	Recipients of training in mainstreaming principles of SLM into the valorization and regeneration of degraded natural ecosystems	
		Recipients of support for formulation of sectoral governing tools	Tools: EIA guidelines, environmental and social safeguards requirements, and best practices relating to forest preservation/regeneration initiatives
	Local SLM associations	Recipients of training in EIA and safeguard compliance	
		Participate in regional cross-site exchanges	
	Gum Arabic producing communities	Recipients of training in best practices of selection and conservation of Gum Arabic tree seeds and Gum Arabic harvest and storage methodologies	
National and international stakeholders networks	Participate in workshops and outreach activities		
1.2: Strengthening Monitoring of Environmental Services	MEDD/Department of Planning	Recipient of data management and environmental monitoring training sessions	
	OSS	Management of generated data on environmental services of landscapes and provide technical assistance for monitoring training	Existing national environmental data management systems are currently supported by OSS REP-SAHEL website, and additional SLM information will feed into this database (http://www.oss-online.org/rep-sahel/). OSS is mediated by the BRICKS Regional Knowledge Hub Project, and the TerrAfrica Platform for SLM
1.3: Enabling Development of a Sustainable Gum Arabic Value	Gum Arabic growers, harvesters, traders, financiers and relevant government and civil organizations	Participation in multi-stakeholder discussion platform events addressing the challenges and	

		opportunities facing the Gum Arabic value chain	
	Gum Arabic producers	Recipients of training on enterprise management and development of associations	In collaboration with the PRAPS project
Component 2: Sustainable Landscape Management Practice			
2.1: Investing in Sustainable Landscape Management	Communities in the target regions	Implementation of SLM practices	SLM practices include varying combinations and methodologies; most sites will involve the establishment of tree nurseries
		Recipients and implementers of immediate interest investments	
		Selection of Gum Arabic sites for intervention	
	MEDD/Department of Planning	Conducting monitoring of SLM practices	Monitoring will be carried out within and outside the selected sites, before and during the implementation of the SLM practices
	Local government	Selection of Gum Arabic sites for intervention	
2.2: Integrating Sustainable Landscape Management Practices in Local Development Planning	The LGDP project	Supporting the integration of project objectives and activities in local communal plans	
Component 3: Project Management			
	MEDD/DNP and other MEDD departments	Project management	

Financial Management, Disbursements and Procurement

11. An assessment of the financial management (FM) capacity of the MEDD was conducted in accordance with World Bank requirements under OP/BP 10.00 and the financial management (FM) manual. A qualified financial officer and an accountant team already in place are handling MEDD's FM tasks; however, they are unfamiliar with World Bank procedures. The FM risk is rated *Substantial* given that the implementing agency (MEDD) has no previous extensive experience in implementing World Bank-funded projects and does not have a strong FM team. The FM capacity of the MEDD presents the following weaknesses: (i) lack of experience of the FM team in place; (ii) lack of accounting software; (iii) weak internal control function: lack of internal audit; and lack of financial, administrative and accounting procedures manual. A number of actions have been agreed on to mitigate the above-mentioned risks; these include (i) developing a manual of financial, accounting and administrative procedures prior to effectiveness; (ii) recruiting a qualified accountant satisfactory to the World Bank within one month after effectiveness; (iii) acquiring a well set up accounting software within two months following effectiveness; and (iv) recruiting a part-time internal auditor within four months after effectiveness. Once the mitigation measures are implemented, the residual risk rating for the MEDD is expected to be reduced to *Moderate*.

Financial Management Arrangements

12. The FM system will include the following:
- (a) Recording of all financial transactions, including receipts and expenses.
 - (b) Recording of assets and liabilities;
 - (c) Internal control arrangements to ensure that every transaction is duly authorized and properly recorded, and assets are safeguarded;
 - (d) Ability to produce financial information;
 - (e) Appropriate staffing to carry out the above functions.

Accounting and Financial Reporting Arrangements

13. The current accounting standards in use in Mauritania for ongoing Bank-financed projects will be applicable. Project accounts will be maintained on an accrual basis, supported with appropriate records and procedures to track commitments and to safeguard assets. Annual financial statements will be prepared by the MEED. A qualified accountant satisfactory to the World Bank will be recruited within one month after effectiveness.

Internal Control Arrangements

14. The Administrative and Accounting Procedures Manual will provide a clear description of the approval and authorization processes in respect of the rule of segregation of duties. An internal auditor will be recruited on part time basis in order to perform an internal audit mission every semester.

Budgeting Arrangements

15. The MEED will prepare annual budgets based on an agreed annual work program and annual procurement plan. The budget execution will be monitored on a quarterly basis. The budgeting process and monitoring will be clearly defined in the Administrative and Accounting Manual of Procedures. Annual draft budgets will be submitted to the Bank for no-objection before adoption and implementation no later than December 15 every year. Periodic budget monitoring reports and recommendations will be done by the FM team. The Recipient will ensure that interim unaudited financial reports for the project in form and content satisfactory to the Bank are prepared and furnished to the World Bank not later than forty-five (45) days after the end of each calendar semester covering the semester, in form and substance satisfactory to the World Bank. The format of the interim unaudited financial reports has been agreed with the Bank.

Disbursement

16. Disbursements under the Grant would be transactions-based whereby withdrawal applications will be supported with Statement of Expenditures (SOE). The following disbursement methods may be used under the project: reimbursement, advance, direct Payment, reimbursement and special commitments as specified in the Disbursement Letter and in accordance with the World Bank Disbursement Guidelines for Projects, dated May 1, 2006.

17. A Designated Account (DA) for the project will be opened in the Central Bank (*Banque Centrale de Mauritanie* - BCM) and a Project Account (PA) will be opened in a commercial bank in Mauritania on terms and conditions acceptable to the World Bank. The DA will be managed according to disbursement procedures described in the Disbursement Letter. The ceiling of the DA has been set to US\$400,000 and will cover approximately four months expenditures. The minimum value applications for reimbursement, direct payment and special commitment is US\$100,000. The DA would be replenished through the submission of Withdrawal Applications on a monthly basis and would include reconciled bank statements and other documents as may be required. All supporting documentation must be easily accessible and kept at an appropriate place for control and audit purposes.

Audit

18. The Financing Agreement will require the submission to the Bank of Audited Financial Statements for the project within six months after year-end. An external auditor with qualification and experience satisfactory to the World Bank will be appointed to conduct an annual audit of the project's financial statements. An opinion on the Audited Project Financial Statements in compliance with the International Federation of Accountants (IFAC) will be required. The external auditor will prepare a Management Letter giving observations and comments, and providing recommendations for improvements in accounting records, systems, controls and compliance with financial covenants in the Financing Agreement.

Procurement

Processes and Procedures

19. Procurement under the project will be carried out in accordance with the World Bank's (i) "Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers", dated January 2011, as revised in July 2014; (ii) "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers", dated January 2011, as revised in July 2014; and (iii) "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006, as revised in January 2011, as well as the provisions stipulated in the Financing Agreement.

20. The general description of various items under different expenditure categories is presented below under *Procurement Arrangements*. For each contract, the different procurement methods or consultant selection methods, the need for prequalification, estimated costs, prior review requirements and time frame are agreed between the Recipient and the World Bank in the Procurement Plan dated July 1, 2015. The Procurement Plan will be updated at least annually, or as required, to reflect the actual project implementation needs and improvements in institutional capacity.

21. In addition to prior review of contracts by the World Bank as indicated in the Procurement Plan, the procurement capacity assessment recommends at least one implementation support mission each year to carry out post-review of procurement actions and a technical review. Post

reviews focus on technical, financial and procurement reports carried out by World Bank and/or consultants selected and hired under the project. The percentage of procurement subject to post-reviews and technical reviews will be decided on a case-by-case basis by the World Bank mission.

22. **Advertising Procedures.** In order to get the broadest attention from eligible bidders and consultants, a General Procurement Notice (GPN) will be prepared by the implementing entity and published in the United Nations Development Business online (UNDB online), on the World Bank's external website and in at least one newspaper of national circulation in the Recipient's country, or in the official gazette, or a widely used website or electronic portal with free national and international access. The Recipient will keep record of the responses received from potential bidders/consultants interested in the contracts and send them the Specific Procurement Notices.

23. Specific Procurement Notices for all goods and non-consulting services to be procured under International Competitive Bidding (ICB) and Expressions of Interest for all consulting services with a cost equal to or above US\$200,000 will be published in the UNDB online, on the World Bank's external website, and in at least one newspaper of national circulation in the Recipient's country, or in the official gazette, or a widely used website or electronic portal with free national and international access. Specific Procurement Notices (SPN) for goods and non-consulting services to be procured using National Competitive Bidding (NCB) will be published in at least one newspaper of national circulation in the Recipient's country.

24. **National Competitive Bidding.** The procurement procedure to be followed for NCB shall be the open competitive bidding procedure set forth in the Public Procurement Code 2010-044 of July 22, 2010, of Mauritania (the "Code"); provided, however, that such procedure shall be subject to the provisions of Section I, and Paragraphs 3.3 and 3.4 of the Procurement Guidelines, and the following additional provisions:

- (a) Bidding documents acceptable to the World Bank shall be used;
- (b) Eligibility to participate in a procurement process and to be awarded a World Bank-financed contract shall be as defined under Section I of the Procurement Guidelines; accordingly, no bidder or potential bidder shall be declared ineligible for contracts financed by the Bank for reasons other than those provided in Section I of the Procurement Guidelines. Foreign bidders shall be allowed to participate in NCB procedures, and foreign bidders shall not be obligated to partner with local bidders in order to participate in a procurement process;
- (c) Bidding shall not be restricted to pre-registered firms, and foreign bidders shall not be required to be registered with local authorities as a prerequisite for submitting bids;
- (d) No margins of preference of any sort (e.g., on the basis of bidder nationality, origin of goods, services or labor, and/or preferential programs) shall be applied in the bid evaluation;
- (e) Joint venture or consortium partners shall be jointly and severally liable for their obligations. Bidders shall be given at least thirty (30) days from the date of publication of the invitation to bid or the date of availability of the bidding documents, whichever is later, to prepare and submit bids. Bids shall be submitted in a single envelope;
- (f) An extension of bid validity, if justified by exceptional circumstances, may be requested in writing from all bidders before the original bid validity expiration date, provided that

such extension shall cover only the minimum period required to complete the evaluation and award a contract, but not to exceed thirty (30) days. No further extensions shall be requested without the prior written concurrence of the World Bank;

- (g) All bids (or the sole bid if only one bid is received) shall not be rejected, the procurement process shall not be cancelled, and new bids shall not be solicited without the World Bank's prior written concurrence;
- (h) Qualification criteria shall be applied on a pass or fail basis;
- (i) Bidders shall be given at least twenty-eight (28) days from the receipt of notification of award to submit performance securities;
- (j) In accordance with the Procurement Guidelines, each bidding document and contract shall include provisions stating the World Bank's policy to sanction firms or individuals found to have engaged in fraud and corruption as set forth in the Procurement Guidelines;
- (k) In accordance with the Procurement Guidelines, each bidding document and contract shall include provisions stating the World Bank's policy with respect to inspection and audit of accounts, records and other documents relating to the submission of bids and contract performance; and
- (l) Evaluation committee should include two specialists in the matter at least and should never include any tender committee members.

25. **Fraud and Corruption.** All procurement entities as well as bidders and service providers (i.e., suppliers, service providers and consultants) shall observe the highest standard of ethics during the procurement and execution of contracts financed under the project in accordance with paragraphs 1.16 and 1.17 (Fraud and Corruption) of the Procurement Guidelines and paragraph 1.23 and 1.24 (Fraud and Corruption) of the Consultants Guidelines, and the "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 as revised in January 2011.

Procurement Arrangements

26. **Procurement of Works.** Works to be procured under the project will include small works for fencing of plots, establishment of nurseries, construction of community infrastructures, repair and installation of water pumps, etc. (for the full list of works, please see the description of sub-component 2.1). Almost all the works will be procured through NCB, Shopping, Direct Contracting or community procurement.

27. **Procurement of Goods.** Goods to be procured under the project will include computers and accessories, printers, photocopiers and other IT equipment, software and licenses, furniture, stationary, transportation equipment (including vehicles), small protection equipment, material and equipment for agro-pastoral activities such as seeds, wheelbarrows, shovels, etc. Contracts with an amount equal to or above US\$500,000 equivalent shall be procured through ICB. Goods orders shall be grouped into larger contracts wherever possible to achieve greater economies of scale. Contracts with an amount lower than US\$500,000 but equal to or above US\$50,000 may be procured through NCB. Contracts with an amount below US\$50,000 may be procured using Shopping procedures in accordance with paragraph 3.5 of the Procurement Guidelines and based on a model request for quotations satisfactory to the World Bank. Shopping consists of the comparison of at least three price quotations in response to a written request. Direct Contracting

may be used in exceptional circumstances only with the prior approval of the World Bank regardless of the amount, in accordance with paragraph 3.7 and 3.8 of the Procurement Guidelines.

28. **Procurement of Non-Consulting Services.** Procurement of non-consulting services, such as services for organizing workshops, training, data collection, transport services and maintenance of office equipment, etc., will follow procurement procedures similar to those stipulated for the procurement of goods, depending on their nature. The applicable methods shall include ICB, NCB, Shopping and Direct Contracting.

29. **Selection and Employment of Consultants.** Services of both national and international consultants will be required under the project. Selection of consultants will be carried out in compliance with the Consultant Guidelines. The provisions vary for consulting services provided by firms and individual consultants as follows:

- (a) Firms. Selection of consulting firms will include launching a Request for Expressions of Interest, preparing short-lists and issuing a Request for Proposal using World Bank's standard formats, when and as required by the World Bank's Guidelines. The selection method shall be chosen among the following: Quality and Cost Based Selection (QCBS) whenever possible; Quality Based Selection (QBS); Selection under a Fixed Budget (FBS); Least Cost Selection (LCS); Single Source Selection (SSS) as appropriate; and Consultant's Qualifications Selection (CQS) for all consultancy services estimated to cost less than US\$300,000 equivalent. The shortlist of firms for assignments estimated to cost less than US\$100,000 equivalent per contract may be composed entirely of national firms in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines, provided that a sufficient number of qualified national firms are available and no foreign consultant desiring to participate is barred.
- (b) Individual Consultants. Individual consultants will be selected by comparing qualifications of at least three candidates and hired in accordance with the provisions of Section V. of the Consultant Guidelines.

30. Single-Source Selection (SSS) may be used for consulting assignments that meet the requirements of paragraphs 3.8 - 3.11 of the Consultant Guidelines and will always require World Bank's prior review regardless of the amount. Procedures of Selection of Individual Consultants (IC) will apply to assignments which meet the requirements of paragraphs 5.1 and 5.6 of the Consultant Guidelines.

31. The terms of reference for the selection of firms and individual consultants, subject to World Bank prior review and clearance, will be determined in the Procurement Plan.

32. The recruitment of civil servants as individual consultants or as part of the team of consulting firms will strictly abide by the provisions of paragraphs 1.9 to 1.13 of the Consultants Guidelines.

33. **Workshops, Seminars and Conferences.** Training activities would comprise workshops and training, based on individual needs, as well as group requirements, on-the-job training, and hiring consultants for developing training materials and conducting training. Selection of

consultants for training services follows the requirements for selection of consultants above. All training and workshop activities (other than consulting services) would be carried out on the basis of approved Annual Work Plans/Training Plans that would identify the general framework of training activities for the year, including: (i) the type of training or workshop; (ii) the personnel to be trained; (iii) the institutions which would conduct the training and reason for selection of this particular institution; (iv) the justification for the training, how it would lead to effective performance and implementation of the project and or sector; (v) the duration of the proposed training; and (vi) the cost estimate of the training. Report by the trainee(s), including completion certificate/diploma upon completion of training, shall be provided to the Project Coordinator and will be kept as parts of the records, and will be shared with the World Bank if required.

34. **Operating Costs.** Operating Costs are incremental expenses arising under the project and based on Annual Work Plans and Budgets approved by the World Bank pursuant to the Financing Agreement. They are incurred based on eligible expenses as defined in the Financing Agreement and cannot include salaries of the Recipient's civil and public servants. The procedures for managing these expenditures will be governed by the Recipient's own administrative procedures, acceptable to the World Bank.

35. **Procurement Documents.** Procurement of works and goods under ICB and recruitment of consultants will be carried out using the latest World Bank's Standard Bidding Documents (SBD) and, respectively, Standard Request for Proposal (RFP). For NCB, the Recipient shall submit a sample format of bidding documents to the World Bank for prior review. Bidding documents shall incorporate the exceptions listed under paragraph 18 above and shall be used throughout the project once the format has been agreed. The Forms of Evaluation Reports developed by the World Bank will be used. SBD for NCB will be updated to include clauses related to Fraud and Corruption, Conflict of Interest, Eligibility and World Bank's inspection and auditing rights requirements consistently with the World Bank's Procurement Guidelines.

Assessment of Procurement Capacity of the Implementing Agency and Risks

36. The Mauritanian Procurement Code is regulated by Law No 2010-044 of July 22, 2010 and its regulations (several decrees and by-laws issued by the Prime Minister and the Ministry of Economic Affairs and Development - MAED). This code was developed and reviewed with World Bank assistance. In general, the country's procurement procedures do not conflict with World Bank Guidelines. However, procurement practices allow World Bank procedures to take precedence over any contrary local regulation or practice.

37. A procurement capacity assessment was conducted for the DNP and *Direction des affaires Administrative* (DAF) of MEDD, the Public Procurement Commission of the Rural Sector (CPMP-SR) that will be in charge of procurement activities. Both DNP and DAF have no significant previous experience in management World Bank projects, which results a weak implementation capacity. The assessment indicates significant capacity gaps among the DNP and DAF. They will handle only contracts that amount less than US\$33,000 equivalent. An action plan was prepared to strengthen their capacities, including drafting the procurement manual, procurement training for the staff involved in procurement activities, and technical assistance in procurement will be developed to assist MEDD to manage the procurement processes in accordance with World Bank

guidelines. An assessment was also completed for CPMP-SR (as per existing law), which will be responsible for managing the procurement process for contracts above US\$33,000 equivalent. The CPMP-SR was created in February 2012 in the framework of the GOM's law. CPMP-SR is composed of ten members who are all selected on a competitive basis. The assessment indicated that CPMP-SR needed to strengthen member skills and capacities.

38. **The overall procurement risk is rated High.** It is expected to be lowered to substantial after implementation of the following mitigation measures.

39. **Mitigation measures:** for the DNP to manage this project, the main mitigation measures will be :

- (a) Develop a procurement manual for all goods, works, no-consultant services and consultant services approved by the World Bank before project effectiveness;
- (b) Due to the number and the low volume of contracts to be procured under the project, and limited national availability of qualified procurement staff, the DNP and DAF will hire a specialized firm in procurement to assist the project to carry out all procurement activities, beginning with the bidding documents and RFP preparation to contracts award during the first year of project implementation, and to provide training for the staff of the MEDD that are involved in procurement activities;
- (c) Appointment and training of DNP and DAF staff as project procurement specialists; and
- (d) The World Bank's procurement specialist who is based in Mauritania will provide close supervision and support, or propose additional mitigation measures if and when they are needed.

Table 5: Procurement Action plan

	Recommended Actions	Due Date
1	Prepare a procurement manual for all goods, works, non-consulting services and consultant services, approved by the World Bank	Before project effectiveness
2	Train the designated DNP/DAF procurements specialists on World Bank procurement procedures	During the three months following effectiveness
3	Train DNP/DAF staff involved in project implementation on procurement procedures	During the twelve months following project effectiveness

40. **Frequency of procurement reviews and supervision:** World Bank's pre- and post-reviews will be carried out on the basis of thresholds indicated in the table below. The World Bank will conduct implementation support missions every six months and annual Post Procurement Reviews (PPR); with the ratio of post review at least one to five contracts. The World Bank may also conduct an Independent Procurement Review (IPR) at any time up to two years after the closing date of the project.

Environmental and Social (including safeguards)

41. *Environment.* The project has been designed with a view to maximizing environmental and social benefits in the target regions, with potential for additional positive environmental impact at the national and regional levels and globally. From an environmental perspective, the project is expected to promote restoration and conservation of natural resources through regional planning,

capacity building and on-the-ground investments, thereby helping to prevent land erosion, enhancing habitat restoration, and supporting regeneration of flora and fauna populations in both the short-and long-term. Increased vegetation cover will lead to greater carbon sequestration.

42. *Social.* The population in the three targeted districts is relatively young and accounts for almost a third of the population of Mauritania. It comprises a small majority of women due to inter and intra-regional migration of men in search of jobs, higher growth rate and a higher average household size. A socioeconomic analysis carried out by the government during project preparation²³ showed that migration of men has put women at the center of communal life, giving them a more prominent role in the management of natural resources. Additional observations were made regarding the potential positive social impact of project interventions not only on income from Gum Arabic but also on skills to manage other natural resources, with particular benefit for women. The project is expected to strengthen traditional systems of environmental and social management, empower local governance structures, NGOs and CSOs by providing them with tools and mechanisms for environmental management. Importantly, communities will assume a key role in local-level decision making and implementation of project-funded activities as a key elements of sustainability and social empowerment.

Consultations (RPF)

43. A comprehensive consultation process was undertaken during the preparation of the project. Discussions were held in the Wilayas of Brakna, Gorgol and Trarza, with administrative and municipal authorities, technical services, communities and CSOs.

44. About 55 villages were visited (about 20,000 people) out of 116 identified potential villages along with other stakeholders. During all the visits, the team presented the development objective of the project and engaged a participatory consultation process. Administrative authorities, regional and technical services (environment, agriculture, breeding, hydraulic) were sensitized on the project objective, were asked about their opinions on the sites, the potential Gum Arabic and the nature of potential conflicts. Mayors and municipal advisors were consulted upon the safeguards instruments and their geographical distribution at the village level.

45. Communities from villages with strong Gum Arabic potential were consulted upon using a specific survey. This allowed them to understand the importance of the Gum Arabic resource at the local level, its management, including sale and distribution, technical modern or traditional knowledge, etc. Safeguards instruments were discussed as well. Other stakeholders, including partners at the local level (NGOs, socio-professional structures and existing relevant groups of interest) were also met with.

46. Overall, all stakeholders indicated their perception of the causes of degradation of natural resources, of development projects and shared their preoccupations and expectations. In summary, communities are organized and seem ready to work towards developing and increasing the value of the Gum Arabic industry despite apparent poor living conditions.

²³ MEDD. *Étude Socio-économique de la filière Acacia Senegal et Acacia Seyal pour la production de la gomme arabique - Rapport socioéconomique.* Nouakchott, 2014.

47. *Safeguards.* The project triggers OP/BP 4.01 on Environmental Assessment (EA); OP/BP 4.04 on Natural Habitats; OP/BP 4.09 on Pest Management; OP/BP 4.11 on Physical Cultural Resources; OP/BP 4.12 on Involuntary Resettlement; and OP 4.36 on Forests. The project is expected to have minimal adverse impacts on the environment. Nonetheless, the project may invest in activities that have the potential for minimal adverse social and environmental impact, such as small-scale rehabilitation projects or small scale irrigation infrastructure. Adverse impacts from these small-scale operations are easily identified, minimized and mitigated by simple interventions. Therefore, the project is classified as an EA Category B project, requiring partial assessment. OP/BP 4.04 on Natural Habitats is triggered due to expected (positive) changes in management of natural habitats in the targeted areas; OP 4.36 on Forests is triggered due to forest management activities funded by the project, which are expected to improve the management and status of forests in the three project areas; OP/BP 4.09 on Pest Management is triggered because investments in re-vegetation and agroforestry activities may require the use of pest control methods and pesticides management on the part of local producers; and OP/BP 4.11 on Physical Cultural Resources is triggered to reflect the possibility that artifacts could be revealed during field work. From a social point of view, the project will not support land acquisition or physical relocation of people, but it may support activities that restrict access to resources within protected areas; therefore, the project triggers OP/BP 4.12 on Involuntary Resettlement.

48. The GOM prepared an Environmental and Social Management Framework (ESMF, dated April 2015), which screens potential investments for adverse environmental impacts, guides execution of any activities such that adverse impacts are avoided, minimized, and mitigated, and describes the standard mitigation activities for the types of project interventions possible. The ESMF also provides a positive and a negative list of site-specific interventions, and guidance for the development of Environmental and Social Impact Assessments (ESIA) and Environmental and Social Management Plans (ESMP), for those interventions where adverse social and environmental impacts are foreseen. The ESIA and ESMPs will need to be approved by the DNP and the World Bank before on the ground activities commence. To address OP/BP 4.11, the ESMF includes a clause of "Chance Find" that will be included in the companies' contracts in case any chance finds occurs. The ESMF also outlines costs associated with the implementation and supervision of safeguards, as well as trainings needs.

49. An additional safeguard instrument developed is a Resettlement Policy Framework (RPF, dated April 2015) which outlines the activities necessary to consult with users about potential access restrictions, identifies potential losses as a result of the restrictions, and develops alternatives to offset these potential losses. The Pest Management Plan (PMP) that had been prepared for the Agriculture Development and Food Price Response Project (Additional Financing, P128994) was updated to fit the project (dated February 2015); it outlines the standards for the purchase, application, storage and disposal of pesticides. Where applicable, a simplified Resettlement Action Plan will be prepared. All bidding documents for works contracts will have environmental and social clauses incorporated, in order to enable contractors to follow up on environmental and social due diligence and to mitigate the anticipated negative impacts. The ESMF was disclosed at the InfoShop on June 9, 2015 and the PMP and RPF were disclosed at the InfoShop on June 4, 2015.

50. Safeguards will be monitored by the environmental specialist in the Directorate of Environmental Control attached to the MEDD. The Ministry has some experience in World Bank safeguards policies through several past World Bank-funded projects, which it was involved in, in particular, the Community-Based Watershed Management Project and the ongoing LGDP, which developed and implemented comprehensive social and environmental mitigation framework with the support of the MEDD. The ESMF outlines the additional capacity building needed at the national, regional and community levels to adequately implement the safeguards instruments.

Safeguard Policies Triggered

Safeguard Policies Triggered	Yes	No
Environmental Assessment (OP/BP 4.01)	X	
Natural Habitats (OP/BP 4.04)	X	
Forests OP/BP (OP/BP 4.36)	X	
Pest Management (OP 4.09)	X	
Physical Cultural Resources (OP/BP 4.11)	X	
Indigenous Peoples (OP/BP 4.10)		X
Involuntary Resettlement (OP/BP 4.12)	X	
Safety of Dams (OP/BP 4.37)		X
Projects on International Waterways (OP/BP 7.50)		X
Projects in Disputed Areas (OP/BP 7.60)		X

Monitoring and Evaluation

51. Project M&E will be carried out at three integrated levels: (i) at the project level, looking at the performance of the project in general and per component in accordance with the project Results Framework (See Annex 1); (ii) at the GEF Focal Area level by tracking performance using the Biodiversity Tracking Tool, the Land Degradation (LD) Portfolio Monitoring and Tracking Tool (PMAT) and the SFM/REDD+ Tracking Tool²⁴; and (iii) at the ecosystem level, evaluating productivity and services functions' changes as a result of various combinations of SLM practices. The project M&E system will act as a management tool by enabling the MEDD, the NSC, the World Bank and the GEF to continuously assess project effectiveness during implementation, make changes as needed, and consequently improve project performance in a targeted manner. An M&E manual will be prepared for the project before effectiveness, describing the methodologies for information gathering, analysis and dissemination, training needs, administrative tasks, responsibilities and timelines for M&E and reporting at all three levels.

52. The PMU will have the overall M&E and reporting responsibilities. During the first year, it will receive M&E capacity reinforcement by a hired M&E consultant, who will conduct training for relevant MEDD staff, who will then take over this responsibility. Local level progress will be tracked by the RCUs, who will receive technical assistance and capacity building support for this purpose.

²⁴ While the LD indicators will be reported on annually as per GEF requirement (feeding into the Annual Performance Report submitted to the GEF by the World Bank), the BD and SFM respective indicators will be reported on at GEF CEO Endorsement, mid-term and project completion as required.

53. M&E tasks will also be used to:

- (a) Evaluate the effectiveness of SLM practices and make adjustments as needed;
- (b) Feed SLM data into the National Environmental Data Management System (supported by the Sahara and Sahel Observatory - OSS);
- (c) Feed data and information from the project to the Building Resilience through Innovation, Communication and Knowledge Services (BRICKS) project for evaluation of overall program performance;
- (d) Prepare semi-annual financial reports and annual external audits;
- (e) Monitor and evaluate compliance with agreed World Bank social and environmental safeguard instruments;
- (f) Monitor and evaluate participation of women, youth and pastoralists in project activities; and
- (g) Identify additional capacity development needs of stakeholders and partners.

54. M&E budget, comprising the salary of a full time M&E specialist for Year 1 under component 3, and M&E capacity building under component 2, has been agreed on and incorporated into the project's overall budget. Progress reporting will be executed by the PMU on a semi-annual basis, and financial reporting will be carried out on a semi-annual basis. External audits will be carried out by an independent auditing firm on an annual basis.

Annex 4: Implementation Support Plan
Mauritania: Sustainable Landscape Management Project under the SAWAP

A. Strategy and Approach For Implementation Support

1. The project will be supervised and operationally supported by a World Bank core task team, which will comprise the Task Team Leader (TTL), procurement, financial management, environmental, social and monitoring and evaluation (M&E) specialists. The team will conduct implementation support missions on a semi-annual basis, with the purpose of ensuring that the GEF Grant proceeds are used only for the purposes for which the Grant was approved, with due regard to economy and efficiency and with a view to sustainability of project results.

2. Each mission will include procurement and financial reviews as well as safeguards compliance reviews. In addition, close contact will be maintained with the Directorate of Nature Protection (DNP) to ensure that implementation is on track and that bottlenecks are resolved in an expedited manner in-between missions. In order to promote sustainability of capacity building efforts, and minimize the project’s reliance on external sources, World Bank support will focus mainly operational aspects (M&E and reporting, procurement, financial management, safeguard implementation and compliance), while technical support will be provided to the extent possible by local Non-Governmental Organizations (NGOs) and regional organizations which are already active in Mauritania. The Bank will support the DNP in coordinating and harmonizing its efforts with relevant projects and development partners, including the SAWAP program partners, the Sahara and Sahel Observatory (OSS) for knowledge sharing; and the World Bank-funded Regional Sahel Pastoralism Support Project (PRAPS) and Local Government Development Project (LGDP) for developing a Gum Arabic value chain and mainstreaming sustainable landscape management (SLM) into local development planning, respectively.

B. Implementation Support Plan

Table 6: Implementation Support Main Focus

<i>Focus</i>	<i>Skills Needed</i>	<i>Resource Estimate</i>	<i>Partner Role</i>
Fiduciary aspects: Training, implementation support and supervision of World Bank procurement, financial management, disbursement and safeguard guidelines/procedures/policies.	Knowledge of World Bank procurement, financial management, disbursement and safeguard guidelines/procedures/policies.	Total: US\$175,000 (US\$35,000 per annum)	
M&E and reporting support: guidance	Experience in designing M&E systems and producing reports which satisfy World Bank and GEF requirements		

Table 7: Skills Mix Required

<i>Skills Needed</i>	<i>Number of Staff Weeks</i>	<i>Number of Trips</i>	<i>Comments</i>
Knowledge of World Bank procurement, financial management, disbursement and safeguard guidelines/procedures/policies	A total of 40 staff weeks for two semi-annual missions per annum for HQ-based and field-based staff, in addition to 13 staff weeks for ongoing desktop operational support.	Ten in total for each specialist (two per annum, procurement, financial management/disbursement, social and environmental safeguards)	Financial, procurement and safeguard specialists will be based in the field
Experience in designing M&E systems and producing reports which satisfy World Bank and GEF requirements	A total of Five staff weeks for field and desktop support	Five in total (one per annum)	
TTL: good technical and operational skills, strong familiarity with country settings	A total of 15 staff weeks for field and desktop support	Ten in total (two per annum)	The TTL will be based at headquarters. Grouping of missions will take place to the extent possible to save costs

Table 8: Partners

<i>Name</i>	<i>Institution/Country</i>	<i>Role</i>
SAWAP program partners	Ethiopia: Sustainable Land Management Project (Phase 2)/Ministry of Agriculture (2014-2019) Ghana: Sustainable Land and Water Management Project/Ministry of Environment, Science, Technology and Innovation (2010-2016) Mali: Natural Resource Management in a Changing Climate Project/Agency for the Environment and Sustainable Development (AEDD) (2014-2019)	Sharing of knowledge and lessons learned on SLM practices, development of commercial agricultural value chains and strengthening of institutional capacities, using BRICKS as a common platform.

	<p>Nigeria: Nigeria Erosion and Watershed Management Project (NEWMAP)/Federal Ministry of Environment (2012-2020)</p> <p>Senegal: Senegal Sustainable and Inclusive Agribusiness Project /Ministry of Agriculture and Rural Development (2014-2019)</p> <p>Sudan: Sustainable Natural Resource Management Project/Ministry of Environment, Forestry and Physical Development (2014-2019)</p> <p>Togo: Togo Integrated Disaster and Land Management Project/Ministry of Environment and Forest Resources (2012-2016)</p> <p>BRICKS/ CILSS, OSS, IUCN (2013-2019)</p>	
Switzerland	Burkina Faso, Mali, Mauritania, Niger, Nigeria, Senegal, and Chad: Improving the Sahelian Populations' Resilience to Environmental Changes Project (REPSAHEL)/ OSS (2012-2015). OSS is located in Tunisia.	Provide a national platform for environmental data management
CILSS	Mali, Republic of Burkina Faso, Republic of Senegal, Republic of Chad, Islamic Republic of Mauritania, Republic of Niger: PRAPS (2015-2021)	Complement the project's focus on developing a Gum Arabic value chain by enhancing the livelihood resilience of pastoralists in the targeted areas
Mauritania Ministry of Economic Affairs and Development	LGDP/ (2013-2019)	Complement the project-funded activities in terms of mainstreaming SLM into local development planning by strengthening the capacity of local level institutions in the targeted regions.

Annex 5: Incremental Cost Analysis

Mauritania: Sustainable Landscape Management Project under the SAWAP

A. Background and Context

1. *General.* Mauritania is a lower-middle income country with an economic outlook affected by demographic transformation and particular geographic and climatic challenges. Mauritania is mostly a desert country, with a population of about 3.5 million and a Gross Domestic Product (GDP) per capita of US\$1,270 in 2013. Over the last decade, more than two-fifths of the population were below the national poverty line, while in 2008 almost half of the population lived on US\$2 per day or less.

2. *Natural resource management.* Mauritania has an arid climate, with inadequate rainfall to support arable crop production in most of the country. Mauritania's natural resources are under increasing pressure from climate change and desertification, urban population growth and economic development. This situation has been aggravated by poor environmental governance; Mauritania was ranked 161st out of 163 countries in the 2010 Environmental Performance Index. Vegetation and forest resources are sparse, and except for mining and fisheries, the country lacks directly exploitable natural resources. Water scarcity is also a widespread problem. Ecosystems' degradation and decrease in biodiversity have been harming rural populations and affecting their income-generating activities. The poorest people, who are already the most severely affected, are also becoming increasingly vulnerable to floods and droughts. The 2012 droughts brought to the forefront the need to move from crisis response to sustainable and resilient development of dry lands.

3. *Land and water degradation and desertification.* The impact of droughts on the soil's physical and chemical characteristics has led to degradation and loss of agricultural potential, and scarcity of pastoral resources. Water erosion takes place mainly in the country's southern belt and oasis areas, accentuating gullies and ditches, destroying wadi banks and depleting the soil. Chemical degradation under the combined effect of low rainfall and evaporation has resulted in increased salt water intrusion and soil salinization, especially in wadis and along the Senegal River's lower delta and coastline.

4. *Deforestation.* Mauritania's forestry resources continue to deteriorate to the point of almost irreversible situation in some parts of the country. This is the result of a combined effect of low regeneration of vegetation cover, deforestation for timber, fuel wood and irrigated agriculture, and increased concentration of sedentary livestock in already vulnerable areas.

5. *Biodiversity Loss.* Repetitive droughts since the 1970s have accentuated the extension of the Sahara desert and modified the geographical distribution of sylvo-pastoral and agro-sylvo-pastoral areas. Vegetative and faunal degradation has been primarily the result of droughts, as well as human population growth, land clearing, poaching, expanding livestock systems, bush fires, hunting and increased demand of timber, non-timber forest products, fuel wood, charcoal and fodder.

6. *Degrading Gum Arabic producing ecosystems.* Mauritania was the second largest exporter of Gum Arabic in the world with an average annual production of 5,700 tonnes between 1968 and 1972, however presently, Gum Arabic production stands at only about 500 tonnes annually.²⁵ The Gum Arabic production sector faces a number of local and national constraints: local constraints are related to the production systems and their economic characteristics and weak socio-economic status of communities leading to opportunistic behaviors such as unsustainable harvesting and storage practices; national constraints include disorganized marketing channels, the absence of a suitable marketing financing structure, lack of research and personal capacity to develop locally suitable production technologies and improper data management.

B. Broad National Development Goals

7. Despite a firm political will to combat desertification and sustain the country's natural resources, past regional and national efforts (e.g., Program to Combat Desertification, National Strategy for Sustainable Development, National Environmental Action Plans) have been mostly unsuccessful due to climatic events, weak civil capacity and widespread poverty. In 2011, the Government released its 2011-2015 Poverty Reduction Strategy, which addressed the need to integrate the country's natural resources into the economy's productive sector. Consequently in June 2014, the Government finalized, with the support of the World Bank, a Green Growth Policy Note. The first of three phases, the Policy Note guides Government's transition toward a more inclusive and green economic growth.

8. **The Project Development Objective (PDO)** is to strengthen sustainable landscape management in targeted productive ecosystems in Mauritania. Sustainable landscape management is defined as the use of land and water resources, taking into account the needs of both the production and service functions of the ecosystem within the larger landscape. The project targets degraded ecosystems with high potential for preservation and regeneration of Gum Arabic producing tree species.

C. Scope of Analysis

9. As in the entire-funded region, the "Gum Arabic belt" is situated at the frontline of the south-expanding Sahara Desert, a transitional area between the Sahara and the Sahel zones. Gum Arabic is produced by two tree species, Acacia Senegal and Acacia Seyal. In Mauritania, due to mostly sandy soil conditions, the Acacia Senegal, which produces higher gum quality, is more prevalent. Both tree species are of interest in the context of the fight against desertification because of their easy establishment, little water and fertilizer needs and nitrogen fixing ability. Gum Arabic trees are also used for timber, fuel wood and fodder.

10. In Mauritania, the Gum Arabic belt is located north of the Senegal River Valley, covering a land swath of 16.5 million hectares (1,100 km in length and 150 km in width). Annual rainfall in this part of the country ranges between 150 to 400 mm. The Gum Arabic producing landscapes cover the regions of Trarza, Brakna, Assaba, Guidimaka, Gorgol, Hodh Ech Chargui and Hodh El Gharbi. The project aims to valorize and regenerate degraded Gum Arabic producing landscapes

²⁵ MEDD. *Etude de la filière Acacia Sénégal et Acacia Seyal pour la production de gomme arabique.* Nouakchott, 2014.

in the regions of Trarza, Brakna and Gorgol.

11. In the targeted regions, the woody vegetation is dominated by *Balanites aegyptiaca*, *Acacia raddiana*, *Commiphora africana*, *Acacia flava*, *Acacia senegal*, *Acacia seyal* and *Caparis decudea*. Other, more localized abundant species are *Leptadenia spartium* (in dunes), *Maerua crassifolia*, *Combretum glutinosum*, *Combretum aculeatum*, *Acacia flava*, *Cordia rothii*, *Boscia senegalensis*, *Sclerocarya birrea*, *Guiera senegalensis*, *Grewia bicolor*, *Mitragyna inemis*, *Anogeissus leiocarpus* and *Adansonia digitata*. The herbaceous vegetation is dominated by annual grasses, including *Cenchrus biflorus*, *Aristida mutabilis*, *Panicum turgidum*, *Schoenfeldia gracilis* and *Eragrostis tremula*.

12. The project will finance SLM activities that address the needs of the production systems (in terms of production of Gum Arabic, non-timber forest products and fodder), and maintain and enhance three selected ecosystem services: biodiversity conservation, soil and water conservation, and vegetation and soil carbon storage.

D. Fit with GEF-5 Strategic Priorities

13. The project is consistent with the GEF-5 LD, BD and SFM strategic priorities (see Table 9). In particular, the project is aligned with BD-2 objective of mainstreaming biodiversity conservation and sustainable use into production landscapes, seascapes and sectors, with Outcome 2.1 of an increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation; LD-3 objective of reducing pressures on natural resources by managing competing land uses in the wider landscape, with Outcome 3.2 of integrated landscapes management practices adopted by local communities; and SFM-1 objective of reducing pressures on forest resources and generating sustainable flows of forest ecosystem services with Outcome 1.2 of good management practices applied in existing forests. Although not specifically targeted, the project also fulfills the GEF-5 focal area strategies of: i) Climate Change, by enhancing carbon sequestration through promotion of Gum Arabic tree production; ii) International Waters, by promoting the establishment of a tree barrier between the southward expanding Sahara Desert and the international Senegal River Basin; and iii) Cross-Cutting Capacity Development, by supporting various SLM capacity building, communication and ecological M&E activities involving governmental agencies at national and local levels and non-governmental entities.

Table 9: Targeted GEF 5 Focal Area objectives, outcomes and core outputs

Focal Area Objectives	Expected Outcomes	Expected FA Outputs
BD-2: Mainstream biodiversity conservation and sustainable use into production landscapes, seascapes and sectors	Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation	Output 2.2: National and sub-national land use plans (number) that incorporate biodiversity and ecosystem services valuation
LD-3: Reduce pressures on natural resources from competing land uses in the wider landscapes	Outcome 3.2: Integrated landscapes management practices adopted by local communities	Output: 3.2: INRM tools and methodologies developed and tested Output: 3.4: Information and INRM technologies and good practice guidelines disseminated

SFM-1: Reduce pressure on forest resources and generate sustainable flows of forest ecosystem services	Outcome 1.2: Good management practices applied in existing forests	Output 1.2: Forest area (hectares) under sustainable management, separated by forest type
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E. Link with the Sahel and West Africa Program in Support of the Great Green Wall Initiative (SAWAP)

14. The project is one of eleven investments under the GEF/World Bank Sahel and West Africa Program in Support of the Great Green Wall Initiative (SAWAP). The program supports the implementation of a country-driven vision for integrated natural resource management for sustainable and climate resilient development in the Sahel region. The program is one of the contributions to the Great Green Wall Initiative which was adopted by the Assembly of the African Union in January 2007. The Initiative’s goal is to address land degradation and desertification in the Sahel and Sahara, boost food security, and support communities to adapt to climate change. Eleven of the SAWAP’s investment operations (a large portfolio of well over US\$1 billion) have been approved by the World Bank Board of Directors; in addition, a Regional Knowledge Hub Project, BRICKS, was approved to ensure regional knowledge exchange. The project contributes to the following SAWAP Key Performance Indicators (KPIs):

- (a) KPI 1. Increase in land area with SLWM practices in targeted areas, compared to baseline (hectares, reported by crop, range, forest, wetlands, protected areas);
- (b) KPI 2. Changes in vegetation cover in targeted areas, compared to baseline (hectares);
- (c) KPI 4. Change in Carbon accumulation rates in biomass and soil compared to baseline (tc/ha).

F. Baseline or Business as Usual Scenario

15. In the baseline scenario, support to sustainable management of productive ecosystems is provided in Mauritania through aspects of the two following projects:

- (a) The Local Government Development Project (LGDP: US\$102 million, 2014-2019), which aims to strengthen the institutional performance of targeted local governments in delivering services addressing the themes of i) municipal government and institutional building, ii) rural services and infrastructure development, iii) municipal finance and decentralization, and iv) other public sector governance. The PNIDDLE targets ten regions, including Trarza, Brakna and Gorgol, which are targeted by the project. Based on an estimated geographic overlap of local rural governments targeted, an amount of US\$11.22 million is considered baseline financing.
- (b) The Regional Sahel Pastoralism Support Project (PRAPS: US\$248 million, which aims to enhance livelihood resilience of pastoralists in cross-border drought-prone areas of selected countries (Mali, Burkina Faso, Senegal, Chad, Mauritania and Niger) through policy reform, capacity building and investments. The project will more specifically benefit from certain activities implemented under PRAPS Component 2 “Natural Resources Management Enhancement”, Component 3 “Market Access Facilitation” and Component 4 “Pastoral Crisis Management”; and which will contribute to strengthening the sustainable management of productive ecosystems and to the development of a sustainable Gum Arabic value chain;

and its baseline support to the Mauritania Sustainable Landscape Management Project under the SAWAP is estimated at US\$6.63 million.

16. Therefore, the baseline financing is calculated at US\$17.85 million.

17. These projects - as a result of their wider geographic reach - focus on larger scale and general approaches to mitigation of land and water degradation and adaptability to climate change. They do not evaluate linkages between sustainable management practices and changes in productivity and services of the various ecosystems involved. Only limited attention is paid to enhancing biodiversity and fostering sustainable forest management. However, by supporting sound local development planning and investing in larger scale institutional, infrastructural and natural resources management needs, these programs provide a supportive framework within which the project can be embedded, resulting in mutual benefits.

18. Additional baseline investments on which the project will capitalize are: i) the GEF-funded Mauritania Community Based Watershed Management Project (PACV, closed in March 2013), which invested in land degradation control at the watershed level through collaboration with targeted rural communities, ii) the Swiss Agency for Development and Cooperation (SDC)-funded Improving the Sahelian Populations' Resilience to Environmental Changes Project (REPSAHEL, closing in 2015), which developed a national environmental database, iii) the Belgium-funded Association for the Promotion of Education and Training Abroad (APEFE, closed in October 2014), which developed SLM training modules for the region, and iv) the MDG Achievement Fund in Mauritania (MDG-F-1724, closed in 2012), which invested in the regeneration of Acacia Senegal tree populations. Without the project, the MEDD would not have the resources to expand and build on the technical and institutional accomplishments achieved by these programs to achieve sustainable landscape management. Even maintenance of some of the achievements may be questionable as the activities did not include revenue generation.

G. GEF Alternative

19. The Mauritania Sustainable Landscape Management Project under SAWAP will build on the larger scale land degradation control and climate adaptability scope of the baseline investments by promoting SLM of degraded Gum Arabic production ecosystems within the regions of Trarza, Brakna and Gorgol. The project will address both the needs of the production systems (in terms of the production of Gum Arabic, non-timber forest products and fodder) and the maintenance and enhancement of three selected ecosystem services: biodiversity conservation, soil and water conservation, and soil carbon storage. Changes in ecosystem productivity and services as a result of different SLM practices will be evaluated, and lessons learned will be broadly disseminated. The project will also initiate development of a sustainable Gum Arabic value chain by identifying challenges and opportunities. In the long term, this will generate revenues which are expected to increase local livelihoods' resilience, and support a long-term engagement in the SLM practices. As the targeted rural communes in these regions have experienced migration particularly of male individuals to national and international (Mali and Senegal) urban areas, the women who remain to take care of the rural household and agricultural activities are the primary beneficiaries of the project.²⁶

²⁶ *Etude Socio-économique de la filière Acacia Senegal et Acacia Seyal pour la production de la gomme arabique.* Nouakchott, 2014.

20. Project-financed activities are grouped into the following three components: (i) Component 1: Sustainable Landscape Management Knowledge, Governance and Partnerships; (ii) Component 2: Sustainable Landscape Management Practice; and (iii) Component 3: Project Management.

21. **Component 1: Sustainable Landscape Management Knowledge, Governance and Partnerships (Total: US\$1.31 million: GEF BD US\$0.25 million; GEF LD US\$0.73 million; GEF SFM US\$0.33 million).** This component consists of three sub-components, which will jointly strengthen knowledge, governance and partnerships within and among stakeholders (national and local government agencies, local communities, non-profit organizations and the private sector) involved in SLM in general, and in gum producing natural landscapes and the Gum Arabic value chain in specific.

22. **Component 2: Sustainable Landscape Management Practice (Total: US\$3.26 million: GEF BD US\$0.62 million; GEF LD US\$1.82 million; GEF SFM US\$0.82 million).** Component 2 supports investments in SLM practices in degraded Gum Arabic producing ecosystems and their integration into local development planning, for mutual reinforcement. The objective is to promote and evaluate various SLM practices which aim to recover degraded Gum Arabic ecosystems, by increasing the productivity of Gum Arabic, non-timber forest products and fodder while enhancing biodiversity conservation, soil and water conservation, and vegetation and soil carbon storage. Table 10 illustrates the relative positive impact of the various SLM investments on the three focal areas, by investment category. For details on the investment categories, see Annex 2.

Table 10: Categories of SLM investments and their relative impact on focal areas

	BD	LD	SFM
Category 1: Participatory SLM investments (US\$2.12 million, 70 percent of sub-component cost)			
<u>Exploitation control:</u> • Fencing and/or guarding of plots	+++	+++	+++
<u>Regeneration of Gum Arabic producing tree species:</u> • Establishment of Gum Arabic tree nurseries • Planting of juvenile Gum Arabic trees in plots	++	+++	+++
<u>Enrichment/revegetation with other indigenous woody species for non-timber products:</u> • Establishment of tree nurseries with e.g., <i>Adansonia digitata</i> , <i>Ziziphus Mauritania</i> , <i>Ziziphus Mauritanica</i> , <i>Commiphora Africana</i> , <i>Sclerocarya birrea</i>	++	+++	+++
<u>Enrichment/revegetation with indigenous herbaceous species for fodder production:</u> <i>Panicum turgidum</i> , <i>Aristida pungens</i>	++	+++	++
<u>Soil and water conservation practices:</u> • Stone bunds, half-moon structures, traditional mini-water catchment practices (Zai), sand dune fixation, gully stabilizing measures (reshaping, filling,	++	+++	++

revegetation), riverbank repair (structural support, revegetation).			
Bush-fire control/prevention measures (<i>par feux</i>)	++	++	++
Category 2: Immediate local support investments²⁷ (US\$0.91 million, 30 percent of sub-component cost)			
<u>Enhancement of vegetable gardening:</u>	+	++	+
<ul style="list-style-type: none"> • Establishment of vegetable gardens • Improving planting practices 			
<u>Improvement of watering facilities:</u>	++	++	++
<ul style="list-style-type: none"> • Repair of existing water pumps • Small-scale irrigation measures (new shallow water wells) 			
<u>Provision of improved fuel stoves and/or gas burners, solar energy equipment</u>	+	++	++
<u>Construction of local community boutiques to sell natural products</u>	++	++	++
<u>Support to income generating activities (dairy, fish farming, beekeeping etc.)</u>	++	++	++

23. **Component 3: Project Management (Total: US\$1.59 million, of which: GEF BD US\$0.05 million; GEF LD US\$0.13 million; GEF SFM US\$0.06 million; GOM US\$1.35 million).** This component provides project management support to the MEDD by financing: (i) a project management and administration training workshop, including procurement; (ii) a project launch workshop; (iii) the hiring of a procurement consultant, an internal auditor and an M&E consultant for a limited period of time or capacity enhancement within the MEDD; (iv) hiring of an external auditing firm to carry out annual external audits; and (v) operating costs associated with project management at the central and local levels (preparation of annual work plans, procurement plans and budgets, coordination of activities, preparation of progress and financial reports, procurement and financial management). The Government of Mauritania will provide in-kind contribution in the amount of US\$1.35 million, which represents the cost of the Project Management Unit's civil servant staff (project coordinator, two assistants and technical staff from the MEDD information and administrative departments), Regional Coordination Units' (RCU) staff, project premises, utilities, a vehicle for overall coordination which will be assigned to the project for its duration and the operational expenses of the vehicles to be provided to facilitate the ecological monitoring sub-component.

24. Table 11 summarizes the distribution of the GEF financing per component and GEF focal area source.

Table 11: Financing by component and GEF 5 focal area source (US\$ million)

Component	GEF 5 Focal Area			Total US\$ (%)
	BD	LD	SFM	
1. Sustainable Landscape Management Knowledge, Governance and Partnership	0.25	0.73	0.33	1.31 (27)
2. Sustainable Landscape Management Practice	0.62	1.82	0.82	3.26 (68)
3. Project Management	0.05	0.13	0.06	0.24 (5)
Total	0.92	2.68	1.21	4.81 (100)

²⁷ The list is exhaustive.

25. The US\$4.81 million GEF grant will be complemented by an estimated US\$1.35 million in-kind co-funding from the MEDD. Thus, the GEF alternative scenario total cost is US\$24.01 million, of which the GEF funds of US\$4.81 million represent an incremental cost of 20 percent. The distribution of these funding sources by component is presented in Table 12.

Table 12: GEF Alternative – breakdown of funding sources by component (US\$ million)

Project Components	GEF	GoM	PNIDDLE	PRAPS	Total
1. Sustainable Landscape Management Knowledge, Governance and Partnership	1.31	0.35	2.81	3.98	8.45
2. Sustainable Landscape Management Practice	3.26	0.25	8.41	2.65	14.57
3. Project Management	0.24	0.75	0	0	0.99
Total	4.81	1.35	11.22	6.63	24.01

H. Incremental Benefits of the GEF Alternative

26. The GEF alternative adds explicitly the dimension of biodiversity and sustainable forest management of targeted production ecosystems to the larger scale and general approach to land degradation control and climate change adaptability scope of the Baseline Scenario. Coordination with the PNIDDLE and PRAPS programs will be of mutual benefit. Additionally, the targeted Gum Arabic producing ecosystems are geographically positioned between the southwards expanding Sahara Desert and the biodiversity rich Senegal River Valley. As such, by promoting the establishment of a tree barrier, the GEF alternative protects the Senegal River Valley from desertification, enhances biodiversity conservation and improves the condition of international waters.

27. Observations on the changes in ecosystems’ productivity and services linked to project-funded SLM practices and other lessons learned from the project will be broadly shared and disseminated within the SAWAP program through the BRICKS project. Since Gum Arabic producing ecosystems occur everywhere in the transitional zone between the Sahara and Sahel across the entire SAWAP region, the project’s development and environmental impact are likely to surpass its five-year lifespan and geographic reach.

28. Table 13 lists the domestic and global environmental benefits of the baseline and GEF scenarios by component.

I. Estimation of the Impact of Project-Funded SLM Activities on Carbon Dioxide Balance

29. The project will include an estimation of the impact of supported SLM practices on carbon sequestration during the entire project lifetime as part of the monitoring of changes in ecosystem services and production functions, which is an explicit sub-component of the project. This is expected to significantly increase the level of information on this subject in Mauritania, which is currently scarce.

30. A rough estimate is provided on the impact of the project on carbon dioxide balance; it is

based on the results of a detailed FAO study²⁸ on the subject in Niger in 2012 which used the EX-Ante Carbon Balance Tool (EX-ACT, Version 3). The project similarly involves regeneration of degraded landscapes, covering sylvo-pastoral and agro-sylvo-pastoral zones in the same transitional zone between the Sahara Desert and Sahel areas. The study indicated a yearly gain of carbon storage in the above and underground biomass of 0.73 tCO₂-eq/ha. Assuming the situation in Mauritania is comparable with that in Niger, and based on a five year project duration and total area of 3000 ha, the project could reach a carbon sequestration gain of 10,950 tCO₂-eq.

²⁸ FAO. *Evaluation carbone du “Programme d’Action Communautaire – Résilience au Changement Climatique” au Niger - Application de l’outil EX-ACT Version 3*. Rome, 2012.

Table 13: Incremental costs and environmental benefits matrix (US\$ million)

Scenario	Domestic Environmental Benefits	Global Environmental Benefits
Component 1: Sustainable Landscape Management Governance, Knowledge and Partnerships		
Baseline PNIDDLE: 2.81 PRAPS: 3.98	Limited in scope but wide geographic spread SLM governance, knowledge and partnership at work, mostly of more general nature, focused on mitigation of land and water degradation and climate change adaptability, with little attention to mitigation of biodiversity loss and deforestation.	Some immediate and mid-term country and regional level benefits as related to the knowledge and governance of sustainable land and water management, focused on LD-3 (Reducing pressures on natural resources from competing land uses in the wider landscapes).
GEF Alternative GEF : 1.31 GoM: 0.35 Total: 8.45	Longer term enhanced SLM governing tools, knowledge and multi-stakeholder partnerships developed, with focus on Gum Arabic producing ecosystems and the development of a sustainable Gum Arabic value chain. Specific attention given to land degradation control, biodiversity conservation and sustainable forest management.	Longer term and wide spread enhanced governing tools, knowledge and multi-stakeholder partnerships in Mauritania and the SAWAP region overall—specifically related to Gum Arabic producing landscapes, as to enable and enhance: BD-2 (Mainstreaming of biodiversity conservation and sustainable use into production landscapes and sectors) LD-3 (Reducing pressures on natural resources from competing land uses in the wider landscapes) SFM-1 (Reducing pressure on forest resources and generate sustainable flows of forest ecosystem services)
Component 2: Sustainable Landscape Management Practice		
Baseline PNIDDLE: 8.41 PRAPS: 2.65	Land and water degradation control practices supported.	Some immediate and mid-term country and regional level benefits as related to sustainable land and water management, focused on LD-3 (Reducing pressures on natural resources from competing land uses in the wider landscapes).
GEF Alternative GEF : 3.26 GoM: 0.25 Total: 14.57	Income generating SLM practiced in degraded Gum Arabic producing ecosystems with promising national up-scaling potential. In the Gum Arabic belt of southern Mauritania, enhanced biodiversity preservation, soil and land conservation and sustainable forest management and thus desertification abated.	Longer term country level implementation of SLM in Mauritania with replication potential throughout the SAWAP region, focusing on : BD-2 (Mainstreaming of biodiversity conservation and sustainable use into production landscapes and sectors) LD-3 (Reducing pressures on natural resources from competing land uses in the wider landscapes) SFM-1 (Reducing pressure on forest resources and generate sustainable flows of forest ecosystem services)
Component 3: Project Management		
Baseline N/A	Limited project ecological outcomes monitored and evaluated.	No significant benefit as the results may not be comparable with global environmental databases.
GEF Alternative GEF: 0.24 GoM:0.75	Globally standardized ecological outcomes of the project monitored and evaluated, allowing comparison with the global situation.	SAWAP and global ecosystems monitoring systems enriched with project data, allowing evaluation of progress of global environmental objectives as related to mitigation of biodiversity loss, land and water degradation and deforestation.
Total Baseline: 17.85		
Total GEF Alternative: 24.01		
GEF Increment: 4.81 (20 percent)		

Annex 6: Economic and Financial Analysis
Mauritania: Sustainable Landscape Management Project under the SAWAP

1. The project aims to contribute to the preservation and regeneration of targeted ecosystems in three Mauritanian regions through expansion and strengthening of selected Sustainable Landscape Management (SLM) practices. Envisioned SLM practices are expected to induce many quantifiable and non-quantifiable benefits, including: increased agricultural productivity, reduced soil erosion, improved biodiversity and soil fertility, increased fodder availability, improved access to water resources and greater carbon sequestration. It is anticipated that, the above expected SLM outcomes will ultimately provide increased livelihoods opportunities and concrete socioeconomic benefits to about 480,000 people living in the project areas (this is the total number of beneficiaries, of which 160,000 will be direct beneficiaries).
2. The project comprises three mutually reinforcing components: (i) Sustainable Landscape Management Knowledge, Governance and Partnerships; (ii) Sustainable Landscape Management Practice; and (iii) Project Management. SLM practices of the sylvo-agro-pastoral land parcels planned in Component 2 are expected to increase the productivity of Acacia Senegal trees existing in the targeted areas by 50 percent and cause new introduced plants to produce Gum Arabic 33 percent more than the existing trees, thereby increasing significantly the sector value chain creation and income generation for the intended project beneficiaries.
3. Financial and economic analyses conducted for the project focus on a cost-benefit analysis and zeroes in on SLM investments financed under Component 2. The analyses cover 30 years, including the project implementation period and take into account only quantifiable benefits and costs streams. The financial viability of productive investments and the economic attractiveness of the project at the country level are verified through the computation of Net Present Values (NPVs) and Internal and Economic Rates of Return (IRR/ERR) and their comparison to the associated capital investment and the opportunity cost of World Bank funds, estimated at twelve percent. The sensitivity of the above economic indicators to the variation of production, price of Gum Arabic and operating and maintenance (O&M) costs of SLM practices is tested in the analysis.

Assumptions

4. The benefits and cost streams have been identified based on the following assumptions:
 - (a) the SLM practices and technologies under Component 2 are identified and prioritized according to their potential to positively affect Acacia Senegal production of Gum Arabic;
 - (b) Activities under Component 1 aimed at building SLM capacity, developing governing tools and knowledge sharing, and strengthening monitoring of environmental services are assumed to improve the capacity of the Department of Nature Protection of (DNP) of the MEDD to successfully implement all planned activities;
 - (c) SLM practices aimed preserving and regenerating Gum Arabic producing natural landscapes will not only be identified and prioritized in close collaboration with local communities and associations but also benefit from sustained maintenance funding;

- (d) The analysis assumes that as a result of SLM activities supported under the project, the productivity of Acacia Senegal trees within identified plots will improve by 50 percent; the prices of Gum Arabic will stay constant in the base case scenario and O&M will account for five percent of capital investment.

Benefit Stream Determination

5. Expected benefits include incremental revenues resulting from improved productivity of Acacia Senegal trees in the project intervention areas as explained earlier. The table below provides a few elements used in the computation of **anticipated monetary benefits**:

# Sites	Surface Area (ha)	# Trees/ha	Production/tree (kg)/year	Price/kg (MRO)	Price/kg (US\$)
60	50	200	0.5	500	1.54

6. Annual expected revenues will benefit primary Gum Arabic producers, intermediary traders, and retailers. Predicted annual revenue accruing from the sixth year to Gum Arabic producers is computed as shown below:

# Sites	Surface Area (ha)	# Trees/ha	Production per tree/year (kg)	Total Production (kg)	Unit Price (MRO)/kg	Total Gross Revenue (from Gum Arabic sale) (MRO)	Total Gross Revenue (US\$)
60	50	200	0.5	300,000	500	150,000,000	461,539.00

7. Total net benefits used in the calculation of the project's Internal and Economic Rates of return and the associated Net Present Values combine revenues from the above three mentioned levels and take into account the respective related operating costs (i.e. harvesting, Acacia trees trimming, transportation) and the projected annual maintenance costs estimated at 5 percent of capital expenses. On the other hand, the economic viability of the overall operation at the country level expressed through the economic rate of return (ERR) and the associated NPV is estimated taking into consideration direct and indirect costs and expected benefits. Depreciation charges, expected changes in the general price and direct transfers such as taxes, direct subsidies, and credit transactions including loans, principal repayment, and interest payments were thus excluded from the cost-benefit analysis.

8. The table below provides elements of the **cost stream determination**:

Cost elements	Determination of cost value
Salary (harvesting and trees trimming costs)	10% of Gum Arabic annual sale revenue
Other maintenance cost (i.e. fence maintenance)	5% of capital cost/year from year 6
Transportation cost	MRO 24.00 (US\$0.07)/kg

Project economic and financial returns

9. The results of the analyses in terms of IRR/ERR and NPVs at twelve percent discount rate are summarized below:

Financial Analysis		Economic Analysis	
IRR	NPV (in US\$)	ERR	NPV (in US\$)
15%	655,000	14%	342,000

10. Under the given assumptions, results of the analyses show that the operation is financially attractive and economically viable at the level of country as exemplified by its positive NPVs and the associated internal and economic rates above the opportunity cost of twelve percent. Ancillary environmental fallouts and several other benefits expected from the planned enrichment of targeted existing vegetation with other economically valuable ecosystems such as *Adansonia digitana* (Baobab), *Sclerocarya birrea*, *Commiphora Africana*, *Ziziphus mauritiana* and *Ziziphus mauritiaca* have not been quantified because of lack of usable data. As a result, these were not taken into account in the determination of the project's ERR. If accounted for, they would enhance the overall economic viability of the proposed project. For that reason, the decision on project feasibility and rationale should also take these elements into consideration.

Sensitivity and Risk Analysis

11. The project's ERR sensitivity to the following three key variables was tested: (i) increase of costs of O&M of SLM practices and technologies; and (ii) low impact of planned SLM practices on Acacia Senegal trees' productivity and associated price change.

12. ***Sensitivity to increase in SLM practices and technologies maintenance costs.*** The analysis has tested the change in project ERR due to a variation of SLM investments maintenance costs above the base scenario case of five percent of related capital expenditure. The analysis reveals that for the project to remain economically viable, O&M costs of SLM investments should not exceed seven percent of related capital expenses. At this level, the project expected ERR would equalize the twelve percent opportunity cost while the associated NPV will remain positive, around US\$1,800.

13. ***Sensitivity to changes in productivity.*** Results of the sensitivity analysis reveal that a ten percent decrease in Acacia Senegal productivity combined with a five percent increase in price, will cause the project ERR base case scenario to decrease from 14 percent to 13 percent and the associated NPV from US\$342,000 to US\$182,200, suggesting that the project economic viability would be sustained under this scenario.

14. **The project's overall expected contribution to the country's socioeconomic development.** In addition to the anticipated commercial revenues accruing to targeted local communities involved in the Gum Arabic industry, the project is expected to contribute to the preservation/creation of up to 7,200 local jobs. Over a 30 year period, the project is expected to

generate US\$45,000 in total annual salary income for the project area.²⁹ Revenues are expected to accrue during the project's life time, as early as the end of the second year, as a result of protection measures (fencing) and applied SLM techniques. Furthermore, project activities aimed at supporting the sector ministry, local governments and associations and private sector actors involved in the Gum Arabic industry, through the development of sectoral governing tools, partnerships, knowledge sharing and training, will catalyze stakeholders' energies to envision and develop a more ambitious program of re-boosting Gum Arabic sector, building on the results and lessons learned from the project.

15. **The rationale for the public sector provision:** The involvement of the public sector in Mauritania is critical in this sector for a number of reasons. Formal market economies have limited suitability in protecting the global environment. It is therefore important that the government helps to foster an environment more conducive to sustainable economic development and use of natural resources. Moreover, given the country's vulnerability to climate change variability, and associated devastating impacts, as exemplified by the threatening advance of sand dunes and their negative effects on the environment, the livelihoods of local communities and on the entire country's economy, the government has an important role to play in the transition to a more sustainable and stable economic development. This project recognizes the important role public sector has in the achievement of the broad objective of ensuring equitable distribution and access to public services and valuation of ecosystem services. Further, public sector leadership is essential because protected areas and communal lands in Mauritania are vested in government ownership.

16. **World Bank's value added.** The World Bank's added value in low middle income and fragile states is substantial, encompassing capacity building, technical expertise, coordination support, and channeling global knowledge. For this project specifically, it will include direct technical expertise through intensive supervision; support for the coordination required, through a Bank team that incorporates members from all relevant sectors; and the channeling of global knowledge through connections to WB teams and counterparts working on similar projects (past or present) in other low-middle income or fragile states. On the other hand, the project is part of the World Bank's commitment to the GEF-WB Sahel and West Africa Program which supports the Great Green Wall Initiative which was endorsed by the Sahel Heads of State. Additionally, the project builds on the TerrAfrica Platform for Sustainable Land and Water Management (SLWM). TerrAfrica is an African-driven global partnership program to scale up sustainable land and water management across sectors in over 23 sub-Saharan countries, by reinforcing investments, institutions and information at country and regional levels. The project is therefore a key building block in the World Bank's strategic and programmatic approach in addressing sustainable development, climate-smart agriculture, resilience and across the Africa region. In this regard, the World Bank is bringing international expertise on SLWM through the engagement in the SAWAP and TerrAfrica to benefit this project.

²⁹ See footnote #13.

Annex 7: Project Map

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