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Report No:

PROJECT DOCUMENT
ON A
PROPOSED GRANT FROM THE
GLOBAL ENVIRONMENT FACILITY TRUST FUND
IN THE AMOUNT OF US\$6.0 MILLION
TO THE
GOVERNMENT OF THE ISLAMIC REPUBLIC OF MAURITANIA
FOR A
COMMUNITY-BASED WATERSHED MANAGEMENT PROJECT
{May 16, 2006}

CURRENCY EQUIVALENTS

(Exchange Rate Effective March 30, 2006)

Currency Unit = Ouguiyas
 263 Ouguiyas = US\$1.00
 US\$1.44 = SDR 1.00

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ABV	Associations de Bassin Versant / Watershed Associations
ADC	Association de Développement Communautaire / Community Development Association
BAD	Banque Africaine de Développement / African Development Bank
CBD	Convention on Biological Diversity
CBRD	Community-Based Rural Development Project / Projet de Développement Rural des Communautés de Base (PDRC)
CBWM	Community-Based Watershed Management Project / Projet d'Aménagement Communautaire des Bassins Versants (PACBV)
CCD	Convention Contre la Désertification
CCU	Central Coordination Unit / Unité Central de coordination (UCC)
CDP	Community Development Plans / Plans de développement communautaires
CFP	Country Financing Parameters
CNRADA	Centre National de Recherche Agronomique et de Développement Agricole / National Agronomic and Agricultural Research Center
CNERV	Centre National d'Elevage et de Recherches Vétérinaires / National Livestock and Veterinary Research Center
CRD	Comité Régional de Développement / Regional Development Committee
CST	Comité Technique et scientifique / Scientific and Technical Committee /
CVA	Community Village Associations / Association de développement communautaire (ADC)
DAF	Directeur de l'Administration et des Finances / Director of Administration and Finance
DENV	Environment Directorate (MRDE) / Direction de l'environnement (MDRE)
DPSE	Direction des Politiques et du Suivi-Evaluation / Directorate of Policy, and Monitoring and Evaluation
EA	Extension Agents / Agents de vulgarisation des Bassins Versants
FMR	Financial Monitoring Report
GEF	Global Environment Facility / Fonds de l'Environnement Mondial (FEM)
GIRNEM	Projet de Gestion Intégré des Ressources Naturelles de l'Est Mauritanien
GIS	Geographic Information System / Système d'Information Géographique (SIG)
GTZ	Gesellschaft Fuer technische Zusammenarbeit / German technical Cooperation
ICARDA	International Center for Agricultural Research in the Dry Areas
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IDA	International Development Association / Association Internationale de Développement (AID)
IDPIAM	Integrated Development Project for Irrigated Agriculture in Mauritania / Programme de développement intégré de l'agriculture irriguée en Mauritanie (PDIAIM)
MDRE	Ministère de Développement Rural et de l'Environnement / Ministry of Rural Development, and Environment

NGOs	Non-governmental Organizations / Organisations Non-gouvernementales (ONG)
PAN/LCD	Plan d'Action National de Lutte contre la Désertification
RCU	Regional Coordination Unit
SLM	Sustainable Land Management / Gestion Durable des Terres (GDT)
SOE	Statement of Expenses
STAP	GEF Scientific and Technical Advisory Panel
UNCCC	United Nations Convention on Climate Change
UNCCD	United Nations Convention to Combat Desertification

Terminology

Hakem	Prefect/Administrator of a Moughataa
Moughataa	Administrative subdivision
Wali	Governor of a wilaya
Wilaya	Administrative region

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MAURITANIA
Community Based Watershed Management Project

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A. STRATEGIC CONTEXT AND RATIONALE

1. Country and sector issues

Mauritania is a Heavily-Indebted Poor Country (HIPC), with a per capita GDP of US\$350 (2002) and a poverty rate of 46.3 percent (2000). It is one of Africa's largest states, with some 1.1 million square kilometers, but over 90 percent of the land is desert. The population is small (2.6 million), but growing rapidly at 2.4 percent per year. Despite continued rural-urban migration, the rural sector provides employment for about 64 percent of the labor force and remains a main source of income for the population. The rural areas also have the highest concentration of the poor (75 percent), although the overall poverty rate has declined since 1990.

Key Elements of the country's poverty reduction strategy

The Government of the Islamic Republic of Mauritania (GIRM) has been implementing a wide range of policy, economic and sector reforms since 1992. Mauritania was one of the first countries to present a full Poverty Reduction Strategy Paper (PRSP) in 2001 and has been implementing it satisfactorily since then. The PRSP lays out four pillars aimed at: (i) accelerating economic growth; (ii) developing growth in the economic environment of the poor (particularly in the rural sector); (iii) developing human resources and ensuring universal access to basic infrastructure and services; and (iv) strengthening institutional capacities and governance. The PRSP is to be implemented through Regional Poverty Reduction Programs for each of the 13 wilayas (regions). With respect to its second pillar, the PRSP recognizes that developing and diversifying the rural sector is essential to developing trade, reducing production costs and enhancing the competitiveness of the economy.

The Country Assistance Strategy (CAS) (FY03-05) emphasizes the need to invest in natural resources management and envisions investment in natural resources management (NRM) capacity building in FY05 (high case lending scenario).

Key Policy, Institutional, and Other Issues (root causes, barriers, and threats)

General constraints hampering the Government's efforts to fight poverty include: (a) demographics (Mauritania's population is expected to double from 2.6 to 4.1 million by 2015 with rapid urban migration impacting the environment); (b) the weak capacity of public administration (implementing and managing economic and sectoral policies, managing strategic planning and programming/monitoring of public expenditures); and (c) the weak capacity of civil society (recently developed and insufficiently structured which affects their ability to deliver quality assistance).

In the **rural sector**, the constraints include: (i) a narrow and degraded natural resource base where agricultural activities take place within a narrow strip of land (200 km wide) characterized by low and erratic rainfall and interrupted by drought spells, (ii) limited transport infrastructure providing access to markets and services, (iii) limited supply of productive services including agricultural services resulting in low agricultural productivity, (iv) limited local community ownership of public investments as a result of a predominant top-down approach to public investments, (v) limited access to investment and working capital to boost agricultural productivity, and (vi) land tenure issues and the

implementation of the pastoral code which is presently being concentrated in high value land and not as much in rainfed areas where it could help resolve farmer-herder conflicts.

Land degradation is a major concern in Mauritania where agro-pastoral areas and oases provide the ecosystems which serve as a primary source of water for the cattle population, support agricultural and pastoral production, supply firewood and timber, supply crops, and provide the habitat for fauna and flora. The integrity of the ecosystems is threatened by **constraints to sustainable management of natural resources** including reduced arable land, pastureland, biodiversity and forest lands due to lack of technical supervision and information, population pressures, limited access to technologies, poor management and uncontrolled usage of resources.

Government Strategy to Address Issues and Constraints

The Government's efforts to address the above constraints include putting in place such national strategies and policies as the: Poverty Reduction Strategy Paper (PRSP, revised in 2001), the 2001 Agro-food Strategy; the 2002 Livestock Strategy; the Pastoral Code (2003); the Land Tenure Law "*Loi foncière et domaniale*" (1997, 2002), the "*Schéma National d'Aménagement du Territoire*"(1986), the Forestry Code, the Forest Action Plan; the bylaw for Game and Nature Protection "*Code de la Chasse et la Protection de la Nature*" (1997), the National Biodiversity Strategy (1998), the National Action Plans for Adaptation to Climatic Change (NAPA)(2004) and for combating Desertification (PAN-LCD) (2002), the National Environmental Action Plan (NEAP) (prepared in 2004).

In 1986, the Government initiated a Decentralization Strategy which was applied to rural municipalities in 1989 leading to the creation of 216 communes, of which 163 are rural. Subsequently, a "National Strategy of Decentralization and Local Governance was prepared in 2002.

Country Eligibility for GEF Co-financing

The Government of Mauritania signed the United Nations Convention to Combat Desertification (CCD) on October 14, 1994, and ratified the convention on August 7, 1996. The Convention on Biological Diversity (CBD) was signed on June 12, 1992, and ratified on August 16, 1996. The Convention on Climate Change (CCC) was signed on December 6, 1992, and ratified on January 20, 1994. The Government has also prepared and submitted an National Action Plan (NAP) in 2002 and the NAP's priorities are included in the 2001-2004 Poverty Reduction Strategy Paper (PRSP).

2. Rationale for IDA and GEF Involvement

The Community-Based Watershed Management project (CBWM) builds on the community-based rural development structure begun under the CBRD project financed by an IDA credit signed in 2004 (Credit 3883-MAU) (the “baseline project”) which focuses primarily on village-level investments, by broadening the base and supplementing it with natural resources management emphasizing sustainable land management (SLM) at the inter-community or landscape level. In this way, the Bank holds an advantage over other donors involved in local development operations by being able to focus its financing to support both broader village-level investments and adequate attention to community-based natural resource management in terms of land degradation management.

3. Higher level objectives to which the project contributes

The project would contribute to the Borrower’s higher level objectives and sector priorities for poverty reduction by being aligned with the priorities in the PRSP (2001) which emphasizes the need to invest in natural resources management (NRM) and in capacity building in FY05 (high case lending scenario). The preparation of the financing of the baseline project and then the CBWM project received strong Government support: an official request was made to the Bank for the financing of the CBWM project to complement the CBRD project, on an inter-community basis to improve the management of natural resources, and combat desertification within the context of watersheds and landscapes management.

The baseline project and the CBWM support the Government’s program of decentralization by soliciting the participation of the regional, local and traditional authorities in project execution, as well as supporting the Government in the implementation of several other national strategies and policies with relevance to the rural sector.

The **global objective** is to limit land degradation and to safeguard critical ecosystem functions through community-driven SLM activities that improve agro-sylvopastoral management and increase vegetation cover while securing livelihoods and global environmental benefits (i.e., reduced sedimentation of waterways, improved interconnection and integrity of ecosystems, enhanced carbon storage rates, and increased opportunities for biodiversity conservation).

The expected **global benefits** of the GEF alternative include:

- Arresting and reducing desertification (a global bad);
- increased opportunities for conservation of biodiversity, mitigation of desertification, and preserving ecosystem integrity through the harmonization of policies and regulations supporting sustainable management of resources at the watershed/landscape level;
- enhanced ecosystem integrity and sustainable land management due to adoption of improved land management and restoration practices, both in productive landscapes and in riparian areas which result in decreased soil erosion, increased in carbon sequestration, and improved conservation and sustainable use of biodiversity;

- improved capacity for seed retrieval of threatened riparian plant species and sustainable land management through improving capacity of communities to manage their land resources;
- restoration of globally important ecosystems (e.g., microclimates, fauna and flora, areas of significance for migratory birds);
- establishment of a replicable Monitoring and Evaluation (M&E) system for land degradation, incorporating global concerns to the baseline M&E activities.

The expected **national** benefits of the project would be:

- Improved land and water quality/quantity for local use through restoration of degraded lands, resulting decrease in erosion rates, and sediment flow into water bodies;
- Improved income flow of rural communities through implementation and adoption of sustainable land management practices in targeted areas;
- Increased capacity for stakeholders to implement cross-sectoral approaches to land management, including improved outreach and involvement of civil society, private sector, and government institutions to plan and manage natural resources.

B. PROJECT DESCRIPTION

1. Lending instrument

The lending instrument is a GEF grant. The CBWM will be an extension of the CBRD financed with an IDA Specific Investment Loan. The project is a partially-blended operation, being processed later than the IDA-financed operation and having a separate legal documentation and Board approval date.

2. Program objective and Phases

Not applicable.

3. Project development objective and key indicators

The **project development objective** is to lessen the incidence of land degradation at the watershed level within the CBRD project area by assisting rural communities to realize benefits through community-driven investments addressing land degradation and promoting SLM practices.

The **overall project outcome** expected for the project is that rural communities' increased usage of effective SLM techniques and practices lead to a decrease in incidences of land degradation.

The **key indicators** for evaluating the achievement of the objective would be:

- Watershed associations in the selected project area are able to implement 75 percent of the SLM approach introduced.
- Two-thirds of activities introduced by the project are generating positive income flow for the communities.
- 25 percent increase in biomass (perennial grasses & shrubs regeneration) in targeted areas.

4. Project components

The project has three components which are aligned with the components of the baseline project as follows.

Component A: Capacity Building

Baseline Project Activities (IDA funding: US\$9.2 million). This component supports strengthening the capacity of community village associations (Associations de développement communautaires (ADCs)) and selected rural municipalities to design and implement effective development plans; developing the technical capacity of the communities' service providers (crop and livestock research-development, extension services, statistical, environmental and rural training agencies) with an emphasis on decentralized units; and strengthening the capacity of micro-enterprises that directly supply goods and maintenance services to the village associations.

CBWM Activities (GEF funding: US\$1.5 million) - Capacity-Building for Sustainable Land Management. GEF incremental activities will include: (a) the development of inter-community plans for watershed management; (b) the establishment of watershed associations in the targeted areas; (c) collaboration with national and local research institutions, extension services and community associations to adopt a watershed management approach in developing and transferring SLM technologies; (d) the review of policies, laws and regulations to provide incentives to rural communities to adopt sustainable management of resources at the watershed/landscape level; and (e) exploration and identification of future sustainable operation and funding options (e.g., carbon markets, bio-carbon funds, environmental tax revenues, etc.) following project closure. The development of watershed associations will provide a fora for discussion and interaction between village communities which, combined with the development of priority action plans, will also provide a mechanism for conflict resolution, e.g., between herders and farmers.

Component B: Investment Funds

Baseline Project Activities (IDA funding: US\$30.3 million). This component provides the means to implement village and communal development plans while giving communities the opportunity to put into practice their strengthened capacities. The funds are intended to bring benefits to poor people and improve their social, environmental and economic conditions and comprise: (a) the Village Investment Fund which provides ADCs with capital input to execute their development plans, and (b) the Rural Communal Road Funds to improve access to rural roads within the communes. Contributions, mostly in-kind, are required from beneficiaries at differing levels depending on the type of investment. The community development plans are demand-driven and identified by the communities and can include investments for village wells, soil and water conservation to boost agricultural productivity (dykes and small dams); (ii) diversified agricultural production (village gardens); (iii) livestock health activities (vaccination parks) (iv) targeted activities to protect the natural resources base (dune fixation, vegetal cover regeneration); and (v) various other on- and off-farm income-generating activities (mills, village stores, agricultural rental equipment). Activities selected by women are encouraged. However, the CBRD does not finance religious establishments and social services (healthcare and education) which are within the sphere of competence of

communes or are provided by other programs, but will assist villages and communes to gain access to those services from sectoral programs.

CBWM Activities (GEF funding: US\$3.5 million) - Providing Incentives for Sustainable Land Management Practices. The GEF component will provide investment capital, through the *Local Investment Fund*, for village communities to adopt sustainable resource management and conservation practices within a watershed area and at the inter-village community level. The watershed management plan, developed at the national level with the assistance of technical experts, would determine the types of activities which would be eligible for funding. The investment proposals made by watershed associations would be demand-driven and would identify sustainable land/resource management investments and activities to be funded. These investments must also be in harmony (i.e., no duplication of effort) with the CBRD community development plans (CDPs). Eligible activities could include: (a) the demonstration and application of new, innovative SLM and energy efficient technologies (e.g., solar cooking stoves, solar electricity, biogas) at the watershed (regional or inter-village), and lower (village community) levels, establishment of upstream and river bank protection to minimize erosion and sediment transport in the watersheds, cattle routes/wells, pasture investments, inter-village forest management investments); (b) income-generating activities (nurseries, ecotourism, fishing, gum arabic, medicinal plants); and (c) demonstrations of better management practices or mechanisms to strengthen traditional grazing management systems and systems to reduce livestock-agriculture conflicts such as installation of closures and boundaries for the protection of grazing areas and plantations. The project would not fund activities which are not linked to GEF objectives or do not provide direct or indirect benefits to the global environment.

The component will be implemented by the Central Coordination Unit (CCU) of the CBRD project, under the supervision of the lead environmental specialist. The implementation of this component will be an indicator of whether innovative techniques for soil conservation introduced at the community level, their rate of adoption, and the extent of their inclusion in the watershed management plan and watershed CDPs have been successful.

Component C: Project Management, Monitoring and Evaluation

IDA Baseline Activities (IDA funding: US\$4.1 million). The baseline supports general project management and coordination expenses, monitoring and evaluation, and the development and implementation of a communication strategy. Coordination would be carried out by the CCU located in Nouakchott and also by the Regional Coordination Units (RCUs) located in nine regional delegations of the MDRE. The CCU will also be responsible for carrying out a communications strategy designed to disseminate the project's activities, approaches, and results, through relevant local and national media. Activities will also be supported to develop an M&E system, including the development of key poverty indicators, to effectively track and evaluate project progress and to ensure timely and relevant periodic reporting.

GEF Activities (GEF incremental funding: US\$1.0 million). This component will be also be implemented by the CCU to ensure synergy and consistency between the objectives and activities of the baseline project and the CBWM. The lead environmental

specialist within the CCU will be responsible for facilitating, coordinating and monitoring the project's GEF activities. The component will fund technical assistance associated with M&E, and the incremental operating costs of additional personnel recruited as part of regional teams (facilitators and animators) to execute GEF activities or to assist in managing these activities. Qualified technical assistance (e.g., an international research and development consulting firm) will be recruited under the component to assist the CCU, particularly in the development of the watershed management plan and the implementation of M&E tools (e.g., scorecard system, development of tools to assess land degradation costs and SLM benefits). Monitoring indicators used for the baseline project would also apply to the CBWM, particularly for project management and development of a communication strategy, but vary for M&E of NRM related activities. It is envisaged that the communications plan will eventually establish a group of SLM "champions", made up of representatives of various stakeholders involved or impacted by the project, e.g., local government, community association members, extension service agents, women, youth.

Lessons learned and reflected in the project design

Capacity building of community associations. Under the Natural Resources Management project in Mauritania, pertinent lessons incorporated into the project's design are: (a) empowered rural communities are emboldened to steer Government technical services toward their needs and initiate the process to reverse the trend toward impoverishment; (b) creating a critical mass of investments ensures wider distribution of wealth within the communities through creation of revenue and employment; (c) within the demand-driven approach, local communities must be trained to balance short-term, village-oriented interests with long-term investments and inter-village resources management; (d) monitoring and evaluation is not to be overlooked.

Transfer of grants (lessons from various Bank and GEF-financed projects): Where there is great human pressure on natural resources and the main economic activities are dependent on natural resources, project strategy should focus on both alternative livelihood and ecosystem-based natural resource management. However, in transferring funds to communities, provisions should be made to build adequate administrative management capacity (basic bookkeeping/accounting) for the funds.

Facilitation (various projects in Mauritania). Project staff acting as facilitators rather than implementers provides a sound framework for capacity building, transfer of knowledge, use of traditional knowledge and governing structures which may lead to local ownership, empowerment, increased effectiveness, and provides a greater prospect for sustainability.

Lessons from the GEF Land Degradation Linkage Study (2001) incorporated into project design:

- Projects with a people/land management focus tend to address land degradation issues more directly. (The project employs a demand-driven, participatory approach to local empowerment).

- The most effective linkage projects appear to be those where land degradation is built in as an initial component of the problem and the solution. (The project's objective is focused on reducing land degradation through SLM and related activities).
- In biodiversity linkage projects, rangeland environments have created the best land degradation/biodiversity synergy. (Potential sites identified include rangeland environments).

5. Alternatives considered and reasons for rejection

Three lending options were considered: separated/associated operations, blended operation and an APL. The option of separated/associated operations was rejected in favor of a partially-blended operation, because the latter offers better synergies with the baseline project in terms of coordination of project activities and implementation by the same project coordination unit for both the baseline and GEF-financed projects. Implementation by the same project coordination unit for both project offered cost savings in terms of staffing, operating cost, and time, while building capacity and ownership at the national level. The APL option was rejected because of the need to align closely the implementation of the CBWM activities with the baseline project activities and project duration.

The CBWM will be an extension of the CBRD which is financed with an IDA Specific Investment Loan. The project is a partially-blended operation, being processed later than the IDA-financed operation and having a separate legal documentation and Board approval date. The project will be implemented over five years and will lag the baseline project by two years in project start-up. It will also close about a year later. The lag will be advantageous since preliminary activities and basic structures for implementing the project would have been initiated or established, particularly: the selection of community associations, preliminary consultations, training and technical assistance in the formulation of local development plans would have been launched, and the new watershed associations to be formed could gain from the experience; the central database established under the CBRD would be in place and activities for developing a Geographical Information System (GIS) for M&E would be more advanced.

C. IMPLEMENTATION

1. Partnership arrangements

A coordination mechanism will be established for the collaboration with the GEF national focal point for Mauritania in the Direction de l'Environnement (DENV) of the Ministère de Développement Rural et de l'Environnement (MDRE) and the CBRD staff to avoid duplication and reinforce synergies between national, regional, and global initiatives. These mechanisms will also include a regional coordination mechanism. The role and responsibility of this structure will be reinforced by other ongoing projects supported by IDA and other donor organizations already funding related interventions in the country such as UNDP, IFAD, GTZ.

The project will collaborate with the Oasis Sustainable Development Program (IFAD) in the area around the oases; where local associations already exist under the Oasis project, no new associations will be created to avoid duplication of effort and resources. The

project will also seek to coordinate and collaborate with the following projects: the Desert Margins Program (UNEP/ICRISAT), the Small Grants Program (UNDP/GEF), the Poverty Reduction Project in Aftout South and Karakoro (PASK) (IFAD), the Natural Resources Management Program (GTZ), the Biological Conservation Project in Mauritania and Senegal (UNDP), the Rural Electrification through Solar Panels and Windmills Project (UNDP), Famine Early Warning System (FEWS) (USAID), and the TerrAfrica Partnership to access other donor activities.

2. Institutional and implementation arrangements

The project is designed to foster bottom-up decision-making: the watershed associations (Association de Bassins Versants (ABV)) will be assisted in developing their watershed management plan, which will then be approved by the local public authorities (through approval committees). An agreement (“convention”) will be signed between the ABVs and interested parties to endorse the plan and to clarify roles and responsibilities. From the plan, the ABVs will select their priority activities and formulate annual action plans which would include subprojects for investment and training in SLM and income-generation. They will be supported with technical assistance provided by the Decentralized Regional Coordination Units and the project’s Central Coordination Unit (CCU) (responsible for coordinating and managing the project). The Scientific and Technical Advisory Committee will provide technical guidance and advice to the project, and may play a role in policy dialogue and technical information dissemination. Oversight for harmony with the country’s laws and policies, and intersectoral coordination rests with the Steering Committee. The details of roles and responsibilities at each level are described below.

At the National Level:

Project Central Coordination Unit (CCU): The CCU, under the tutelage of the Ministry of Rural Development and Environment (MDRE) will be responsible for implementing the CBWM. Since the CBWM is a partially blended project with the CBRD, the coordination of the CBWM will use the existing structure of the baseline project for project coordination and management to maintain consistency and efficiency. Staffing of the CCU comprises: (i) a core management team (Project Coordinator, Director of Administration and Finance, Internal Auditor, and Procurement Specialist); (ii) experts covering M&E and such key aspects of the project as community participation/training, rural infrastructure, agricultural services contracting, natural resources/environmental safeguard issues, and gender and social safeguard issues; a technical expert, the lead environmental specialist position within the project, will be responsible for the technical management aspects of the CBWM and will be supported by a full-time technical assistant; and (iii) assistants dealing with project communication, logistics, computer systems.

The CCU is responsible for briefing the MDRE before each meeting of the Steering Committee, and the Scientific and Technical Advisory Committee (defined below). The CCU will also be the contact point for responding to information needs, e.g., from TerrAfrica Briefings including quarterly reports and summary notes. The CCU’s responsibilities include: (i) preparing the annual work programs and budgets for project activities; (ii) planning and implementing such activities; (iii) maintaining the project’s

financial integrity; (iv) implementing the M&E system including the impact analysis; (v) facilitating with sectoral operations to help village communities and rural communes gain access to basic social services; and (vi) collaborating with other development partners and Government-financed development projects to avoid duplication of effort and to ensure complementarity with such initiatives. Unlike the CBRD, under the CBWM, the CCU will handle all direct payments to contractors and service providers for the watershed associations which, unlike the CBRD's community development associations "Associations de Développement Communautaires (ADC), will not be managing their own funds under the project.

The Steering Committee (Comité de Pilotage, CP): Provides overall guidance to the project. It will be responsible for: (i) reviewing the annual work plans, budgets, and project's results prepared by the CCU; (ii) assessing the progress made towards achieving project's objectives; (iii) facilitating the project's implementation through the coordination among CP's members. It is chaired by the Ministry of Economic Affairs and Development (MAED) and consists of key ministries involved in project activities (Rural Development, Interior, Health, Education, Equipment, Water, etc.), representatives (mayors) from elected local governments (communes), and civil society (NGOs). The CP meets twice a year, with one of the meetings to include other development partners. The minutes of CP's meetings will be shared with IDA and the GEF.

Scientific and Technical Advisory Committee (Comité scientifique et technique, CST)

This committee, which will be established in the context of the CBWM does not exist in the baseline project design. Its role would be to review the technical elements of the project activities which are new and innovative (e.g., solar cooking stoves, biogas) and having a national scope, guarantee the coherence and scientific quality of activities, and contribute to the monitoring, and evaluation of the project from a technical standpoint, and be involved in the dissemination of results. The committee would meet as needed and selected members of the committee would participate in field missions. The committee would be chaired by the GEF Focal Point of Mauritania (DENV), and include a core team of: the CCU as Secretariat, international experts in related disciplines, representatives or project staff of other related donor-funded programs. Representatives from donors, national research institutions, the university, extension services, other Government technical services departments (e.g., DPSE, DA, DE, DRV), and civil society would be invited to participate as observers. The CTS may also be involved in policy dialogue and information dissemination involving best practices inside and outside of the country.

At the Regional Level:

Decentralized Regional Coordination Unit—RCU: Project management will be decentralized to the regional (*wilaya*) level. The *Comité Régional de Développement* (CRD) selects the watershed sites and oversees the regional program and is chaired by the Governor (*Wali*) of the region. The CRD is composed of Government representatives (the *Hakems*), public services, representatives of local government (communes) and civil society (NGO, professional associations). Each region in the project area has a Regional Coordination Unit (RCU) which is under the supervision of the *Délégation Régionale du Développement Rural* of the MDRE.

The RCU will be in charge of implementing project activities on the ground and would be responsible for approving the plans for watershed management. In particular, it will ensure that the M&E system is carried out according to plan and the “*Association des Bassins Versants*” (ABV) or watershed associations receive the necessary assistance in implementing project activities. The RCU is staffed with the Regional Coordinator, an accountant and a data entry operator. It works with the *Cadre mobile d’assistance technique* (CMAT) recruited by the project to strengthen the Regional Delegation in terms of staffing. The CMAT are expected to be retained by these delegations at the end of the project. As with the CCU, the core staff of the RCU will be under a performance-contract to be jointly assessed by the Borrower and GEF.

At the Local Level:

Local Public Authorities and Oversight: Central and local technical services of the State and local authorities of the communes are expected to play an important role in the CBRD and CBWM. Local authorities are expected to: (i) participate in the validation process and implementation of the watershed management plan which must be aligned with the Regional Poverty Reduction Programs and the development agenda of the communes and the region; (ii) verify that the different investments conform with relevant rules and legal texts; (iii) supervise the implementation of subprojects; and (iv) assist the communities in conflict resolution should they arise. The watershed management plan and the activities contained therein will be vetted by an Approval Committee at the *Moughataa* (*préfecture*) level, coordinated by the Prefect (*Hakem*) of the concerned Moughataa. The Approval Committee will be comprised of representatives of the sectoral ministries, local governments, and local NGOs. Details would be provided in the Project Implementation Manual.

Watershed Associations (Associations des Bassins Versants - ABVs) are ultimately the principal implementing units of the CBWM. They are governed by applicable laws and regulations. They will group together representatives from different ADC villages under the CBRD. The project will not intervene in areas which do not have ADC villages. With assistance from technical specialists, ABVs will be responsible for designing the development and investment plans for selected watersheds through a participatory approach. The approach will involve several villages, and for rural communes, it will involve all villages in the watersheds. Funds will be managed by the CCU for the ABVs. ABVs and rural communes will be responsible for contracting suppliers and service providers, procuring goods and services needed to implement investment plans, and assuring proper operation and maintenance of the investments, and the CCU will pay

directly the contractors or providers. The ABVs will be responsible also for assessing the performance of agricultural and facilitation services. The composition of each ABVs would include: at least three representatives from each ADC, one representative from the livestock herders (transhumants), and a representative each from other users of watershed resources, e.g., fishermen, charcoal manufacturers, etc..

Matching grants under the Local Investment Fund (Component B) will be provided using the following criteria: (i) the ABV is a socially cohesive group with which the project can work; (ii) the ABV has in place a watershed management plan; and (iii) sub-projects are technically, financially, and environmentally sound with indications that the ABV will take responsibility for its realization, operation and maintenance. The ABVs are required to follow a transparent process in the procurement of goods and services and are subject to technical supervision and monitoring of the sub-projects. If an ABV violates the agreement signed with the project's CCU through any misuse or misappropriation of funds, support from the project will be suspended.

3. Monitoring and evaluation of outcomes/results

To ensure harmonization and coordination, the project will use the monitoring and evaluation system designed for the baseline project and adds relevant information needed for its GEF-funded activities. The central database being developed under the baseline project will capture data collected from project activities, national databases, studies and surveys, as well as inputs from the CBRD's Central Coordination Unit's (CCU) financial monitoring system. The Geographic Information System (GIS) for the baseline and the CBWM is being developed in parallel with the GIS system of the IPDIA project, with the collaboration of the central mapping agency of Mauritania. The GIS information once available may be used for capturing diagnostic information on villages and communities, monitor initiatives and community interventions related to watershed management and land degradation. In the meantime, GIS data and information used in the design of watershed management plans will be provided as part of a technical assistance or consultant services contract to develop the plans and training will be provided to Government technical staff as part of the contracts.

The project would supplement the financing for M&E activities under the baseline project for incremental equipment and operating costs, and consultant services to carry out analyses and impact assessments, and for study tours to capture best practices and lessons from experiences with environmental M&E.

At the local level, the project will support community-based M&E as a tool for building the capacity of watershed associations to implement their watershed management plans. M&E will build on accepted traditional methods of surveillance which exist at the village level, and involve watershed associations in surveillance activities and reporting of abuses of natural resources to the proper local authorities. Ecological monitoring would initially be carried out by extension agents with the possibility of transferring such responsibilities to watershed associations as their capacities are developed. Local facilitators would be trained in basic data collection and assisted with minimal equipment and transport necessary for them to effectively carry out their tasks.

As in the baseline project, to ensure objectivity, the project will contract with third parties (the MDRE's M&E unit, other agencies, and consultants) to measure its outcome

indicators and conduct targeted studies and surveys as needed. In year one, the project will work with these parties to define an appropriate quantitative approach to assess the project's overall impact, e.g., indicators for measuring successful adoption of the SLM approaches by the watershed associations will be measures using a scorecard system. However, overall responsibility for the collection of indicator data and analysis of results rests with the M&E system located within the CCU and assisted by RCUs. Capacities of the CCU and the Ministry of Rural Development and Environment (MDRE) (particularly its statistical unit) will be strengthened so as to build complete ownership of the M&E system by the Government.

4. Sustainability and Replicability

Replicability. The project will be tested initially in two pilot sites¹, following which successful approaches will be replicated to a total of four sites by the end of the project implementation period of five years. The selection criteria for scaling up to other sites will be specific to watershed management and land degradation problems to better ensure replicability from one site to the next. A detailed replication strategy will be proposed at the end of the second year of project implementation.

The project will collect best practices and lessons from other related initiatives and other donor-financed projects in the area and incorporate applicable approaches during the project execution period, in addition to collecting and disseminating such information through the Scientific and Technical Advisory Committee. Representatives from other donor agencies (GTZ, UNDP, UNEP, IFAD), with programs under preparation and execution were invited to participate in the preparation of the project. Donors were also invited to attend a stakeholder's workshop held to endorse findings of studies completed during the project's preparation. The project intends to remain in contact with the representatives of relevant programs by soliciting their involvement, e.g., as observers, in the Scientific and Technical Advisory Committee, field trips, and workshops.

The TerrAfrica Partnership on SLM is available to assist in scaling up and scaling out interventions from the CBWM project, within Mauritania and beyond. The TerrAfrica Partnership would provide a platform for knowledge, promoting and disseminating best practice, toolkits, and analytical work, gathered from other countries in Africa which would assist Mauritania's SLM initiatives.

Sustainability Together with the baseline project, the project will employ a demand-driven, participatory approach to building local capacity for managing small projects, formulating development plans, contracting and supervising small procurement works, funds management, monitoring, and application of new SLM technologies. Communities will gain experience in negotiating contracts with government, civil society and private sector and build partnerships with them. The project will provide an enabling environment for strengthening local ownership of natural resources management initiatives through demand-driven investments with beneficiary contributions in kind (labor and basic materials). At the regional and national levels, the project would frame interventions within the decentralization process and would contribute to strengthening

¹ The two watershed pilot sites are: Greiguel (3 communes, 32 villages), and Tengharada (1 commune, 12 villages). The total number of villages targeted will be around 150 villages over five years of implementation.

the capacity of national associations/institutions in designing, planning and managing watershed management plans in the context of land degradation by involving these important stakeholders in the preparation, implementation and evaluation processes.

The environmental communications strategy and materials to be made available through GEF funding will also contribute to building stakeholder capacity in SLM implementation.

The project will be implemented within the framework of relevant national policies and regulations which the Government has established which will contribute to the long term prospects of the project's sustainability. Furthermore, the baseline study and review of policies and regulations will make recommendations on harmonization of relevant laws and regulations which will directly impact the project.

Following the coup of August 2005, the Bank has maintained a close dialogue with the current Government of Mauritania and has received confirmation from the Government of its strong commitment to the current lending program.

In order to ensure financial sustainability, the economic aspects of managing land degradation will be taken into account and innovative financial mechanisms will be explored including national environmental funds, regional partnership centers for communities, carbon finance/sequestration, and returning environmental tax revenue to the local level. In particular, profitable options would be highlighted on community development plans.

5. Critical risks and possible controversial aspects.

The Country Financial Accountability Assessment (CFAA) revealed that the systems for planning, budgeting, monitoring and controlling public resources in Mauritania are improving but remain at a level that they do not provide sufficient reasonable assurance that funds are used for the purpose intended. The risk of waste, diversion and misuse of funds was assessed as partially high. The overall project risk from a financial management perspective is therefore considered partially high. Nevertheless, various measures to mitigate these risks have been agreed. The financial management arrangements of the project are designed to ensure that funds are used for the purpose intended, and timely information is produced for project management and government oversight, and facilitate the compliance with IDA fiduciary requirements.

As the CFAA recommendations on financial accountability reforms have not fully been implemented yet, the Country Risk is assessed as partially high. Various measures to mitigate these risks have been agreed and thus the project risk from a financial management perspective could be moderate provided the risk mitigating measures are properly addressed.

The table below identifies the key risks that project management may face in achieving its objectives and provides a basis for determining how management should address these risks.

Risks	Risk Rating	Mitigation Measures
<i>Inherent Financial Management Risks:</i> Funds may not be used in an efficient and economical way and exclusively for purposes intended due to corruption and poor governance.	M	The team of qualified and experienced staff in place would reduce this risk. Strong internal control procedures to be set up and maintained under control with strengthened follow-up of Audit Reports.
Confusion may arise between CBRD and CBWM transactions.	M	A dedicated accountant will handle CBWM operations under DAF supervision.
<i>Financial Management Control Risks:</i> Teething problems may jeopardize timeliness and accuracy of financial report and thus slow down the disbursement process.	M	Training of staff is expected to be provided by a FM consultant before effectiveness.
<i>Other Project Risks:</i>		
Lack of cooperation between stakeholders due to land use planning or zoning may create conflicts.	H	Conduct stakeholder analysis as prerequisite for development of watershed mgt. plans. Put in place with communities, participative mechanisms to encourage involvement of disadvantaged groups (transhumants, nomads, women, youth) in SLM. Encourage traditional methods of conflict resolution involving local authorities and laws.
Competition for resources creates conflicts.	M	Ensure participative process in resources management and decision-making so that benefits are evident to all stakeholders; ensure transparency, availability of information in the use of resources/funds. Use of local laws and local/traditional methods of conflict resolution.
Weak implementation capacity at the local (communities, service providers) and institutional levels (local authorities, local collectivities) may cause bottlenecks in implementation and limit effective feedback and support from communities.	M	Training and assistance for relevant institutions/ organizations. A communication strategy will be put in place to provide incentives for communities to participate in inter-village activities, targeting women and youth.
Weak cohesion of inter-village associations and groups (slow to form).	M	Pilot sites are chosen in areas which have some cohesion around common interests in use of natural resources. Baseline project would have already launched local development plans and would provide a basis for the project. Participative process plus training and technical assistance will improve cohesion of groups.
Prolonged drought periods would negate positive effects of project investments	H	Build capacity for early warning system within communities; support diversification of livelihood options; identify options for interventions for water conservation/management activities to be included in project activities; identify linkages with ongoing national and donor initiatives to mitigate risks due to drought.
H = High S = Substantial M = Moderate N = Low/negligible		

6. Loan/credit conditions and covenants

The following are *conditions of effectiveness*:

- Revision of the Arrêtés concerning the Pilot Steering Committee (Comité de Pilotage), and the Central Coordination Unit, to reflect the new responsibilities of these units.
- Update and supplement all project manuals including those of Project Implementation, Financial Management, and Monitoring and Evaluation.
- Financial Management: initial deposit of 25 percent of counterpart funds for the 1st annual forecast.
- Extension of external auditor's contract to include and assess CBWM project.

D. APPRAISAL SUMMARY

1. Economic and financial analyses

A cost-benefit analysis for the whole project was not undertaken because: (a) the benefits derived from capacity building activities cannot be quantified, and (b) the benefits derived from investments in natural resources management and sustainable land management cannot be easily quantified in monetary terms. Consequently, an illustrative cost-benefit analysis of the income-generating activities was carried out. The analysis shows that it should not be difficult to reach a minimum of 10 percent internal rate of return (IRR) and economic rate of return (ERR) on average for such sub-projects as soil and water conservation (dikes and thresholds), acacia gum tree rehabilitation, village garden, and African gardens.

Economic and Financial Analysis (NPV in US\$'000)

Models	Economic		Financial			
	ERR	NPV	ADC		Global	
			IRR	NPV	IRR	NPV
Dikes	73%	33,3	106%	34,0	48%	26,3
Thresholds	35%	8,1	60%	7,9	19%	5,0
Acacia Gum Trees	38%	28,9	152%	30,9	24%	24,2
Village Gardens	NC	8,0	NC	5,5	502%	4,2
Irrigated African Gardens	145%	37,8	>1000%	38,7	128%	35,7

Note: NC = not computable; NR = not relevant

2. Technical

The project supports environmentally sound investments that would promote sustainable land management practices among beneficiary communities in the watershed intervention areas. The investments would correspond to beneficiary needs and be driven by the contents of a plan for watershed management formulated at the national level for each watershed. The plan and specifications will be drawn up by technical experts in consultation with the communities to ensure a participatory approach. Proposals for local

investment funding for inter-community subprojects will be reviewed by a Scientific and Technical Committee responsible for technical soundness and quality oversight. Technical design and implementation of the subprojects will be carried out with the assistance of technical services personnel from the CCU and from the Regional Delegation Units and the soundness and benefits from the investments will be monitored through M&E methods established for the project (e.g., scorecards, etc.). For each investment selected by the ABV, a technical note will be produced describing its specifications (including technical description, performance, operation and maintenance procedures, costs and benefits, etc.). Environmental screening will be performed prior to each sub-project's execution, and regular monitoring of environmental impact will ensure that adequate safeguards measures are taken into account. Community members will be given appropriate training and follow-up assistance to acquire and maintain new skills and technologies introduced.

3. Fiduciary

The overall conclusion of the assessment is that the current financial management (FM) arrangements are satisfactory to meet IDA FM requirements though some recommendations should be implemented by effectiveness such as: (a) extend external auditors contract to the new operation; (b) update and extend the existing FM systems including manual of procedures; (c) Initial deposit of Counterpart Funds released.

By effectiveness, the project will not be ready for report-based disbursements. Thus, at the initial stage, transaction-based disbursement procedures, as described in the World Bank Disbursement Handbook, will be followed i.e. direct payment, reimbursement, and special commitments. However, when project implementation begins, and the recipient (GOM) requests conversion to report-based disbursements, a review will be undertaken by IDA to determine if the project is eligible.

4. Social

Degradation of agricultural production systems in the watersheds has lead to reduced agricultural production and as a result to increased poverty. The degradation in the watersheds has been particularly dramatic and would eventually lead to the abandonment of many of these agro-ecosystems. The project objective is to sustainably increase agricultural production and diversification and revenues in the four selected watershed basins.

From its onset and throughout preparation, the project team focused on reviewing social issues in the designated watersheds to identify potential constraints for cooperation between villages and communities in the same watershed. The project will use the findings of the socio-economic study and the appraisal report (social issues) for the CBRD to explore in greater depth current social data tied to the social development objectives of the project, namely: (i) stakeholder inclusion, and (ii) their accountability and ownership of the project through full and broad-based participation of all the beneficiaries over the project lifespan. The CBWM will seek to analyze further constraints that could delay the activities of the various beneficiary groups (such as a rural exodus and low literacy level of ABV managers, which could pose a serious obstacle to sound management of their activities, etc.), as well as capitalize on and boost opportunities for the attainment of project objectives.

In addition, the project will seek to tap into the social diversity within the village communities in order to foster a harmonious balance and cohesion among the different social groups using watershed resources. The method used in the preparatory process of the CBWM facilitated involvement of all stakeholders (beneficiaries, commune mayors, the public and private sectors, technical services, civil society organizations, etc.) through on-site visits and consensus-building workshops. The participatory approach used during the planning phase of the project will be strengthened and intensified, in order to build a consensus around efforts to combat land degradation (for example, soil management, pastureland, forests, revenue-generating activities, introduction of new technologies).

Current social organization structures (truck farming and cottage-industry cooperatives, mutual assistance groups for the building of dikes and wells, ADCs, etc. will be used by the watershed association (ABV), in order to expand the participation of village communities in the implementation of watershed management plans. The use of these local institutions will contribute significantly to the effectiveness of the project as well as its sustainability, with the objective of fostering equitable growth and poverty reduction. Taking into account the fact that the watershed communities use common resources (forests, pasturelands, agricultural ecosystems, water supply points, etc.) covering different areas, social conflicts between farmers and animal breeders related to the cohabitation of these two groups are commonplace.

To this end, the project will use the regulatory mechanisms in place to reduce these conflicts: (i) the traditional mechanism (internal conflict management methods involving traditional chiefs, *imams*, village sages, and *jemmas*, in order to mediate such conflicts); (ii) external mechanisms, using mediation and arbitration through communal, departmental, and regional committees, along with representatives of farmers, animal breeders, and users. This mechanism relies on the pastoral code and other legal and regulatory mechanisms in place. In order to minimize the potential risk of social conflicts at the level of inter-community organizations (ABV), which could affect project activities, the project will carry out conflict management capacity-building activities for all staff involved in the CBWM Project implementation process. This is designed to foster and sustain the inclusion of all the various stakeholder groups in the planning, implementation and monitoring of sub-projects and beyond.

The socio-economic study has demonstrated the need to take into account the priorities and interests of women in order to overcome gender-related disadvantages and increase the involvement of women in controlling natural resource degradation. The project will build the capacity of women in the areas of energy substitution (introduction of solar and bio-gas cookers, improved ovens, etc.) and techniques for the restoration of degraded land.

5. Environment

From an environmental and social safeguard point of view, the Mauritania Community-Based Watershed Management Project (CBWM) is a Category B project. That is, there could be adverse environmental and social impacts of the project, but they are expected to be localized, not complex or irreversible, and avoidable or at least manageable to an acceptable level. There are three Bank Safeguard policies applicable to the project. These

include: Environmental Assessment (OP 4.01); Involuntary Resettlement (OP 4.12) and Pest Management (OP 4.09).

At the time of the environmental and social assessment of the project, the range, scale, locations and number of sub-projects, as part of the CBWM initiatives were unknown. In order to provide the foundation for identifying the potential impacts of sub-projects, once identified, and determining what mitigation measures should be put in place, the Bank requires the development of an *Environmental and Social Management Framework (ESMF)* and a *Resettlement Policy Framework (RPF)*. In addition, it was determined, based on project envisioned activities leading, in particular, to diversification and intensification of agriculture, that the Pest Management Policy is triggered. This required the development of a *Pest Management Plan (PMP)*.

Because the CBWM, a GEF-funded project, is intervening in the same intervention zones as the Community-Based Rural Development (CBRD) project already under implementation, it was deemed in this case that the ESMF and the RPF for the CBRD project should adapted to suit the development objective, description and institutional and implementation arrangements of the CBWM. On the other hand, the PMP prepared for the CBRDP has been simply re-disclosed, since there was no need for the preparation of a new one. This was based on the fact the existing PMP is national in scope.

The ESMF and RPF have been prepared², in full compliance with Bank and national safeguard policies, by local consultants, following a broad consultation framework, involving all relevant stakeholder groups. The PMP³ has already been the subject of consultation in the preparation of CBRD.

6. Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP/GP 4.01)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Natural Habitats (OP/BP 4.04)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pest Management (OP 4.09)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cultural Property (OPN 11.03 , being revised as OP 4.11)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Involuntary Resettlement (OP/BP 4.12)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Indigenous Peoples (OP 4.10)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Forests (OP/BP 4.36)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Safety of Dams (OP/BP 4.37)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Projects in Disputed Areas (OP/BP/GP 7.60)*	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Projects on International Waterways (OP/BP/GP 7.50)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

7. Policy Exceptions and Readiness

There are no policy exceptions applicable to the CBWM project.

² ESMF dated November 1, 2005; RFP dated February 1, 2006.

³ PMP dated February 16, 2006.

* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas.

The project was designed in a highly participative process involving consultation with other donors, and participation in the preparation process by stakeholders and civil society. Consultation through a stakeholders' workshop held on October 19-20, 2005, at preparation validated findings in the project's baseline studies⁴ and informed publicly of the project's design and content. The newly formed Government of Mauritania provided support through ministerial representation, national television and press coverage to demonstrate its interest and commitment.

⁴ The baseline studies presented were: (i) an analysis of laws and regulations, (ii) soil characterization and degradation, (iii) social analysis of communities at the pilot sites, and (iv) biophysical analysis of sites.

Annex 1: Country and Sector or Program Background

MAURITANIA: Community Based Watershed Management Project

Background

With a GDP of \$350 per capita (2002) and a poverty rate of 46.3 percent (2000), Mauritania supports a population of 2.6 million people with an annual growth rate of 2.4 percent. More than 90 percent of the land surface is desert. Although there is an increasing trend of rapid urbanization, largely as a result of migrations due to drought, the rural sector has the highest concentration of the poor (75 percent) and remains the main source of income for the population employing an estimated 64 percent of the labor force.

Key elements of the poverty reduction strategy

Mauritania has been engaged for a little over a decade in ambitious reform policies that have affected all aspects of the country's political, economic and social life. The country was eligible for the poverty reduction initiative for heavily indebted poor countries (HIPC) in March 1999 and launched its first poverty reduction strategy on a highly participative basis in the 1990s. The poverty reduction strategy is built on four main themes:

- (i) Accelerating economic growth (with a target rate of 7 percent), through direct and indirect effects on job creation and new revenues, and through its impact on the Government's budget revenues, which will in turn support sectors that directly benefit the poor.
- (ii) Developing growth in poverty-stricken areas through a participatory approach.
- (iii) Developing human resources, with a focus on education, health, and access to essential infrastructures
- (iv) Promoting true institutional development and good governance.

To achieve these objectives, in the medium-term (by 2005), the Government is implementing a coherent package of macro-economic stabilization, deepening structural reforms, and implementing investment programs targeting areas with direct impact on poverty (rural development, urban development, education, health, potable water). In the long term, the Government's intends to: (a) reduce the proportion of the population living below the poverty threshold to under 27 percent by the year 2010 and below 17 percent by 2015, (b) achieve by 2015, the social development objectives defined on the basis of recommendations emerging from various world summit meetings; and (c) reduce social and spatial disparities.

The Country Assistance Strategy (CAS) (FY03-05) emphasizes the need to invest in natural resources management and envisions investment in natural resources management capacity building in FY05 (high case lending scenario).

Development Issues and Constraints

While the successful implementation of the national programs and policy reforms has contributed to a good performance, the Mauritanian economy is still laboring under an undiversified and uncompetitive productive base, inadequate infrastructures, an ineffective training system, inefficient financial intermediation services, and limited institutional capacities.

The following **general constraints** are hampering the Government's efforts to fight poverty:

- ***Demographics.*** Mauritania's population is expected to double from 2.6 to 4.1 million by 2015; and rapid urban migration towards the capital, Nouakchott, at the rate of 5 percent per year, are expected to increase demand for social services and impact environment.
- ***Weak Capacity of Public Administration*** in implementing economic and sectoral policies, managing strategic planning and programming/monitoring of public expenditures, organizing administrative services, statistical data systems, and under-equipped regional services undermine the effectiveness of poverty reduction strategies.
- ***Weak Capacity of Civil Society*** which are recent and insufficiently structured which affects their ability to be effective partners to implementing poverty reduction programs with the Government and to provide outreach to the population.

Mauritania also remains the Sahelian country most affected by drought and desertification; repeated cycles of drought and resulting natural resource deterioration seriously affect the population's productive capacities. Vegetation and forest resources are sparse, and except for mining and fisheries, the country lacks directly exploitable natural resources. Water scarcity is a widespread problem. Desertification and environmental degradation are threatening arable land (45 percent of the total surface) and urgent actions are needed to mitigate this threat. Access to potable water (for human and animal consumption), limited road infrastructure, particularly in rural areas, severely curb access for the rural population to agricultural services, health care, sanitation, education, and business and social services. As a result, large areas lie fallow in terms of their potential for growth for lack of connecting feeder roads to markets.

In the rural sector, the constraints to development include:

- ***A narrow and degraded natural resource base*** where agricultural activities take place within a narrow strip of land (200 km wide); the land is characterized by low and erratic rainfall, interrupted by drought spells; the limited arable land is threatened by soil degrading practices and advancing dune formations; and biodiversity is threatened by over-exploitation of forest formations.

- ***Limited transport infrastructure to access markets and services*** due to a combination of public investment decisions, poor implementation of transport policies, and the vastness of the country and the isolation of rural populations, which poses a challenge to developing a road network.
- ***Limited supply of productive services*** including agricultural services, resulting in low agricultural productivity.
- ***Limited local community ownership of public investments*** as a result of a predominant top-down approach to public investments, low level of decentralization to the rural areas, and low involvement of local communities in public investment decision making.
- ***Limited access to investment and working capital*** with no viable system for rural micro-finance for rural communities to acquire needed productive assets and services to boost agricultural productivity.
- ***Land tenure and the implementation of a pastoral code*** which is presently being concentrated in high value land and not as much in rainfed areas where it could help resolve farmer-herder conflicts.

Land degradation is a major concern in Mauritania where agro-pastoral areas and oases provide the ecosystems which serve as a primary source of water for the cattle population, support agricultural and pastoral production, supply firewood and timber, supply crops, and provide the habitat for fauna and flora. The integrity of the ecosystems is threatened by the following **constraints to sustainable management of natural resources**:

- ***Loss of arable land*** due to drought, lack of technical supervision and distribution of available technologies, increase in population, lack of collective vision and long-term planning, and difficulties in managing intercommunity areas. Result: reduction in yield, income, food security.
- ***Loss of pastureland*** due to inadequate tradition-based rules, lack of familiarity and irregular application of the pastoral code, spatial management difficulties, lack of participation of communities, numerous regulations and measures for managing intercommunity forums. Result: increase in conflicts, greater competition for resources.
- ***Loss of biodiversity*** from uncontrolled hunting, fishing, and deforestation, unfamiliarity with regulations, limited personnel for monitoring, land clearing, reduction in the water table, and poverty pressure. Result: disappearance of plant and animal species, reduction in medicinal plants.

- ***Loss of forest land*** from poor access to alternative technologies, and lack of supervision.

Government Actions to Address Issues and Constraints

The Government has put in place various national strategies and policies to address the above constraints. In the **rural sector**, the Government's long-term strategy is to: (a) facilitate growth to ensure food security in the country; (b) ensure equal access to resources in the sector; (c) increase public goods and services needed to develop the sector sustainably; and (d) build capacity for integrated and participatory rural development.

Key strategies and policies include:

- ***Country Environmental Strategy Paper (CESP)*** and the ***the Environmental Strategy (to be updated)*** which addresses environmental concerns from increased population pressures and urban environmental problems.
- ***Multisectoral Program to Combat Desertification (Programme Multisectoriel de Lutte Contre la Désertification (PMLCD))*** – multisectoral program at the national and regional level which was presented to the donor community in 1992.
- ***National Action Plan to Combat Desertification (Plan d'Action National de Lutte Contre la Désertification (PAN-LCD) (2002))*** – priorities of the plan highlight the urgent need to: (a) develop scientific and technical methods to take into account environmental issues including land degradation; (b) develop national capacity to address environmental issues (application of national environmental policies at every level); (c) implement environmental impact studies. In this context, the project is the implementation of the PAN/LCD⁵; the project team is required to participate in meetings organized by the MDRE on desertification and land degradation. The project would share with the PAN/LCD lessons and information gathered through the M&E component which supports land degradation monitoring through satellite imagery.
- ***National Environment Action Plan (NEAP) (Plan d'Action National pour l'Environnement et le Développement Durable (PANE))*** which formulated a legal and institutional framework for environmental management. Land degradation is an essential component of the PANE, which is part of the Poverty Reduction Strategy Paper.
- ***National Action Plan for Adaptation to Climatic Change (NAPA)***.
- ***National Biodiversity Strategy (1998)***.
- ***Forestry Code and Forest Action Plan***.
- ***By-Law for Game and Protection of Game and Nature/Code de la Chasse et la protection de la Nature (1997)***.

⁵ « Rapport National sur la Mise en Œuvre de la CCD en Mauritanie », République Islamique de Mauritanie, Ministère du Développement Rural de de l'Environnement, Direction de l'Environnement, janvier, 2005.

- ***General Policies and Strategies for Rural Sector Development through the year 2015 (1998, revised in 2001).***
- ***Letter of Development Policy for Irrigated Agriculture through the year 2010 (dated 1999)*** – puts in place key measures to promote efficiency and diversification in agricultural production in the Senegal River Valley (liberalization of the rice sub-sector, implementation of the IDA-funded Integrated Development Program for Irrigated Agriculture (IDPIA/PDIAIM) which provides for the rehabilitation of irrigated perimeters; and strengthening financial institutions to provide access to credit for farmers).
- ***Land Tenure Law (Lois Foncière et domaniale (1997, 2002)).***
- ***Agro-food Strategy (2001)*** identifies import substitution and export niche markets as growth sectors in the short to medium term.
- ***Letter of Livestock Development Policy (2004)*** complements the *Pastoral Code* and were drafted as a result of a study “Livestock Contribution to Poverty Reduction and Economic Growth”(2002) which recognized the fact that, over the last 20 years, the livestock sector has made an unrecorded but significant contribution to national economic growth and to poverty alleviation.
- ***Pastoral Code (Code Pastoral) (2003) (Loi No. 2000-044).*** The livestock sector, which is characterized in Mauritania by a mobile production system with flexible use of natural resources, accounts for about 25 percent of the GDP compared to three to five percent for the rest of the agriculture sector. However, little support had been provided for this type of mobile animal husbandry except for limited services on animal health care and to the foundation of pastoral organizations. No laws exist granting right of access and utilization of natural resources to pastoralists. Consequently, the Government has opted for a package of measures which will promote and preserve the transhumant livestock husbandry, reinforce the capacity of pastoral organizations and livestock managers, and elaborate and apply the pastoral code.
- ***Loi d’Orientation*** or Guideline Law No. 50-2001 of July 19, 2001 - the Poverty Reduction Strategy Paper (PRSP) has been raised to the level of a law in Mauritania; the law contains guidelines for combating poverty. The Bank and IMF considered that this provided the solid basis for continued international assistance to Mauritania, particularly since it marked a completion point under the HIPC initiative begun in early 2002.
- ***Decentralization Strategy*** (Ordinance No. 86-134, April 13, 1986), was applied to rural municipalities in 1989 and led to the creation of 216 communes, of which 163 are rural municipalities.
- ***A National Strategy of Decentralization and Local Governance (2002)*** - focuses on the legal and institutional framework, fiscal resources, financial transfers from central government to the communes, managerial capacities of the communes, and linkages running through decentralization and local development, good governance, and sustainable development.

Country eligibility for GEF Cofinancing

The Government of Mauritania has signed/ratified the following conventions: (i) the Convention to Combat Desertification (CCD) – signed on October 14, 1994, and ratified on August 7, 1996; (ii) the Convention on Biological Diversity (CBD) - signed on June 12, 1992, and ratified on August 16, 1996; (iii) the Convention on Climate Change (CCC) was signed on December 6, 1992, and ratified on January 20, 1994. The Government has also prepared and submitted a National Action Plan (NAP) in 2002 and the NAP's priorities are included in the 2001-2004 Poverty Reduction Strategy Paper (PRSP); and the new environmental strategy to be implemented with UNDP's assistance through the National Environmental Action Plan (NEAP) (*Plan National d'Action pour l'Environnement (PANE)*) which was developed through a participative process and in accordance with the relevant international conventions (CCD, CBD, the convention on Wetlands (Ramsar Convention)). The major objectives of the NEAP are to: (i) promote extensive consultations at the community and departmental levels regarding environmental degradation and develop natural resources in the areas of pastoralism, forestry, and protection of marine and inland wetlands; (iii) develop ecotourism as an alternative method for maximizing the potential of the country's natural biodiversity heritage; (iv) implement a massive program to utilize butane gas and alternative energy sources in place of charcoal; and (v) establish arrangements for monitoring and evaluating environmental policies and programs.

Rationale for Bank and GEF Involvement

The CBWM project builds on the community-based rural development structure begun under the IDA-financed CBRD project which focuses primarily on village-level investments, by broadening the base and supplementing it with natural resources management emphasizing sustainable land management (SLM) at the inter-community or landscape level. In this way, the Bank holds an advantage over other donors involved in local development operations by being able to focus its financing to support both broader village-level investments and adequate attention to community-based natural resource management in terms of land degradation management.

Higher level objectives to which the project contributes

The project would contribute to the Borrower's higher level objectives and sector priorities for poverty reduction by being aligned with the priorities in the PRSP (2001) which emphasizes the need to invest in natural resources management (NRM) and in capacity building in FY05 (high case lending scenario). The preparation of the financing of the baseline project and then the CBWM project received strong Government support: an official request was made to the Bank for the financing of the CBWM project to complement the CBRD project, on an inter-community basis, to improve the management of natural resources and combat desertification within the context of watersheds and landscapes management.

The baseline project and the CBWM support the Government's program of decentralization by soliciting the participation of the regional, local and traditional authorities in project execution, as well as supporting the Government in the implementation of several other national strategies and policies with relevance to the rural sector mentioned above.

The **global objective** of the CBWM is to limit land degradation and to safeguard critical ecosystem functions through community-driven SLM activities that improve agro-sylvopastoral management and increase vegetation cover while securing livelihoods and global environmental benefits (i.e., reduced sedimentation of waterways, improved interconnection and integrity of ecosystems, enhanced carbon storage rates, and increased opportunities for biodiversity conservation).

The expected **global benefits** of the GEF alternative include:

- stopping and reducing desertification (a global bad);
- increased opportunities for conservation of biodiversity, mitigation of desertification, and preserving ecosystem integrity through the harmonization of policies and regulations supporting sustainable management of resources at the watershed/landscape level;
- enhanced ecosystem integrity and sustainable land management due to adoption of improved land management and restoration practices, both in productive landscapes and in riparian areas which result in decreased soil erosion, increased in carbon sequestration, and improved conservation and sustainable use of biodiversity;
- improved capacity for seed retrieval of threatened riparian plant species and sustainable land management through improving capacity of communities to manage their land resources;
- restoration of globally important ecosystems (e.g., microclimates, fauna and flora, areas of significance for migratory birds);
- establishment of a replicable M&E system for land degradation, incorporating global concerns to the baseline M&E activities.

The expected **national** benefits of the project would be:

- Improved land and water quality/quantity for local use through restoration of degraded lands, resulting decrease in erosion rates, and sediment flow into water bodies;
- Improved income flow of rural communities through implementation and adoption of sustainable land management practices in targeted areas;
- Increased capacity for stakeholders to implement cross-sectoral approaches to land management, including improved outreach and involvement of civil society, private sector, and government institutions to plan and manage natural resources.

The **project development objective** is to lessen the incidence of land degradation at the watershed level within the CBRD project area by assisting rural communities to realize benefits through community-driven investments addressing land degradation and promoting SLM practices.

The **overall project outcome** expected for the project is that the rural communities' increased usage of effective SLM techniques and practices lead to a decrease in incidences of land degradation.

**Annex 2: Major Related Projects Financed by the Bank and/or other Agencies
MAURITANIA: Community Based Watershed Management Project**

World Bank				
Project	Sector Issue Addressed	Implement. Status	Performance Ratings	
			(IP)	(DO)
Community-Based Rural Development Project (P081368)	Agriculture, forestry, fishing, social services, infrastructure, sanitation, agro-industry	Active/ Supervision	S	S
Integrated Development Program for Irrigated Agriculture (PDIAIM) – APL 2 (P088828)	Irrigation, Infrastructure, Agric. Exports, Environment	Active/ Supervision	S	S
Africa Emergency Locust Project (AELP) (P092473)	Natural disaster, Pest management, Social safety net, development of early warning system of infestation.	Active/ Supervision	S	S
Senegal River Basin Water and Environment Management Project	Environment, water mgt.			
Agricultural Services Project (P001864)		Closed	U	U
Rainfed Natural Resources Management Project (P001875)		Closed	S	S
Other Agencies				
IFAD - Oasis Sustainable Development Program (Project ID 1180)	Social, agriculture, community infrastructure	Active	n.a.	n.a.
IFAD - Poverty Reduction Project in Aftout South and Karakoro (Ln. S-43-MR)	Rural development, Environment (watershed management)	Active		
UNEP/ICRISAT - Desert Margins Program	Environment (arid zones, watershed), new technology for agric intensification to improve livelihoods.	Active		
UNEP/GEF - Biological Diversity Conservation through Participatory Rehabilitation of the Degraded Lands of the Arid and Semi-Arid Transboundary Areas of Mauritania and Senegal	Environment (biodiversity, NRM, arid lands)	Active		
UNEP/FAO - Regional Integrated Management of the Fouta Djallon Highlands (PDF B) (GEF/PMIS 1431)	Agriculture, rangeland/pasture, Environment (desertification)	Active		
GTZ - Natural Resource Management Program (ProGRN)	Environment (desertification,	Active		
UNDP/GEF - Small Grants Program	Environment (micro-projects)	Active		
UNDP - Adrar Solar Initiative and Decentralized Electrification in the Northern Coastline of Mauritania through Hybrid (Wind/Diesel) Systems	Energy, environment	Active		

UNDP – Programme d’Appui au Communes de l’Assaba (PACA)	Environment, governance, basic infrastructure, financial instruments	Active		
Multiple donors – Programme d’aAppui à la Décentralisation et la Déconcentration en Mauritanie (PADDM).		Active		

n.a.: not available.

Linkage with the Oasis Sustainable Development Programs (IFAD) (Ln. I-618-MR) (\$33.92 million). The Oasis Program focuses on (a) building capacity of rural institutions at the grass-roots level, including community organizations, women and youth associations, decentralized financing institutions and rural communes; (b) promoting sustainable oasis agricultural systems through the development and dissemination of appropriate technical and managerial know-how and through marketing support; (c) providing financial support for essential community-based social and economic infrastructure; and (d) the consolidation of viable decentralized rural finance systems. Representatives of the Oasis Program have participated in the CBWM’s preparation and appraisal missions, inter-project workshops, and field trips to share lessons learnt and experiences which could be mutually beneficial to both projects. In implementation, the Oasis program will also be involved in field trips and consultations.

Linkage with the Biological Diversity Conservation through Participatory Rehabilitation of the Degraded Lands of the Arid and Semi-Arid Transboundary Areas of Mauritania and Senegal (UNEP). The biodiversity project covers a 50 km strip of land along the Senegal River in Mauritania and Senegal. Within this area, the project is intervening in 100 villages. The objectives of the biodiversity project are the protection of biodiversity and the sustainable management of degraded land. The biodiversity project does not cover the same area as this project, nor employ the same methods. However, lessons from the project will be shared in the implementation of the CBWM for issues on land degradation and community awareness building.

Linkage with the Desert Margins Program – The Desert Margins Program (DMP) has developed methodologies and technology packages for arid zone management in order to permit agricultural intensification and improved livelihoods. These new technologies will be examined for the feasibility of their application to watershed management within the framework of the CBWM.

Linkage with the Natural Resources Management Program (ProGRN)(GTZ). Representatives of GTZ’s program have participated in the CBWM project preparation process and provided input into the design of the CBWM in terms of lessons drawn. GTZ representatives from the program will be invited to participate in the meetings of the Scientific and Technical Committee to be established under the CBWM for quality oversight, and will collaborate periodically in training workshops on SLM topics.

Linkage with the Investing in Sustainable Land Management through Mainstreaming and Partnership Building – A Pilot Approach in Sub-Saharan Africa (Senegal, Ethiopia). Currently under preparation for a financing by IDA and GEF, this project is designed as a pilot operation in two or three countries to incorporate SLM issues within existing national frameworks for development through: (a)

developing the capacity in the target countries to mobilize resources for SLM and the management of drylands; (b) developing methodologies for the evaluation of the costs of land degradation and the benefits of SLM; (c) improving the enabling environment to address land degradation in the target countries (policies, institutions and management practices). The results of this project would contribute to the financial sustainability issues related to watershed management in Mauritania.

Linkage with the Famine Emergency Warning Systems (FEWS) Network. FEWS makes available maps, data, remote sensing and satellite imagery/photographs for determining rainfall patterns and other information, which would be used for developing an early warning system with decision makers, local authorities, and local communities. In this way, decision makers can be alerted in a timely manner to prepare contingency plans e.g., sowing of seeds, harvesting of crops, water rationing, etc..

Annex 3: Results Framework and Monitoring
MAURITANIA: Community Based Watershed Management Project

Global Objective		
To limit land degradation and to safeguard critical ecosystem functions through community-driven SLM activities that improve agro-sylvopastoral management and increase vegetation cover while securing livelihoods and global environmental benefits (i.e., reduced sedimentation of waterways, improved interconnectedness and integrity of ecosystems, enhanced carbon storage rates, and increased opportunities for biodiversity conservation).		
Project Development Objective (PDO)	Project Outcome Indicators	Use of Project Outcome Information
To lessen the incidence of land degradation at the watershed level within the targeted CBRD project areas by assisting rural communities to realize benefits through community-driven investments addressing land degradation and promoting SLM practices.	<ul style="list-style-type: none"> Watershed associations (ABVs) are able to implement 75% of the SLM approach introduced. 2/3 of activities introduced generate positive income flow for the communities. 30% biomass increase in project areas treated, indicating sustainable regeneration of grass and shrubs. 	<ul style="list-style-type: none"> Y2 to Y4. Assess relevance and replicability of the SLM approach for scaling up at the national level. Y3 and Y5. Assess the replicability of the approach tested at the sites and make adjustments as needed. Y2 to Y5. Focus on successful techniques adopted in reducing soil degradation.
Intermediate Outcomes by Component	Intermediate Outcome Indicators	Use of Intermediate Outcome Monitoring
Component A: Capacity Building for Sustainable Land Management (SLM)		
Watershed associations and relevant institutions have sufficient capacity to implement the SLM approach introduced.	<ul style="list-style-type: none"> Two plans for watershed management are developed and adopted for the selected sites by the end Year 2, and 4 by end of Year 4. Watershed associations have developed and applied local rules for SLM. Each watershed association has adopted at least 2 improved SLM practices. The CCU has outlined a strategy for financing SLM activities. 	<ul style="list-style-type: none"> Y2 to Y4. Assess the viability and applicability of techniques proposed in the watershed management plans and make adjustments as needed. Y3 to Y5. Assess the effectiveness of capacity building activities and ensure that they respond to the needs of watershed associations and their environment. Y5. Contribute to the exploration of sustainable, future funding options for SLM activities/practices at the national and international levels.

Component B: Providing Incentives for SLM		
ABVs are able to identify and implement investments identified in the watershed management plans	<ul style="list-style-type: none"> • At least eligible 20 sub-projects are financed and implemented. • Sustainable maintenance rules for investments are elaborated and applied in at least 80% of subprojects lasting more than 1 year. 	<ul style="list-style-type: none"> • Y2 to Y5. Assess the effectiveness of investment fund use and success rate of SLM practices introduced and applied. • Y3 to Y5. Assess level of ownership of investments by ABVs. • Y3 to Y5. Monitor effectiveness of technical services provided at the local level.
Component C: Project Management and Monitoring & Evaluation		
<p>The CCU provides on time the means necessary to reach the objectives of the GEF project, using the tools and standards acceptable to the GEF.</p> <p>The M&E system allows indicators and project performance to be measured.</p> <p>The CCU has prepared and implemented an effective communication strategy</p>	<ul style="list-style-type: none"> • At least 80% of activities contained in the annual work programs have been implemented. • Safeguards measures have been applied in accordance with the ESMF. • Performance monitoring indicators are regularly updated. • Performance/mgt. chart and periodic reports on activities and indicators are produced and disseminated on time. • Project partners and the beneficiary population in the watersheds are sensitized to project objectives and activities. 	<ul style="list-style-type: none"> • Y1 to Y5. Assist the project coordination unit in decision making, management and evaluation of project activities. • Y1 to Y5. Ensure quality reporting of project activities. • Y1 to Y5. Mitigate financial, environmental and social risks associated with project implementation. • Y3 to Y5. Assess the effectiveness of communication tools.

Arrangements for Project Performance and Results Monitoring

To ensure harmonization and coordination between the two projects, the CCU will be responsible for the monitoring and evaluation of the CBWM's performance and results monitoring. The project will supplement financing for the baseline project's M&E system and strengthen it to accommodate the additional requirements of the CBWM. Specific responsibilities for data collection and processing, performance indicators updating and results analysis and dissemination will be assigned to key players: the UCC (its M&E Unit in particular), the CCU's regional counterparts in the Wilayas involved in the project, external partners (national institutions, consulting firms and individual consultants), and the watershed associations. Specific responsibilities for each of these key players will be detailed in an Annex to be attached to the CBRD's M&E Manual.

Data Collection

(a) Development Objectives indicators:

- (i) A score card system will be used to measure on a yearly basis how well the ADCs have mastered the techniques and practices introduced. The score card system will take into account the following aspects: (1) watershed association structure and operation (criteria for membership, organization, governance, communication, management of membership fees, capacity for social mobilisation); (2) the capacity for planning and monitoring the activities of the association (ability to use and adoption of the monitoring tools provided by the project); (3) the ability to define and apply the rules and regulations of SLM (local conventions/laws); (4) the adoption and level of proficiency of using SLM techniques introduced (participation in training, mobilization of resources for SLM, maintenance of investment activities), etc. The score card system will be used each year by the watershed associations in the form of a self-evaluation exercise. They will be assisted by a consultant specialized in participatory methods. Data collected in the field will provide input into the CBRD data base which will contain a table to be updated on the watershed associations in addition to the existing table on the ADCs. The additional annex to the CBRD's M&E Manual will include definitions and weights of selection criteria, as well as the means and ways that they will be put into practice for M&E should be agreed between the project and its beneficiaries. The additional annex to the CBRD's M&E Manual, which must be submitted to the Bank prior to project effectiveness
- (ii) The biomass indicator will be measured using the line transect survey and complemented with the plot survey in areas treated by the project and in reference areas. The design of the initial test system will be carried out by a partner research institution which would also be responsible for general environmental monitoring other key aspects of the watershed environment (rainfall, groundwater level, vegetation cover and biodiversity, etc.).

(b) *Other key project performance indicators.* The following table details the organization and frequency of the Result Framework Indicators. Key indicators include:

- (i) Component A: Capacity building indicators for watershed associations and institutions involved in SLM. The participatory design of watershed development plans provides the best measuring tool of ownership of the watershed approach. Benchmark studies to prepare watershed development plans will be used to establish the baseline for monitoring indicators, which will be illustrated on maps using a Geographic Information system (GIS). The project's Scientific and Technical Committee will provide quality control for each of the four watershed management plans before they are validated by the project.
- (ii) Component B: Local Investment Fund-related Indicators. The CBRD database currently under implementation should include tables on the CBWM subprojects and document the project preparation phase, execution, technical monitoring, financial benefits, and environmental impacts of the investments. Economic impact evaluation of the CBWM subprojects will be carried out in Years 3 and 5, just as for the sub-projects of the ADCs under the CBRD.
- (iii) Component C: Project management indicators for the project will be the same as those of the baseline project, taking into account the quality of financial management as indicated in the audit reports, application of standards for procurement acceptable to the GEF/IDA, and for environmental safeguards. This also includes the capacity to measure and update its performance indicators and to produce timely reports (management performance charts and reports).

Capacity. The CBRD's M&E Manual defines the data collection organizational setup, definition of indicators, methods and data collection tools, and information reporting. Staffing includes: at the national level a recently recruited Unit Chief, assisted by a computer specialist and two data entry staff, and at the regional level, a Regional Coordinator for the CBRD who is also responsible for M&E, one data entry staff, and the technical team of the EMAT (*Equipe mobile d'appui technique*) which includes engineer-level technicians who will also be responsible for supervising data collection in the field. An M&E Manual detailing rules and responsibilities for data collection has been prepared under the CBRD.

The joint CBRD/CBWM project team will focus its efforts on data collection and updating the database of the ADCs and ABVs and the subprojects of the CBRD and CBWM. The team will be responsible for updating the M&E Manual and the database to reflect this priority.

The CBRD will collaborate with relevant external institutions for the implementation of the test transect and plot survey system used to measure the physical impact of SLM

activities which will be contracted to a research institution (e.g., ICARDA). However, the development of a GIS for the project sites will be included in the contracts for consulting firms hired to develop the watershed management plans. In both cases, these initiatives will include programs to train the technical personnel of the project (CCU and RCUs), to build capacity in these areas (e.g., collaboration with national researchers, recruitment of student interns, etc).

The project will supplement the financing of M&E activities under the baseline project and would fund incremental costs for: equipment (computer hardware, survey material, piezometers, rain-gauges, digital maps, etc.); operating costs (allowances for trainees, travel allowances); training and workshops; consultants required for the surveys, impact evaluation; and study tours needed to integrate best practices and lessons learned from experiences in environmental M&E in other countries.

Monitoring And Supervision Of Safeguards Performance

Successful implementation of the project safeguard requirements and performance measurement requires regular monitoring and evaluation of activities undertaken by the project to comply with national and Bank safeguard policies. This will also help ensure that implementation of project safeguard measures are systematically carried out all through project lifespan.

To do so, the following indicators need to be measured, as part of the project global monitoring plan:

- Number of sub-projects screened on environmental and social safeguard grounds;
- Number of subproject needing specific ESIAS;
- Number of ESIAs conducted;
- Number of sub-projects with costed Environment Management Plans (EMPs) and/or Resettlement Action Plans (RAPs);
- Number of EMPs and/or RAPs implemented according to schedule;
- Number/ Frequency of Safeguard supervision undertaken;
- Number training programs carried out for safeguard capacity strengthening; and
- Number of Institutions/organizations trained.

In addition, bio-physical changes from the baseline – such as changes in ground water recharge; changes in surface water level; changes in biodiversity both flora and fauna; improvements in agricultural soils structure; and biomass – in the natural environment should be measured, as part of the monitoring system.

Arrangements for results monitoring

Project Outcome Indicators	Baseline	Target Values ⁶						Data Collection and Reporting		
		YR1	YR2	YR3	YR4	YR5		Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
<ul style="list-style-type: none"> The 4 ABVs are able to implement 75% of the SLM approaches/techniques/practices introduced. 	Baseline study	-	-	2	3	4		Semester and annual implementation progress report.	Score card. Assisted self-evaluation process.	CCU-M&E Unit-ABV; External evaluation.
<ul style="list-style-type: none"> 2/3 of activities introduced generate positive income flow for the communities. 	Feasibility for each subproject	-	-	65%	65%	65%		Mid-term and final evaluation reports	External Economic Assessment (individual consultant)	CCU-M&E unit - Consultant
<ul style="list-style-type: none"> 25% increase in biomass in project areas treated indicating sustainable regeneration of grass and shrubs. 	Baseline studies as watershed are selected	-	10%	15%	20%	25%		Semester and annual implementation progress report	Plot survey and Line transect survey	CCU- Research partner institutions.

⁶ Target values are indicative at preparation and may be revised during appraisal following discussions with the client country. The project is a pilot, beginning with two watershed sites, with a view to scaling up to a total of five sites by project closing. As such, there will be indicators which will be revised during the course of implementation.

Intermediate Outcome Indicators										
Component A: <ul style="list-style-type: none"> Two watershed management plans are developed and adopted for the selected sites by the end Year 2, and 4 by end of Year 4. Watershed assoc's. have prepared and are enforcing local SLM regulations. Watershed associations have adopted and implemented at least 2 improved SLM practices. The CCU has prepared a document with a strategy for financing SLM activities by end of Y4. 	n/a	-	2	3	4	4		Semester and annual implementation progress report. Mid-term review evaluation report and Implementation Completion Report. Semester and annual Implementation Progress Report	Data collected by URC Score card	M&E Unit – CCU; External evaluation. M&E Unit - CCU-ABV; External evaluation.
Component B: <ul style="list-style-type: none"> At least eligible 20 sub-projects are financed and implemented. Rules for sustainable maintenance have been prepared and are implemented on at least 80% of projects lasting more than 1 year. 	n/a	2	6	10	18	20		Quarterly project reports Mid-term review evaluation report. Implementation Completion Report	Project Database;	M&E UCC;

Component C: <ul style="list-style-type: none"> At least 80% of activities planned in annual work plans have been implemented. Safeguards have been implemented in line with the ESMF. Performance indicators are regularly updated. Performance reports and periodic reports on activities and indicators are produced and disseminated on time. Beneficiaries in the watersheds and project partners are sensitized to project activities. 		80%	80%	80%	80%	80%		Semester and annual project reports	Project Database	M&E – CCU External evaluation
		X	X	X	X	X		Mid-term review evaluation report	Beneficiaries' assessment.	
		X	X	X	X	X		Project supervision reports	Score card. Assisted self-evaluation process	
		X	X	X	X	X		Implementation Completion Report	Score card. Assisted self-evaluation process .	

Annex 4: Detailed Project Description

MAURITANIA: Community Based Watershed Management Project

The IDA-funded Community-Based Rural Development Project (CBRD) (the “baseline project”) for \$45.0 million (Cr. 3883-MAU) was approved by the Board in April 20, 2004. Its objective is to reduce poverty, improve livelihood conditions and increase access to services at the local village community level. The proposed Global Environmental Facility (GEF) grant for a Community-Based Watershed Management Project (CBWM) will supplement the baseline IDA-financed baseline project and will complement its interventions for sustainable livelihoods, and improve the management of natural resources (desertification in particular) through inter-community interventions and targeted investments within the frameworks of watershed and landscape management. The project will be implemented over five years, initially at two pilot sites within the CBRD area and representative of two main ecosystems in Mauritania, and scale-up to a total of four sites by the end of the project.

The project will search for the most relevant way to deal with watershed management, associating the communities and taking into account the decentralization process and the pertinent laws, particularly Mauritania’s “Code Pastoral” (Pastoral Code) currently being formulated. The landscape approach will be documented and discussed in a participative manner with all the stakeholders to highlight its advantages and constraints. The project will also take into account the functions of different ecosystems (agriculture, pastoralism, tourism, habitat for biodiversity) in the country, and draw benefits from other donors’ studies and programs (e.g., GIRNEM work on inventory of the potential of humid zones in the east).

Lending Instrument

Three lending options were considered: separated/associated operations, blended operation and an APL. The option of separated/associated operations was rejected in favor of a partially blended operation, because the latter offers better synergies with the baseline project in terms of coordination of project activities and implementation by the same project coordination unit for both the baseline and GEF funded projects. Implementation by the same project coordination unit for both project offered cost savings in terms of staffing, operating cost, and time, while building capacity and ownership at the national level. The APL option was rejected because of the need to align closely the execution of the GEF funded activities with the baseline project’s activities and project duration.

The CBWM will be a component of the IDA project which is a Specific Investment Loan. The project is a partially-blended operation, being processed later than the IDA operation and having a separate project document and Board date. The project implementation period is five years, whereas the IDA baseline project implementation period is six years. It will lag the baseline project by two years in project start-up and will close about a year later. The lag will be advantageous since preliminary activities and basic structures for implementing the project would have been initiated or established, particularly: the selection of community associations, preliminary

consultations, training and technical assistance in the formulation local development plans would have been launched, and the new watershed associations to be formed could gain from the experience; the central database would be in place and activities for establishing a Geographical Information System (GIS) needed for M&E would be more advanced.

The project has three components which are aligned with the components of the baseline project.

Component A: Capacity Building

IDA Baseline Activities (IDA funding: US\$9.2 million). This component supports strengthening the capacity of community village associations (ADCs) and selected rural municipalities to design and implement effective development plans; developed the technical capacity of the communities' service providers (crop and livestock research-development, extension services, statistical, environmental and rural training agencies) with an emphasis on decentralized units; and strengthened the capacity of micro-enterprises that directly supply goods and maintenance services to the village associations.

GEF Activities (GEF incremental funding: US\$1.5 million) - Capacity Building for Sustainable Land Management. Under the CBWM, this component will supplement the baseline project's activities and develop local and regional capacity to adapt and replicate innovative watershed and landscape management approaches. The main beneficiaries will be the village communities, rural communes, inter-village associations such as watershed associations, civil society directly implicated in project implementation, and Government institutions interacting with communities. The component will be implemented by the Central Coordination Unit (CCU) of the baseline project and will support the following activities.

- Development of watershed and landscape management decision support tools to assist the communities and the local government in the local development planning process; a focus will be placed on the land use optimization, natural resources conservation with particular emphasis on land degradation while maximizing socio-economic objectives. The tools developed will include Geographical Information Systems/Natural Resources Management (GIS-NRM) databases of watersheds, and watershed management plans (*Shémas d'aménagements*) based on the GIS data.
- Establishment and strengthening of watershed associations and decision-making institutions related to watershed/landscape management; training and assistance to watershed associations and other village associations in the targeted watershed areas, disadvantaged groups (women, youth, transhumants), rural communes. Support to civil society, local and regional authorities, and traditional authorities, in the development, implementation and monitoring of local watershed development plans. The development of watershed associations will provide a fora for discussion and interaction between village communities, which combined with the development of priority action plans, will also provide a mechanism for conflict resolution, e.g., between herders and farmers.

- Fostering collaboration between the project and national and local research institutions, university, and extension services, and existing community associations to adopt a watershed/landscape management approach in developing and transferring sustainable land management technologies. Involvement of research institutions will be carried out on a thematic basis depending on the competency of the institution concerned (e.g., CNRADA, CNERV, ICRISAT, ICARDA, etc.); encouraging partnerships between the communities and the research and extension services for using sustainable resources management technologies (training of research staff to work with communities/land users, development of tools to assess land degradation costs and SLM benefits, etc.).
- Review of policies, laws, regulations as needed during project implementation to identify reforms required for providing adequate incentives (such as improved tenure security, conflict resolution systems) to rural communities for the sustainable management of land resources at the watershed and landscape levels.
- Exploration and identification of future, sustainable operation and funding options (e.g., through information available from donor institutions, national environment funds, regional partnership centers for communities, bio-carbon fund, and returning environmental tax revenue to the local level).

The project would fund consultant services for technical assistance and studies, facilitation, animation, training and study tours, data collection costs, equipment and contracts for GIS information gathering, small equipment for training and demonstration of new technologies, and general operating costs.

Component B: Investment Funds

IDA Baseline Activities (IDA funding: US\$30.3 million).

This component provides the means to implement village and communal development plans while giving communities the opportunity to put into practice their strengthened capacities. The funds would bring benefits to poor people and improve their social, environmental and economic conditions and represent 66 percent of total project cost and 79 percent of IDA's financing. They comprise: (a) the Village Investment Fund and (b) the Rural Communal Roads Fund. The Village Investment Fund provides ADCs with capital input to execute their development plans, and Rural Communal Road Funds to improve their access to rural roads within the communes. Contributions, mostly in-kind, are required from beneficiaries at differing levels depending on the type of investment, but average about 30 percent. The community development plans are demand-driven and identified by the communities and can include investments for village wells, soil and water conservation to boost agricultural productivity (dykes and small dams); (ii) diversified agricultural production (village gardens); (iii) livestock health activities (vaccination parks) (iv) targeted activities to protect the natural resources base (dune fixation, vegetal cover regeneration); and (v) various other on- and off-farm income-generating activities (mills, village stores, agricultural rental equipment). Activities selected by women would be encouraged. However, the CBRD would not finance religious establishments and social services (healthcare and education) which are within the sphere of competence of communes or are provided by other programs, but will assist villages and communes to gain access to those services from sectoral programs.

GEF Activities (GEF incremental funding: US\$3.5 million) - Providing Incentives for Sustainable Land Management Practices.

The GEF component will provide investment capital, through the *Local Investment Fund*, for village communities to adopt sustainable resource management and conservation practices within a watershed area and at the inter-village community level. The watershed management plans, developed at the national level with the assistance of technical experts, would determine the types of activities which would be eligible for funding. The investment proposals made by watershed associations would be demand-driven and would identify sustainable land/resource management investments and activities to be funded. These investments must also be in harmony (i.e., no duplication of effort) with the CBRD community development plans (CDPs). Eligible activities could include: (a) the demonstration and application of new, innovative SLM and energy efficient technologies (e.g., solar cooking stoves, solar electricity, biogas) at the watershed (regional or inter-village), and lower (village community) levels, establishment of upstream and river bank protection to minimize erosion and sediment transport in the watersheds, cattle routes/wells, pasture investments, inter-village forest management investments); (b) income-generating activities (nurseries, ecotourism, fishing, gum arabic, medicinal plants); and (c) demonstrations of better management practices or mechanisms to strengthen traditional grazing management systems and systems to resolve livestock-agriculture conflicts such as installation of closures and boundaries for the protection of grazing areas and plantations. The project would not fund activities which are not linked to GEF objectives or do not provide direct or indirect benefits to the global environment.

The component will be implemented by the CCU of the CBRD project, under the supervision of the lead environmental specialist. The implementation of this component will be an indicator of whether innovative techniques for soil conservation introduced at the community level and their rate of adoption, and the extent of their inclusion in the watershed management plan and WCDPs have been successful.

The project would fund costs for establishment and management of the fund, consultant services, training, recruitment of facilitators to train and assist the watershed associations in submitting investment proposals, and costs associated with acquisition of information, materials and equipment for the demonstration of new and innovative techniques in SLM and income-generating activities. Beneficiary contribution would be in-cash or in-kind (labor and basic materials) and percentage of contribution may vary depending on the type of activity.

Component C: Project management and Monitoring and Evaluation (M&E).

IDA Baseline Activities (IDA funding: US\$4.1 million).

The baseline supports general project management and coordination expenses, monitoring and evaluation, and the development and implementation of a communication strategy. Coordination would be carried out by the CCU located in Nouakchott and also by the Regional Coordination Units (RCUs) located in nine regional delegations of the MDRE. The CCU will also be responsible for carrying out a communications strategy designed to disseminate the project's activities, approaches, and results, through relevant local and national media. Activities will also be supported to develop an M&E system,

including the development of key poverty indicators, to effectively track and evaluate project progress and to ensure timely and relevant periodic reporting.

GEF Activities (GEF incremental funding: US\$1.0 million).

This component will be also be implemented by the CCU to ensure synergy and consistency between the objectives and activities of the baseline project and the CBWM. The lead environmental specialist within the CCU will be responsible for facilitating, coordinating and monitoring the project's GEF activities. The component will fund technical assistance associated with M&E, and the incremental operating costs of additional personnel recruited as part of the CCU and the regional teams (facilitators and animators) to execute GEF activities or to assist in managing these activities. Qualified technical assistance will be recruited under the component to assist the CCU, particularly in the development of the watershed management plan and the implementation of M&E tools (e.g., scorecards, development of tools to assess land degradation costs and SLM benefits). Monitoring indicators used for the baseline project would also apply to the CBWM, particularly for project management and development of a communication strategy, but vary for M&E of NRM related activities. The project would fund vehicles, equipment, technical assistance, consultant services, studies and surveys, audits, training, study tours and workshops for effective project implementation and M&E.

To promote the project's objectives, the project will supplement the baseline project's *communication strategy* with targeted dissemination of information specific to SLM successes at community level and land degradation, targeting different levels of stakeholders, including women and youth (schools), and place a communications agent at the watershed association level to follow up on these activities. The project would fund limited communications equipment, production of communications and promotional materials, television and radio air time, consultant services and contracts for animation of local theater/songs, training and study tours, subscriptions to technical journals, and associated operating costs. It is envisaged that the communications plan will eventually establish a group of SLM "champions", made up of representatives of various stakeholders involved or impacted by the project, e.g., local government, community association members, extension service agents, women, youth.

Annex 5: Project Costs
MAURITANIA: Community Based Watershed Management Project

Table 5A: Project Cost Summary

Project Cost By Component and/or Activity	Local US \$million	Foreign US \$million	Total US \$million
A. Capacity Building for SLM	1.40	0.25	1.65
B. Providing Incentives for SLM	0.13	3.62	3.75
C. Project Management and M&E	0.70	0.40	1.10
Total Baseline Cost	2.23	4.27	6.5
Physical Contingencies	0.05	0.01	0.06
Price Contingencies	0.17	0.04	0.21
Total Project Costs¹	2.45	4.32	6.77
Interest during construction			0
Front-end Fee			0
Total Financing Required	2.45	4.32	6.77

¹Identifiable taxes and duties are US\$0.60 million, and the total project cost, net of taxes, is US\$6.18 million. Therefore, the share of project cost net of taxes is 90%.

Table 5B: Project Cost Summary and GEF Financing Share
(US\$ Million)

	Cost Including Contingencies	% of Total	Global Environment \Facility (GEF) Financing	% Financing
A. CAPACITY BUILDING FOR SLM				
1. Development of Watershed Management Plans	107.1	1.6	99.7	93.1
2. Support to Watershed Associations	390.4	5.8	376.2	96.4
3. Support at the Local Level (Hakems, Mayors)	764.7	11.3	542.1	70.9
4. Support at the Regional Level	327.8	4.8	274.6	83.8
5. Support at the National Level	226.3	3.3	187.3	82.8
7. Harmonization of Policies, Laws and Regulations	7.2	0.1	5.8	80.0
Subtotal CAPACITY BUILDING FOR SLM	1,823.5	26.9	1,485.8	81.5
B. PROVIDING INCENTIVES FOR SLM PRACTICES				
1. Demonstration of Techniques and Practices	251.2	3.7	195.9	78.0
2. Local Investment Fund	3,472.4	51.2	3,300.0	95.0
3. Environmental Impact Studies of Sub-projects	42.2	0.6	40.8	96.5
Subtotal PROVIDING INCENTIVES FOR SLM PRACTICES	3,765.9	55.5	3,536.7	93.9
C. PROJECT MANAGEMENT, COORDINATION, AND M&E				
1. Project Management and Coordination	640.7	9.4	494.9	77.3
2. Project Monitoring and Evaluation	234.0	3.5	216.6	92.6
3. Communication and Awareness Strategy	315.9	4.7	271.0	85.8
Subtotal PROJECT MANAGEMENT, COORDINATION, AND M&E	1,190.5	17.6	982.5	82.5
Total PROJECT COSTS	6,779.9	100.0	6,005.0	88.6

Table 5C: Project Components Financing
(US\$ Million)

	Global Environment Facility (GEF)		Govt. of Mauritania		Communities		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%			
A. CAPACITY BUILDING FOR SLM											
1. Development of Watershed Management Plans	99.7	93.1	7.4	6.9	-	-	107.1	1.6	61.9	37.8	7.4
2. Support to Watershed Associations	376.2	96.4	14.1	3.6	-	-	390.4	5.8	37.9	338.3	14.1
3. Support at the Local Level (Hakems, Mayors)	542.1	70.9	222.6	29.1	-	-	764.7	11.3	160.9	381.2	222.6
4. Support at the Regional Level	274.6	83.8	53.2	16.2	-	-	327.8	4.8	6.2	268.5	53.2
5. Support at the National Level	187.3	82.8	39.0	17.2	-	-	226.3	3.3	6.4	180.9	39.0
7. Harmonization of Policies, Laws and Regulations	5.8	80.0	1.4	20.0	-	-	7.2	0.1	-	5.8	1.4
Subtotal CAPACITY BUILDING FOR SLM	1,485.8	81.5	337.7	18.5	-	-	1,823.5	26.9	273.3	1,212.5	337.7
B. PROVIDING INCENTIVES FOR SLM PRACTICES											
1. Demonstration of Techniques and Practices	195.9	78.0	55.3	22.0	-	-	251.2	3.7	124.5	71.4	55.3
2. Local Investment Fund	3,300.0	95.0	-	-	172.4	5.0	3,472.4	51.2	3,472.4	-	-
3. Environmental Impact Studies of Sub-projects	40.8	96.5	1.5	3.5	-	-	42.2	0.6	34.8	6.0	1.5
Subtotal PROVIDING INCENTIVES FOR SLM PRACTICES	3,536.7	93.9	56.8	1.5	172.4	4.6	3,765.9	55.5	3,631.7	77.4	56.8
C. PROJECT MANAGEMENT, COORDINATION, AND M&E											
1. Project Management and Coordination	494.9	77.3	145.7	22.7	-	-	640.7	9.4	220.0	275.0	145.7
2. Project Monitoring and Evaluation	216.6	92.6	17.4	7.4	-	-	234.0	3.5	164.1	52.4	17.4
3. Communication and Awareness Strategy	271.0	85.8	44.9	14.2	-	-	315.9	4.7	37.6	233.4	44.9
Subtotal PROJECT MANAGEMENT, COORDINATION, AND M&E	982.5	82.5	208.0	17.5	-	-	1,190.5	17.6	421.7	560.8	208.0
Total PROJECT COSTS	6,005.0	88.6	602.5	8.9	172.4	2.5	6,779.9	100.0	4,326.7	1,850.8	602.5

Annex 6: Implementation Arrangements

MAURITANIA: Community Based Watershed Management Project

The CBWM project will be implemented as a component of the baseline project, the CBRD, under the auspices of the same national institutions to ensure the consistency of the GEF component with the main IDA project. The institutions involved will be the same as those implementing the IDA baseline project, except for the Scientific and Technical Advisory Committee which will be newly created. Their capacities will be reinforced through the Component A “Capacity Building”. The project will be implemented as follows.

The project is designed to foster bottom-up decision-making beginning with the ABVs which will be assisted in developing their plans for watershed management, which will then be approved by the local public authorities (through approval committees). A partnership agreement (“convention”) will be signed between the ABVs and interested parties to endorse the plan and to clarify roles and responsibilities. From the plan, the ABVs will select their priority activities and formulate annual action plans which would include subprojects for investment and training in SLM and income-generation. The will be supported with technical assistance provided by the Decentralized Regional Coordination Units and the project’s Central Coordination Unit (CCU - responsible for coordinating and managing the project). The Scientific and Technical Advisory Committee will provide technical guidance and advice to the project, and may play a role in policy dialogue and technical information dissemination. Oversight for harmony with the country’s laws and policies, and intersectoral coordination rests with the Steering Committee. Details of roles and responsibilities at each level are described below.

At the National Level:

Project Central Coordination Unit (CCU): The CCU, responsible for executing the baseline project and under the tutelage of the Ministry of Rural Development and Environment (MDRE) will also responsible for implementing the CBWM. Since the CBWM is a partially blended project with the CBRD, the coordination of the CBWM will use the existing structure of the baseline project for project coordination and management to maintain consistency and efficiency.

Staffing at the CCU consists of: (i) a core management team (Project Coordinator, Director of Administration and Finance, Internal Auditor, and Procurement Specialist); (ii) experts covering M&E and such key aspects of the project as community participation/training, rural infrastructure, agricultural services contracting, natural resources/environmental safeguard issues, and gender and social safeguard issues; a technical expert, the lead environmental specialist position within the project, will be responsible for the technical management aspects of the CBWM; and (iii) assistants dealing with project communication, logistics, computer systems. All project staff are under a renewable two-year contract, with terms of reference, qualifications, experience, and expected outputs satisfactory to the Association. The Borrower and the Association will determine the renewal or termination of contracts based on performance evaluations, particularly when the expected outputs have been achieved. If necessary, the number of

staff will be adjusted during implementation. Terms and conditions of the contracts are spelled out in the Implementation Manual.

Key Functions of the CCU. The CCU is responsible for briefing the MDRE before each meeting of the Steering Committee, and the Scientific and Technical Advisory Committee (defined below). The CCU will also be the contact point for responding to information needs, e.g., from TerrAfrica Briefings including quarterly reports and summary notes. The CCU's responsibilities include: (i) preparing the annual work programs and budgets for project activities; (ii) planning and implementing such activities; (iii) maintaining the project's financial integrity by implementing the financial management system recommended by IDA; (iv) implementing the M&E system including the impact analysis; (v) facilitating with sectoral operations to help village communities and rural communes gain access to basic social services; and (vi) collaborating with other development partners and Government-financed development projects to avoid duplication of effort and to ensure complementarity with such initiatives. Unlike the CBRD, under the CBWM, the CCU will handle all direct payments to contractors and service providers for the watershed associations which, unlike the ADC, will not be managing their own funds under the project.

The Steering Committee (Comité de Pilotage, CP): Provides overall guidance to the project. It will be responsible for: (i) reviewing the annual work plans, budgets, and project's results prepared by the CCU; (ii) assessing the progress made towards achieving project's objectives; (iii) facilitating the project's implementation through the coordination among CP's members. It is chaired by the Ministry of Economic Affairs and Development (MAED) and consists of key ministries involved in project activities (Rural Development, Interior, Health, Education, Equipment, Water, etc.), representatives (mayors) from elected local governments (communes), and civil society (NGOs). The CP and its members were established by *Arrêté* 1222/MDRE/MAED. The CP meets twice a year, with one of the meetings to include other development partners. The minutes of CP's meetings will be shared with IDA and the GEF.

Scientific and Technical Advisory Committee (Comité scientifique et technique, CST): This committee, which will be established in the context of the CBWM does not exist in the baseline project design. Its role would be to review the technical elements of the project activities which are new and innovative (e.g., solar cooking stoves, biogas) and having a national scope, guarantee the coherence and scientific quality of activities, and contribute to the monitoring, and evaluation of the project from a technical standpoint, and be involved in the dissemination of results. The committee would meet as needed, and selected members of the committee would participate in field missions. The committee would be chaired by the GEF Focal Point of Mauritania (DENV), and include a core team of: the CCU of the CBRD as Secretariat, international experts in related disciplines, project staff from other related donor-funded programs. Representatives from other donors, national research institutions, the university, extension services, other Government technical services departments (e.g., DPSE, DA, DE, DRV), and civil society would be invited to participate as observers. The CTS may also be involved in policy dialogue and information dissemination involving best practices inside and outside of the country.

Regional Level

Decentralized Regional Coordination Unit—RCU: Project management will be progressively decentralized to the regional (*wilaya*) level. The *Comité Régional de Développement* (CRD) selects the watershed sites and oversees the regional program and is chaired by the Governor (*Wali*) of the region. The CRD is composed of Government representatives (the *Hakems*), public services, representatives of local government (communes) and civil society (NGO, professional associations). Each region in the project area has a Regional Coordination Unit (RCU) which is under the supervision of the *Délégation Régionale du Développement Rural* of the MDRE.

The RCU will be in charge of implementing the project activities on the ground and would be responsible for approving the plans for watershed management. In particular, it will ensure that the M&E system is carried out according to plan and the “*Association des Bassins Versants*” (ABV) or watershed associations receive the necessary assistance in implementing project activities. The RCU is staffed with the Regional Coordinator, an accountant and a data entry operator. It works with the *Cadre mobile d’assistance technique* (CMAT) recruited by the project to strengthen the Regional Delegation. The CMAT are expected to be retained by these delegations at the end of the project. As with the CCU, the core staff of the RCU will be under a performance-contract to be jointly assessed by the Borrower and GEF.

At the Local Level:

Local Public Authorities and Oversight: Central and local technical services of the State and local authorities of the communes are expected to play an important role in the CBRD and CBWM. Local authorities are expected to: (i) participate in the validation process and implementation of the watershed management plan which must be aligned with the Regional Poverty Reduction Programs (PRLP) and the development agenda of the communes and the region; (ii) verify that the different investments conform with relevant rules and legal texts; (iii) supervise the implementation of subprojects; and (iv) assist the communities in conflict resolution should they arise. The watershed management plan and the activities contained therein will be vetted by an Approval Committee at the *Moughataa* (*préfecture*) level, coordinated by the Prefect (*Hakem*) of the concerned Moughataa. The Approval Committee will be comprised of representatives of the sectoral ministries, local governments, and local NGOs. Details would be provided in the Project Implementation Manual.

Watershed Associations (Associations des Bassins Versants - ABVs) (at least two are planned to be created by the mid-term review) are ultimately the principal implementing units of the CBWD. They will group together representatives from different ADC villages under the CBRD. The project will not be intervening in areas which do not have ADCs. With assistance from a team including technical specialists (team composition: facilitators, NGOs, research institutions and extension services staff, ABVs will be responsible for designing the development and investment plans for selected watersheds through a participatory approach. The approach will involve several villages, and for rural communes, it will involve all villages concerned with constraints to watershed management. Funds will be managed by the CCU for the ABVs. ABVs and rural communes will be responsible for contracting suppliers and service providers, procuring

goods and services needed to implement investment plans, and assuring proper operation and maintenance of the investments, and the CCU will pay directly the contractors or providers. The ABVs will be responsible also for assessing the performance of agricultural and facilitation services. The composition of each ABVs would include: at least three representatives from each ADC, one representative from the livestock herders (*transhumans*), and a representative each from other users of watershed resources, e.g., fishermen, charcoal manufacturers, etc..

Matching grants under the Local Investment Fund (Component B) will be provided using the following criteria: (i) the ABV is a socially cohesive group with which the project can work; (ii) the ABV has in place a watershed management plan; and (iii) sub-projects are technically, financially, and environmentally sound with indications that the ABV will take responsibility for its realization, operation and maintenance. The ABVs are required to follow a transparent process in the procurement of goods and services and are subject to technical supervision and monitoring of the sub-projects. If an ABV violates the agreement signed with the project's CCU through any misuse or misappropriation of funds, support from the project will be suspended. In cases of support for on-farm research, proposals for matching grants by communities may also be implemented by research institutions.

Coordination with Other Development Institutions

A coordination mechanism will be established for the collaboration with the GEF national focal point for Mauritania and the CBRD staff to avoid duplication and reinforce synergies between national, regional, and global initiatives. These mechanisms will also include a regional coordination mechanism. The role and responsibility of this structure will be reinforced by other ongoing projects supported by the World Bank and other donor organizations already funding related interventions in the country.

The project will collaborate with the Oasis Sustainable Development Program (IFAD) in the area around the oases; where local associations already exist under the Oasis project, no new associations will be created to avoid duplication of effort and resources. The project will also seek to coordinate and collaborate with the following projects: the Desert Margins Program (UNEP/ICRISAT), the Small Grants Program (UNDP/GEF), the Poverty Reduction Project in Aftout South and Karakoro (PASK) (IFAD), the Natural Resources Management Program (GTZ), the Biological Conservation Project in Mauritania and Senegal (UNDP), the Rural Electrification through Solar Panels and Windmills Project (UNDP), Famine Early Warning System (FEWS) (USAID), and the TerrAfrica Partnership to access an array of donor activities.

Project Areas

The project will be implemented initially in two pilot sites which were selected according to the following criteria: (i) the watersheds had to be representative of the Mauritanian ecosystem; (ii) a development project capable of financing the basic needs of the communities had to be in place; (iii) signs of degradation had to be evident; and (iv) the watershed had to be adequately populated. The two pilot sites selected are: (a) the micro-watershed of Greiguel (agro-pastoral ecosystem) (comprising 3 communes, 32 villages) in the Assaba Region, and (b) the micro-watershed of Tengharada (oasis ecosystem) (1 commune, 12 villages) in the Adrar Region. Successes in the methodological approaches developed during the pilot phase would be replicated and scaled up to a total of four sites (at most 120 villages) within the baseline project area. The baseline study on soil degradation “Caractérisation de la dégradation des sols” has identified 31 potential sites for future intervention within the CBRD area (i.e., in 10 out of 13 regions in Mauritania).

**Annex 7: Financial Management and Disbursement Arrangements
MAURITANIA: Community Based Watershed Management Project**

A. SUMMARY OF FINANCIAL MANAGEMENT ASSESSMENT

Implementing Entity/staffing

The existing CBRD Central Coordination Unit (CCU) will be responsible for implementing the new CBWM operation. Staffing at the CCU already includes: (i) a core management team (the Project Coordinator, Director of Administration and Finance, an Internal Auditor, and a Procurement Specialist); (ii) experts covering M&E and such key aspects of the project as community participation/training, rural infrastructure, agricultural services contracting, natural resources/environmental safeguard issues, and gender and social safeguard issues; a technical expert, the lead environmental specialist position within the project, will be responsible for the technical management aspects of the CBWM and who will be supported by a full-time technical assistant; and (iii) assistants dealing with project communication, logistics, computer systems. Only an additional accounting assistant will be required to handle CBWM operations under CCU DAF supervision.

Risk analysis/Risk assessments: see conclusion of CBRD FM Assessment

Strengths and Weaknesses (update)

- *Strengths:* the project will benefit from the satisfactory FM capacity of CBRD project.
- *Weaknesses:* risk of confusion of transactions related to both IDA- and GEF-financed operations.

Information Systems

The existing computerized FM Systems will be revised and reflected accordingly in the manual of procedures.

Financial Reporting and Monitoring

Similar to CBRD, Financial Monitoring Reports (FMR) will be prepared on a quarterly basis by the DAF and submitted to CCU management and IDA for the purpose of monitoring project implementation.

Annual project financial statements will also be required consisting of the following: (i) A Statement of Sources and Uses of funds (by Credit Category/by Activity showing IDA and Counterpart Funds separately); (ii) A Statement of Cash Position for Project Funds from all sources; (iii) Statements reconciling the balances on the various bank accounts (including GEF Designated Account) to the bank balances shown on the Consolidated Statement of Sources and Uses of funds; (iv) SOE Withdrawal Schedule listing individual withdrawal applications relating to disbursements by the SOE Method, by reference number, date and amount; (v) Notes to the Financial Statements.

Accounting Policies and Procedures

Project accounts will be maintained on an accurate basis, augmented with appropriate records and procedures to track commitments and to safeguard assets. Accounting records will be maintained in dual currencies (i.e., Ouguiyas and USD). The Chart of Accounts will facilitate the preparation of relevant quarterly and annual financial statements, including information on the following:

- Total project expenditures,
- Total financial contribution from each financier,
- Total expenditure on each project component/activity, and
- Analysis of that total expenditure into civil works, various categories of goods, training, consultants and other procurement and disbursement categories.

Annual financial statements will be prepared in accordance with International Accounting Standards (IASs). All accounting and control procedures documented in the existing manual of procedures will apply.

B. AUDIT ARRANGEMENTS

The GEF Agreement will require the submission of Audited Project Financial Statements for CBWM to the Bank (IBRD) within six (6) months after year-end. **A single opinion** on the Audited Project Financial Statements in compliance with International Standards on Auditing (ISAs), will be required including the accuracy and the propriety of expenditures made under the SOE procedures and the extent to which these can be relied upon as a basis for credit disbursements. In addition to the audit reports, the external auditors will be expected to 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 GEF agreement. The contract of the existing auditor for CBRD project will be extended to cover the new operation as well as.

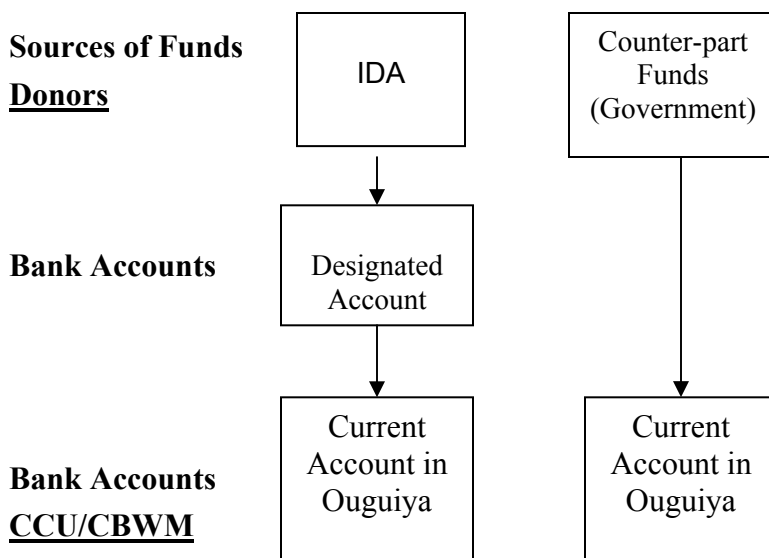
C. DISBURSEMENT ARRANGEMENTS

The overall project funding will consist of an IDA Credit as well as GoM Counterpart Funding , as required under the approved Country Financing Parameters (CFPs) for Mauritania. A 10% overall contribution is expected from the GoM under the Operation. The following accounts will be maintained by the CCU:

- (i) One (1) designated account in US Dollars with a respective current account in Ouguiyas which will be managed by CCU. Funds will be used to make payments to suppliers in the respective contract currencies;
- (ii) A Project Account in Ouguiyas opened at the Central Bank , where Counterpart Funds will be deposited.

Interest income received on the designated account will be deposited to the respective project account or any other account of borrower.

Summary of Funds Flow Diagram



Method of Disbursement :

The CCU is already submitting quarterly Financial Monitoring Reports (FMRs) under a separate operation i.e. the Community-Based Rural Development Project (CBRD). However, it will not be ready for report-based disbursements for this new operation by effectiveness . Therefore, the transaction-based disbursement procedure (as described in the World Bank Disbursement Handbook) will be followed initially, i.e. direct payment, reimbursements, special commitments and replenishments of the designated account. Disbursements will be made on the basis of the standard “goods, work and services”categories in line with CBRD arrangements, currently in place. The same accounting module will also be utilized in order to facilitate CCU’s disbursements under several IDA operations.

When the financial reports are adequate and produced on a timely basis, the borrower will request conversion to report-based disbursements. A review will be undertaken by IDA to confirm the project’s readiness to use the IFR disbursement method. The adoption of report-based disbursements will enable the CCU to move from monthly replenishments under transaction-based disbursements to quarterly IFR-based disbursements to the Project’s designated Account .

Use of statements of expenditures (SOEs):

Disbursements for all expenditures will be made against full documentation, except for items claimed under the Statement of Expenditures (SOE) procedure. SOEs will be used for payments claimed under contracts for: (a) works and goods in an amount inferior to US\$250,000; (b) consulting firms in an amount inferior to US\$100,000 and (c) individual

consultants in an amount inferior to US\$50,000 as well as small equipment, office supplies and training. Documentation supporting all expenditures claimed against SOEs will be retained by the CCU and made available for review when requested by IDA periodic supervision missions and project external auditors. All disbursements will be subject to the conditions of the GEF Grant Agreement and the procedures outlined in the Disbursement Letter.

When the project moves to IFR-based disbursements, all of the documentation will be maintained at the CCU.

Designated account :

To facilitate project implementation and reduce the volume of withdrawal applications, a designated Account in US dollars and the respective equivalent account in local currency (Ouguiyas) will be opened by the CCU in a commercial bank on terms and conditions acceptable to IDA. The authorized allocation will be US\$600,000 for the designated account. The respective allocation will cover about four months of eligible expenditures. The CCU will be responsible for submitting monthly replenishment applications with appropriate supporting documents for incurred expenditures. The Ministry of Finance and the Central Bank will ensure that payments in foreign currency are made within 3 days of submission of an invoice. To the extent possible, all of IDA's share of expenditures should be paid through the designated account. Withdrawal Applications for the replenishment of the designated account will include a reconciliation of the account, a bank statement and any other required documents until such time as the borrower may choose to convert to report-based disbursement. The borrower may also choose to pre-finance eligible project expenditures between project signing and effectiveness and claim reimbursement from the GEF grant, upon effectiveness.

Upon credit effectiveness, IDA will deposit the amount of US dollars 600,000 into the designated account. The designated account will be used for all payments inferior to twenty percent (20 percent) of the authorized allocation and replenishment applications will be submitted monthly. Further deposits by IDA into the Designated Account will be made against withdrawal applications supported by appropriate documents.

Counterpart funds and taxes

The cost sharing between IDA and the GoM will be limited to 90 percent globally. While project costs include all taxes and contracts for goods and services are approved all-taxes included in accordance with Bank procurement Policy, the borrower will be authorized to submit its claims for local expenditures all-taxes excluded, in order to expedite payments.

Withdrawal Schedule

Category	Amount of the Grant Allocated (expressed in USD)	Percentage of Expenditures to be Financed
(1) Civil Works	10,000	100% of local expenditures all-taxes excluded
(2) Goods	360,000	100% of foreign expenditures and 100% of local Expenditures all-taxes excluded
(3) Consultants' services	580,000	100% of foreign expenditures and 100% of local expenditures all-taxes excluded
(4) Training, Study Tours, Workshops	550,000	100%
(5) Sub-projects	3,000,000	100% of amounts disbursed
(6) Operating Costs	900,000	100% of local expenditures all-taxes excluded
(8) Unallocated	600,000	
TOTAL AMOUNT	6,000,000	

NEXT STEPS

Action Plan

The action plan to be implemented before Credit Effectiveness is tabulated below.

ACTION	Target Completion Date
1. Extend the contract of the existing external auditors to the new Operation.	By effectiveness
2. Update and extend FM Systems (re-customize the accounting software, add specific section to the existing manual of procedures where need be).	By effectiveness
3. Release 50% of annual forecast of counterpart funding (\$80,000)	By effectiveness

Conditions for Credit Effectiveness.

Release 25 percent of counterpart funds for the 1st annual forecast (\$40,000).

Financial Covenants

A financial management system, including records and accounts will be maintained by the CCU. Financial Statements will be prepared in a format acceptable to the Bank, and will be adequate to reflect in accordance with sound accounting practices the operations, resources and expenditures in respect of the project.

Supervision Plan

Supervision activities will include: review of quarterly FMRs; review of annual audited financial statements and management letter as well as timely follow up of issues arising; and participation in project supervision missions as appropriate. The Bank FMS in charge will monitor the timely implementation of the financial management arrangements.

Conclusions

The overall conclusion of the assessment is that the current financial management arrangements are satisfactory to meet the Bank's FM requirements, though some recommendations should be implemented by effectiveness such as : *(a) extend external auditors contract to the new operation; (b) update and extend the existing FM systems including manual of procedures; (c) Initial deposit of Counterpart Funds released.*

By effectiveness, the project will not be ready for report-based disbursements. Thus, at the initial stage, transaction-based disbursement procedures, as described in the World Bank Disbursement Handbook, will be followed i.e. direct payment, reimbursement, and special commitments. However, when project implementation begins, and the GoM requests conversion to report-based disbursements, a review will be undertaken by the Bank to determine if the project is eligible.

Annex 8: Procurement Arrangements

MAURITANIA: Community Based Watershed Management Project

A. GENERAL

Procurement for the proposed project would be carried out in accordance with the World Bank's "Guidelines: Procurement Under IBRD Loans and IDA Credits" dated May 2004; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, and the provisions stipulated in the Legal Agreement. The various items under different expenditure categories are described in general below. For each contract to be financed by the Grant, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual project.

Procurement of Works: The project will finance the rehabilitation of MDRE buildings in the project-affected regions under the Capacity Building for Sustainable Development of Lands component. Procurement of civil engineering works costing less than US\$500,000 equivalent will be done following NCB⁷ procedures. No contract above that sum is envisaged but in the event it becomes necessary, the contract will be awarded following ICB⁸ procedures. Other civil engineering contracts costing less than US\$50,000 equivalent will be procured through lump sum, fixed-price contracts awarded on the basis of quotations obtained from at least three qualified domestic contractors invited to bid and preferably more than three in order to have at least three comparable offers. The invitation to bid shall include a detailed description of the works, including required specifications, the required completion date, a basic form of agreement acceptable to the Association, and the relevant drawings, where applicable. In all cases, the award shall be made to the contractors who offer the lowest price quotation for the required work provided they have the experience and resources to complete the contract successfully. National preference is not applied. The procurement will be done using such bidding documents as are agreed with, or acceptable to, the Association.

Publication: A General Procurement Notice (GPN) shall be prepared by the Borrowers and published in the *United Nations Development Business online* (UNDB online) and in the *Development Gateway Market (dgMarket)*, to announce the major consulting services required, and ICB, if any. The GPN shall include works contracts procured through ICB, all contracts for goods procured through ICB and all major consulting contracts (those valued at US\$200,000 or more). In addition, a Specific Procurement Notice (SPN) is required for all goods to be supplied through ICB and any invitations for expressions of interest for contracts estimated to cost more than US\$200,000 must be published on the UNDB and dgMarket websites. Regardless of the amount of the contract a request for expressions of interest (EOI) shall be published in the official Gazette or in a national newspaper and, if applicable, on an electronic portal of free access to consulting firms. In

⁷ NCB: National Competitive Bidding

⁸ ICB: International Competitive Bidding

the case of NCB an SPN shall be published in the official Gazette or in a newspaper of national circulation and, as the case may be, on an electronic portal of free access. The award of contracts shall also be published on the UNDB site and the dgMarket site, in accordance with the Bank's procurement guidelines (para 2.60) and consultant selection guidelines (para 2.28).

Procurement of Goods: Goods procured under this project are essentially motor vehicles, motorcycles, office equipment, and furniture. Goods estimated to cost US\$250,000 equivalent or more will be procured through ICB procedures. Goods estimated to cost less than US\$250,000 equivalent are procured through NCB procedures. The direct contracting method of procurement may be used with the prior consent of the Association in certain cases, for example purchasing of equipment or specific plant material for protecting watersheds. Vehicles estimated to cost less than US\$150,000 per contract may also be procured through the UNDP Inter-Agency Procurement Services Office (IAPSO).

Goods estimated to cost less than US\$30,000 equivalent may be procured through national shopping procedures based on comparing price quotations from at least three qualified contractors, in accordance with IDA guidelines on procurement (paragraph 3.5) and the memorandum on procurement through shopping published by the Bank on June 9, 2000 ("*Guidance on Shopping*"). Requests for quotations must be in writing, indicating the date and the place where the quotations may be submitted, a detailed description of the items and the quantities required, as well as the required delivery time and place for the goods, including installation requirements, if any. The written requests for quotations must be issued to at least three qualified reputable suppliers; it may be better to solicit a greater number of suppliers so as to be sure of receiving at least three proposals in the event some suppliers do not respond. The quotations are opened and evaluated at the same time. Wherever possible, items of the same type that are required at the same time are bulked into packages of an amount equal to or above the US\$250,000 equivalent and procured through international competitive bidding in order to benefit from more competitive prices.

The procurement will be done using the Bank's standard bidding documents for all ICB and such standard national documents as are agreed with, or acceptable to, the Association.

Community-Based Procurement:

Communities organized into watershed associations may benefit from the status of community association, as the project will finance community-based sub-projects, such as construction of dikes and weirs, erosion control of embankments, planning and layout of market gardens, provision of wire fencing, barbed wires, agricultural implements, phytosanitary products, and certain specific energy-saving household appliances, such as solar stoves. To this end and in accordance with paragraph 3.17 of the guidelines, goods and works contracts awarded at the community level for the purposes of the project must comply with procedures acceptable to the Association, as specified in the project implementation manual.

Selection of consultants: If it is necessary to have recourse to consulting services from firms and individuals for the implementation of the components of the project—in particular, studies, technical assistance and supervision of civil works—such contracts are awarded in accordance with the “Guidelines: Selection and Employment of Consultants by World Bank Borrowers” dated May 2004. All consulting contracts (except standard or normal assignments such as audits) for an amount above US\$100,000 equivalent in the case of companies, are awarded in accordance with the quality and cost based selection method (QCBS), consistent with Part 1 of the guidelines. For contracts less than US\$100,000 equivalent the short lists may be composed entirely of national companies in accordance with paragraph 2.7 of the guidelines, on condition that a sufficient number of qualified companies are available at a competitive cost. Nevertheless, if foreign companies show an interest, they may not be excluded. Standard or normal contracts for consulting services—for example audits—costing less than US\$100,000 equivalent in the case of companies, are awarded following the least cost selection (LCS) method, in accordance with paragraphs 3.1 and 3.6 of the guidelines. Contracts for consulting services estimated to cost less than US\$100,000 equivalent for companies may be awarded on the basis of the qualifications of the consultant, in accordance with paragraphs 3.1 and 3.7 of the guidelines. Individual consultants are selected in accordance with Part V of the guidelines. Selection of United Nations bodies and NGOs is made in accordance with paragraphs 3.15 and 3.16 of the guidelines. The direct contracting method of procurement may be used with the prior consent of IDA consistent with paragraphs 3.9 to 3.13 of the guidelines.

Training Activities: These activities comprising workshops and study tours are aimed at capacity building, information sharing and the improvement of management skills. Training activities are part of the annual plan of action and are included in the annual procurement plan of action. The annual training program (with indication of proposed budget, agenda, participants, venue, and all relevant details) is determined during the joint review.

Operating Expenses: For operating expenses financed by the project, contracts are awarded using the administrative and procurement manuals and procedures of the implementing agency, all of which have been examined and deemed acceptable by the Association. These expenses include: current operating expenses such as fuel, office equipment, maintenance of office equipment, relocation under the project, supervision, and remuneration of the local personnel engaged. In any event emoluments of officers of the public sector of the Borrower are excluded. Recurrent purchases such as office supplies and consumables, computers, vehicle maintenance services, among others, will be procured, where possible, so as to coincide with the periods of the year in which the client’s contracts are awarded.

Other: The procurement procedures and standard bidding documents (SBDs) to be used for each procurement method as well as the model contracts for goods procured are presented in the project implementation manual.

B. ASSESSMENT OF CAPACITY TO IMPLEMENT PROCUREMENT

Procurement activities will be carried out by the Community-Based Rural Development (CBRD) Project in the Ministry of Rural Development and Environment (MDRE). The project is staffed by specialists in financial management and public administration, and the procurement function is staffed by program managers of the project and an assistant specializing in procurement—all trained and all having experience in Bank procurement procedures, the latter gained during the implementation of the Rainfed Natural Resource Management Project (RNRMP) and the CBRD.

An assessment of the capacity of the implementing agency (CBRD) to implement the procurement actions for the project was carried out in January 2004 by a procurement specialist from the World Bank headquarters who was in Nouakchott when the project was being assessed. This first assessment proposed a plan of action, the implementation of which was reviewed by the procurement specialist employed at the Nouakchott post at the time of the supervision mission in March and November 2005 and at the time of the present CBWM assessment exercise.

Project procurement within the PCU of the CBRD is divided among the program managers who ensure that there is strict adherence to the procurement procedure (drafting of invitations to tender or documents relating to consultants, participating in the evaluation process with the *Commission départementale des marchés du MDRE* (CDM) [Departmental Tender Board] or the *Commission centrale des marchés* (CCM) [Central Government Tender Board], drafting of contract documents and monitoring of implementation). They are all helped in the procurement process by an assistant, a procurement specialist who centralizes the filing of contract documents, ensures the scheduling of contracts with the CDM and the CCM, and monitors them until they are stamped, approved and signed, and ensures that IDA's non-objection is obtained. Normal operations-related purchases are made by the purchasing managers (purchases made on the basis of negotiations with suppliers). Program managers as well as the APM lend their support and counsel to the community in the procurement assignments they carry out; and a manual, aimed at specifying community procedures is now being developed by a specialist firm.

In light of the performance of the current managers involved in procurement at the CBRD and the tender boards and in order to build capacity in the area of purchasing and to guarantee better monitoring of tenders and contracts to be awarded by the beneficiaries (the communes and grass-root communities) the mission recommends that a firm of procurement specialists be recruited (on a competitive basis). In order to make the most of its expertise in procurement on the project, this firm will be required to provide support to the project in complex tenders, especially during periods when the volume of work so requires, making every effort to provide training and transfer knowledge. For the moment the mission does not believe there is a need to recruit a procurement specialist but it is important for the project to reserve the option to recruit one in the event that the workload, including supervision of the ABSs, so requires.

As far as work materials, office equipment, and supplies are concerned, the minimum required is available and functional. Nevertheless, it is necessary to complete the setting up of a procurement document filing system. A suitable location must be set aside, appropriately laid out, and a proper filing system put in place before the grant becomes effective. The supervision missions must monitor closely the filing and safekeeping of procurement documents.

Organization of the Ministry of Rural Development & Environment (MDRE):

Under the organization chart of the Ministry of Rural Development & Environment, the procurement function is essentially performed by the CBRD (assessed above) which is staffed by experienced personnel. It is in possession of enough physical resources (desks, computers, filing facilities and files) to ensure the implementation of the project. Nevertheless, contracts over 2 million ouguiyas (MRO) are awarded by the CDM of the MDRE, and contracts over 25 million MRO for goods and consultants as well as contracts of over 75 million for works are awarded by the CCM, which is staffed by persons versed in IDA procurement procedures.

The CDM at the MDRE has solid experience in IDA procurement procedures. Certain members of the board have benefited from training in procurement procedures financed by the World Bank and the African Development Bank (ADB) through projects financed by those institutions.

Procurement risk is high.

Corrective measures to address the weaknesses identified have been agreed upon as follows: i) CBRD program managers involved in the implementation of the CBWM, as well as CDM members, will receive training in procurement in order to build their capacity; ii) consultants or a firm of consultants will be recruited for short periods and for one-off support in specific technical activities or in capacity building and knowledge transfer as and when required; iii) a procurement planning and management system will be installed in the CBRD units involved in the implementation of the CBWM; and iv) filing of procurement documents will be improved; an appropriate filing system will be put in place and a specific location set aside for this purpose with a staff of full time officers, who will receive training. A procurement review will be conducted twice per year as part of the supervision mission. An independent audit of the project will be carried out once per year.

C. PROCUREMENT PLAN

The Borrower will develop a procurement plan for the first 18 months based on the annual work plan adopted. This will provide the basis for determining procurement methods. That plan will be agreed upon and transmitted to IDA before negotiations take place. Once approved by IDA, the plan will be available in the project's database and in the Bank's external website. The plan will be updated annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

D. Thresholds for Procurement Methods and Prior Review

Expenditure Category	Contract Value Threshold (US \$)	Procurement Method	Contracts Subject to Prior Review
1. Works	$\geq 500,000$	ICB	All
	$< 500,000$	NCB	None
	$< 50,000$	Shopping	None
2. Goods	$\geq 250,000$	ICB	All
	$< 250,000$	NCB	None
	$< 30,000$	Shopping	None
Vehicles	$< 150,000$	IAPSO	All
Goods	Regardless of value	Direct Contracting	All
3. Consulting Services			
-3.A Firms	$\geq 100,000$	QCBS, QBS, FBS, LCS, CQS	All with TORs
-3.B Individuals	$\geq 50,000$	IC	All with TORs
Firms and Individuals	Regardless of value	Single Source	All with TORs

Note: QCBS = Quality- and Cost-Based Selection QBS = Quality-Based Selection
FBS = Fixed Budget Selection LCS = Least-Cost Selection
CQS = Selection Based on Consultants' Qualifications IC = Individual Consultant

Details of Procurement Arrangements involving International Competition and prior review of contracts by the Bank.

1. List of works and goods contract packages to be procured:

1	2	3	4	5	6	7	8	9
Ref. No.	Contract (Description)	Estimated Cost (US\$ equivalent)	Procurement Method	Prequalification (yes/no)	Domestic Preference (yes/no)	Review by Bank (Prior / Post)	Expected Bid-Opening Date	Completion Date
1	Office furniture (tables, chairs, filing cabinets, etc)	19,000	Shopping	No	No	Post	09/01/06	11/4/06
2	2 Pick up, 1 station wagon, 1 vehicle (leger)	148,000	IAPSO	No	No	Prior	10/01/06	01/31/07
3	Office equipment (computers, printers, laptops, accessories)	8,200	Shopping	No	No	Post	10/05/06	12/15/06
4	Rehabilitation	17,000	Shopping	No	No	Post	12/01/06	02/15/07

	works							
5	Solar Kit	5,000	DC	No	No	Prior	01/05/07	02/05/07
6	Demonstration equipment (scientific research equipment to be supplied by Research Institutes	116,000	DC	No	No	Prior	01/10/07	05/10/07
7	Satellite Image Equipment	5,000	DC	No	No	Prior	01/10/07	02/10/07
8	Plant material for protecting watershed; equipment to measure pluviometry; etc.	15,000	DC	No	No	Prior	04/20/07	07/20/07
9	3 Pick-ups	104,000	NCB	No	No	Post	05/05/07	08/15/07

ICB Contracts estimated to cost above US\$250,000 equivalent per contract and all Direct Contracting will be subject to prior review by the Bank.

DC: Direct contracting (single source)
 NCB: National Competitive Bidding
 ICB: International Competitive Bidding

2. Consulting Services

(a) List of consulting assignments with selection methods and time schedule.

1	2	3	4	5	6	7
Ref. No.	Description of Assignment	Estimated Cost (US\$ equivalent)	Selection Method	Review by Bank (Prior / Post)	Expected Proposals Submission Date	Completion Date
1	Additional Personnel	70,000	IC	Post	10/01/06	06/30/08
2.	Support to the Watershed Associations to prepare and implement subprojects (Individual Consultants to be recruited)	35,000	IC	Post	10/10/06	06/30/08
3.	Strengthening of capacity at the national level with respect to conservation of water and land; conflict management.	25,000	IC	Post	10/11/06	06/30/08
4.	Strengthening of capacity at the local level (Hakems, Mairies) with respect to conservation of water and land; watershed and landscape management	30,000	IC	Post	10/12/06	06/30/08
5	Strengthening of capacity at Regional level (training, workshops, etc.)	20,000	IC	Post	10/15/06	06/30/08
6	Technical Assistance with respect to organization and	31,000x2	IC	Post	10/25/06	12/31/07

	technical monitoring (2 Individual Consultants to be recruited)					
7	Socio-economic study	9,200	IC	Post	11/15/06	01/15/07
8	Environmental Impact study	36,000	IC	Post	12/01/06	06/30/08
9	Biophysics study	9,200	IC	Post	12/15/06	02/01/07
10	Elaboration of local management regulations	18,400	IC	Post	12/15/06	12/31/07
11	International Expert in Monitoring and Evaluation	30,000	IC	Post	01/10/07	01/10/08
12	Development of plans (Situation Reference)	62,000	CQS	Post	01/12/07	12/31/07
13	Review and harmonization of politics, laws, and regulations	5,000	IC	Post	01/15/07	03/15/07
14	Study on plan for watershed management	54,000	CQ or IC	Post	04/15/07	12/31/07
15	Financial Audit	15,400	LCS	Post	06/01/07	06/30/08

IC: Individual consultant

CQS: Selection Based on Consultants' Qualifications

LCS: Least Cost Selection

(b) Consultancy services estimated to cost above US\$100,000 for firms and US\$ 50,000 for individuals per contract, and Single Source selection of consultants (firms and individuals) will be subject to prior review by the Bank.

(c) Short lists composed entirely of national consultants: Short lists of consultants for services estimated to cost less than US\$100,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

Community-Based Procurement

Financing of activities will depend on applications received from the ABVs. Due to the demand-driven nature of community-based subprojects, it is not possible to predetermine the exact mix of goods, small works, and services to be procured in connection with these activities.

Annex 9: Economic and Financial Analysis

MAURITANIA: Community Based Watershed Management Project

The project is expected to generate many benefits, some economic in nature and others social and environmental in nature. A Cost Benefit Analysis (CBA) for the whole project could not be carried out because of this mix, and also for the following reasons: (i) benefits of the capacity-building components (empowerment of communities and support to local governance) defy quantification; and (ii) benefits from investments in natural resource management similarly cannot be easily quantified in monetary terms.

However, an illustrative Cost-Benefit Analysis was calculated on the income-generating activities which the ABVs are expected to undertake. The analysis shows that it should not be difficult to reach a minimum of 10 percent internal rate of return (IRR) and economic rate of return (ERR) on average for such sub-projects as soil and water conservation (dikes and thresholds), acacia gum tree rehabilitation, village garden, and African gardens.

Key hypotheses

It is assumed that investing in dikes would allow the production of sorghum (800 kg/ha) on five ha of land previously uncultivated. Thresholds, on the other hand, allow a net gain of 500 kg/ha of sorghum. In both cases, to the value of sorghum production is added that of cowpeas or the valuable hay in these dry land areas. Vegetable gardens consider only fresh produce valued at relatively low prices (100 UM/kg to 120 UM/kg), even though women generally transform the bulk of the product for later sales at prices often much higher. Vegetable prices are however higher for African irrigated gardens, which can produce the whole year around.

There is little difference between economic and financial costs except in labor cost (whose economic cost is 50 percent lower to account for unemployment and lack of alternative job), and transport cost (which includes 10 percent tax on fuel). Under project conditions, imported goods are provided tax free to village communities.

Results of Economic and Financial Analysis

The table below shows high returns on the ADCs' investment (contribution) and on the total investment as well. Some of the investments (village gardens) generate positive stream of revenue starting in year one, in which case one cannot compute an internal rate of return. The levels of net present values reflect the size and the total life of the investment.

Economic and Financial Analysis ('000 USD)

Models	Economic		Financial			
	ERR	NPV	ADC		Global	
			IRR	NPV	IRR	NPV
Dikes	73%	33,3	106%	34,0	48%	26,3
Thresholds	35%	8,1	60%	7,9	19%	5,0
Acacia gum trees	38%	28,9	152%	30,9	24%	24,2
Village gardens	NC	8,0	NC	5,5	502%	4,2
Irrigated African gardens	145%	37,8	>1000%	38,7	128%	35,7

Note: NC = not computable; NR = not relevant.

Sensitivity Analysis

The sensitivity analysis includes a break-even analysis and switching values. The break-even analysis indicates the number of years necessary to recover the total investment, and not just the ADC's contribution. This is viewed against the total life of the project. The switching value indicates the percent increase/decrease of a key factor that would bring down the internal rate of return to the benchmark (10 percent) chosen for the analysis. Based on the level of switching values and the break-even analysis, the models display little risk. In the case of vegetable gardens which is sensitive to low price, these are not as risky as it appears for the following reasons: (i) prices of all (about half of dozen) products would have to drop at the same time; (ii) women that tend these gardens generally sell small quantities at harvest and transform (dry) the bulk of the production for sale at later periods at much higher prices; (iii) the imputed labor cost in the financial returns is high compared to its opportunity cost; and (iv) it takes only one year out of seven to break even. This explains why vegetable garden are popular investments with village associations.

Sensitivity Analysis – Years to Break-Even and Switching Values

Models	Years to break-even (total life)	Switching values Economic		Switching values Financial (total)	
		Investment Cost	Product Price (or yield)	Investment Cost	Product Price (or yield)
Dikes	3(10)	>100%	-72%	>100%	-57%
Thresholds	4(20)	> 100%	-44%	39%	-19%
Acacia gum trees	7(30)	>100%	-47%	73%	-40%
Village gardening	1(10)	60%	-55%	>100%	-29%
Irrigated African garden	2(20)	>100%	-77%	>100%-	-66%

Notes: N/A=not applicable; (a) rental days/year; (b) volume processed/year; (c) store sales volume.

Annex 10: Safeguard Policy Issues

MAURITANIA: Community Based Watershed Management Project

The project development objective is to lessen the incidence of land degradation at the watershed level within the CBRD project area areas by assisting rural communities to realize benefits through community-driven investments addressing land degradation and promoting SLM practices. The overall project outcome expected for the project is that the rural communities' increased usage of effective SLM techniques and practices lead to a decrease in incidences of land degradation.

The proposed Global Environmental Facility (GEF) grant for a Community-Based Watershed Management Project (CBWM) will supplement the baseline IDA-financed project (CBRD) and will complement its interventions for sustainable livelihoods, and improve the management of natural resources (desertification in particular) through inter-community interventions and targeted investments within the frameworks of watershed and landscape management. The project will be implemented over five years, initially at two pilot sites within the CBRD area and representative of two main ecosystems in Mauritania, and scale-up to a total of four sites by the end of the project.

Environmental and Social Considerations

It is expected that the project will have mostly beneficial environmental and social impacts. The environmental and social management measures have been almost fully integrated into the project component designs. The main positive environmental impact will be the improvement in environmental services of the watersheds through the adoption of agro-ecological production systems and improved management of pastures, which will stabilize or reduce erosion rates, and increase agricultural production and incomes.

A potential environmental risk would be that through the success of the project by increasing agricultural production in the watersheds, the influx of migrants from other areas of the country would be stimulated. These migrants would increase the already high pressure on land in the four project watershed basins, which could lead to further deforestation and clearing of lands. The increased influx of migrants into the fragile watersheds could also lead to increased use of steep hills for agricultural production, which could again increase erosion rates. This is why empowerment of farming communities to engage in participatory decision making and to manage common resources in the watersheds of these lands are of paramount importance. Such mechanisms would regulate the natural resource base of the watersheds among local communities and to newcomers and facilitate improved sustainable management of these resources.

From its onset and throughout preparation, the project team focused on reviewing social issues in the designated watersheds to identify potential constraints for cooperation between villages and communities in the same watershed. The project will use the findings of the CBWM Project's socio-economic study and the appraisal report (social issues) for the CBRD (the baseline project) to explore in greater depth current social data tied to the social development objectives of the project, namely: (i) stakeholder inclusion, and (ii) their accountability and ownership of the project through full and broad-based

participation of all the beneficiaries over the project lifespan. The CBWM Project will seek to analyze further constraints that could delay the activities of the various beneficiary groups (such as a rural exodus and low literacy level of ABV managers, which could pose a serious obstacle to sound management of their activities, etc.), as well as capitalize on and boost opportunities for the attainment of project objectives.

In addition, the project will seek to tap into the social diversity within the village communities in order to foster a harmonious balance and cohesion among the different social groups using watershed resources. The method used in the preparatory process of the CBWM Project facilitated involvement of all stakeholders (beneficiaries, commune mayors, the public and private sectors, technical services, civil society organizations, etc.) through on-site visits and consensus-building workshops. The participatory approach used during the planning phase of the project will be strengthened and intensified, in order to build a consensus around efforts to combat land degradation (for example, soil management, pastureland, forests, revenue-generating activities, introduction of new technologies).

Current social organization structures (truck farming and cottage-industry cooperatives, mutual assistance groups for the building of dikes and wells, community development associations (ADCs), etc. will be used by the watershed association (ABV), in order to expand the participation of village communities in the implementation of watershed management plans. The use of these local institutions will contribute significantly to the effectiveness of the project as well as its sustainability, with the objective to foster equitable growth and poverty reduction. Taking into account the fact that the watershed communities use common resources (forests, pasturelands, agricultural ecosystems, water supply points, etc.) covering different areas, social conflicts between farmers and animal breeders related to the cohabitation of these two groups are commonplace.

To this end, the project will use the regulatory mechanisms in place to reduce these conflicts: (i) the traditional mechanism (internal conflict management methods involving traditional chiefs, imams, village sages, and jemmas, in order to mediate such conflicts); (ii) external mechanisms, using mediation and arbitration through communal, departmental, and regional committees, along with representatives of farmers, animal breeders, and users. This mechanism relies on the pastoral code and other legal and regulatory mechanisms in place. In order to minimize the potential risk of social conflicts at the level of inter-community organizations (ABV), which could affect project activities, the project will carry out conflict management capacity-building activities for all staff involved in the CBWM Project implementation process. This is designed to foster and sustain the inclusion of all the various stakeholder groups in the planning, implementation and monitoring of sub-projects and beyond.

The socio-economic study has demonstrated the need to take into account the priorities and interests of women in order to overcome gender-related disadvantages and increase the involvement of women in controlling natural resource degradation. The project will build the capacity of women in the areas of energy substitution (introduction of solar and bio-gas cookers, improved ovens, etc.) and techniques for the restoration of degraded land.

From an environmental and social safeguard point of view, the Mauritania Community-Based Watershed Management Project (CBWM) is a Category B project. That is, there could be adverse environmental and social impacts of the project, but they are expected to be localized, not complex or irreversible, and avoidable or at least manageable to an acceptable level. There are three Bank Safeguard policies applicable to the project. These include: Environmental Assessment (OP 4.01); Involuntary Resettlement (OP 4.12) and Pest Management (OP 4.09).

At the time of the environmental and social assessment of the project, the range, scale, locations and number of sub-projects, as part of the CBWM initiatives were unknown. In order to provide the foundation for identifying the potential impacts of sub-projects, once identified, and determining what mitigation measures should be put in place, the Bank requires the development of an *Environmental and Social Management Framework (ESMF)* and a *Resettlement Policy Framework (RPF)*. In addition, it was determined, based on project envisioned activities leading, in particular, to diversification and intensification of agriculture, that the Pest Management Policy is triggered. This required the development of a *Pest Management Plan (PMP)*.

Because the CBWM, a GEF-funded project, is intervening in the same intervention zones as the Community-Based Rural Development (CBRD) project already under implementation, it was deemed in this case that the ESMF and the RPF for the CBRD project should be adapted to suit the development objective, description and institutional and implementation arrangements of the CBWM. On the other hand, the PMP prepared for the CBRDP has been simply re-disclosed, since there was no need for the preparation of a new one. This was based on the fact the existing PMP is national in scope.

The ESMF and RPF have been prepared, in full compliance with Bank and national safeguard policies, by local consultants, following a broad consultation framework, involving all relevant stakeholder groups. The PMP has already been the subject of consultation in the preparation of CBRD.

POTENTIAL IMPACTS

THE POTENTIAL PROJECT IMPACTS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

Environment

- Soil erosion, loss of biodiversity both fauna and flora.
- Extensive agriculture leading to additional deforestation
- Pesticide/inorganic fertilizer residues resulting from agricultural intensification
- Pastoral land degradation resulting from overgrazing by livestock;
- Sedimentation of local streams and oueds;
- Improper waste management
- Elimination of the natural enemies of crop pests and consequent alteration of biological pest control methods; and
- Development of pest resistance to pesticides, encouraging further increases in and reliance on chemical pesticides use.

Social & Health

- Loss of land and/or other assets leading to loss of shelter, property, loss of economic activities, access to resources etc;
- pesticides poisoning of farmers and deleterious effects on human health,
- Conflicts among village communities in decision making and sharing watershed resources.

The ESMF formulated standards methods and procedures specifying how subprojects, whose location, number and scale are unknown will systematically address environmental and social issues in the screening and categorization, siting, design, implementation, operational phases and maintenance of the subproject lifecycle. It includes: (i) systematization of environmental and social impact assessment for all identified sub-projects before investment; (ii) procedures for conducting sub-project-specific EIAs, be they Limited Environmental Impact Assessment (LEIA) or Full Environmental Impact Assessment (FEIA) as applicable; (iii) preparation of Environmental Management Plans, either as part of EIAs or free-standing, as appropriate, to ensure that the potential impacts listed above will be mitigated; (iv) capacity strengthening and awareness raising campaigns targeted at relevant stakeholder groups for better implementation and monitoring of project safeguard measures; and (v) roles and responsibilities for environmental control and monitoring.

The RPF looked into the policy, legal and regulatory mechanisms on how to address cases of land acquisition, loss of economic activities, on the part of affected people, as a result of project activities. It also provides a coherent framework, eligibility criteria and asset valuation methods for compensation and/or resettlement of affected people, as well as grievance mechanisms of affected persons, in case of unsatisfactory arrangements. The RPF defines the procedures for preparation of site-specific Resettlement Action Plans (RAP) should any subprojects require them.

Together, these safeguard instruments, are considered both as a planning tool and a means for a harmonious integration of the project in its bio-physical and social environment and as a way to maximize positive effects on the same environment.

The PMP, on the other hand, addressed the concerns relating to the risks associated with potential increases in the use of pesticides for agricultural production, intensification and diversification, increases in disease vector populations which would arise from irrigation schemes and made propositions to strengthen national capacities to implement mitigation measures to minimize the risks. The PMP also identifies national agencies and other partners that could effectively collaborate in, as well as the institutional arrangements for implementing the plan.

The ESMF and RPF include institutional arrangements, outlining the roles and responsibilities for the various stakeholder groups involved, for screening, review and approval of sub-projects, as well as implementation and monitoring of their mitigation measures. The PMP also includes clear institutional arrangements to implement and monitor the plan. In view of the limited institutional capacity to addressing project safeguard aspects adequately, the three safeguard instruments, together, include provisions to strengthening the capacity of the various institutions and actors involved, as

well as promoting coordination and synergy among the various sectors in attending to the potential environmental and social impacts. All three instruments were submitted to ASPEN, the regional Safeguard Unit, and cleared for disclosure in-country and at Bank InfoShop, prior to appraisal.

PUBLIC CONSULTATION AND DISCLOSURE

As indicated above, the preparation of the project safeguard instruments followed a broad consultation framework with all potential stakeholders. This participatory approach will be carried on throughout implementation, supervision and evaluation of the project.

Prior to disclosure in-country and at Bank InfoShop, a stakeholder workshop, chaired by Ministry of Environment, was organized by the project preparation committee, involving relevant project stakeholder groups in public agencies, such as *Ministère de l'Agriculture*; representatives of professional organizations, farming organizations; civil society; and NGOs. This approach was utilized with the intention of presenting the results of the studies, fostering ownership and seeking input from these stakeholders in order to improve quality and soundness of the of the instrument. Recommendations from both ASPEN and stakeholders' workshop have been reflected in the final safeguard reports, prior to disclosure. These recommendations and relevant provisions from the three set of safeguard instruments will be reflected in Project Implementation Manual (PIM).

Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP/GP 4.01)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Natural Habitats (OP/BP 4.04)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pest Management (OP 4.09)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cultural Property (OPN 11.03 , being revised as OP 4.11)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Involuntary Resettlement (OP/BP 4.12)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Indigenous Peoples (OP 4.10)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Forests (OP/BP 4.36)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Safety of Dams (OP/BP 4.37)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Projects in Disputed Areas (OP/BP/GP 7.60)*	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Projects on International Waterways (OP/BP/GP 7.50)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas

Annex 11: Incremental Cost Analysis

MAURITANIA: Community Based Watershed Management Project

This section discusses the incremental costs eligible for GEF funding for the project “Community-based Watershed Management Project” (CBWM), defined as the difference between the GEF alternative scenario and the baseline. The baseline considered is the “Community-based Rural Development Project” (CBRD). For each of the three components of the project, the section will: (a) identify the baseline, (b) describe what would happen if the baseline is implemented, (c) indicate the costs of the baseline, (d) describe the alternative scenario, (e) describe the expected benefits under the alternative scenario, (g) report the cost of the alternative, and (h) the incremental cost.

The relationship between the activities of each component and the environmental benefits generated is synthesized in three explanatory tables. The Incremental Cost Matrix is reported at the end of the section. As most of the decisions, practices and technologies that the beneficiaries of the project will adopt cannot yet be determined, the analysis favors a qualitative approach.

I. Component 1: Capacity Building

- (a) Baseline:** This component supports capacity building activities of community village associations (ADCs) and selected rural municipalities to design and implement effective development plans; develops the technical capacity of the communities’ service providers (crop and livestock research-development, extension services, statistical, environmental and rural training agencies) with an emphasis on decentralized units; and strengthens the capacity of micro-enterprises that directly supply goods and maintenance services to the village associations.
- (b) Expected scenario under the baseline scenario:** Communities will be provided with the necessary skills to effectively develop, implement, manage and monitor development plans and administer their local institutions. However, capacity building activities will not necessarily include or focus on natural resource management.
- (c) Baseline cost:** 9,200,000 USD (IDA)
- (d) GEF alternative scenario:** Under the CBWM, this component will supplement the baseline project’s activities and develop local and regional capacity to adapt and replicate innovative watershed and landscape management approaches. Particularly, the component will support the following activities.
 - Development of watershed and landscape management decision support tools to assist the communities and the local government in the local development planning process (e.g. intercommunity masr plans for watershed management); a focus will be placed on the land use optimization, natural resources conservation with particular emphasis on land degradation while maximizing socio-economic objectives. The tools developed will include Geographical Information Systems/Natural Resources Management (GIS-NRM) databases of watersheds

and watershed management master plans (*Shémas directeurs d'aménagements*) based on GIS data, and local watershed development plans.

- Establishment and strengthening of watershed associations and decision-making institutions related to watershed/landscape management; training and assistance to watershed associations and other village associations in the targeted watershed areas, disadvantaged groups (women, youth, transhumant), rural communes, civil society, local and regional authorities, and traditional authorities, in the development, implementation and monitoring of local watershed development plans.
- Fostering collaboration between the project and national and local research institutions, university, and extension services and different existing community associations to adopt a watershed/landscape management approach in developing and transferring sustainable land management technologies. Encouraging partnerships between the communities and the research and extension services for using sustainable resources management technologies (training of research staff to work with communities/land users, development of tools to assess land degradation costs and SLM benefits, etc.).
- Awareness training and sensitizing communities to land degradation issues (e.g., tours to witness disastrous consequences of land degradation, use of demonstrations of successful mitigation techniques, dissemination of information of new SLM technologies and applications, etc.).
- Review of policies, laws, regulations as needed during project implementation to identify reforms required for providing adequate incentives (such as improved tenure security, conflict resolution systems) to rural communities for the sustainable management of land resources at the watershed and landscape levels.
- Exploration and identification of future, sustainable operation and funding options (e.g., through information available from donor institutions, national environment funds, regional partnership centres for communities, bio-carbon fund, and returning environmental tax revenue to the local level).

The project would in addition fund consultant services for technical assistance and studies, facilitation, animation, training and study tours, data collection costs, equipment and contracts for GIS information gathering, small equipment for training and demonstration of new technologies, and general operating costs.

(e) Expected local and global benefits under the GEF alternative: The GEF alternative will strengthen the capacity of local communities and governments to adopt the watershed management approach in planning and implementing well coordinated local development interventions. This component would mainly provide watershed management decision support tools, institutions, regulatory/policy framework, training and information to all relevant stakeholders. As a result, environmental concerns will be integrated in the design and implementation of development plans and in decision-making processes, and sustainable methods to protect and manage natural resource assets will be developed. That will contribute to indirectly generate both local and global environmental benefits, including

contribution to: reducing land degradation and desertification, preserving the integrity of ecosystems (including freshwater ecosystems), and to preserving the natural resource base/ capital. Details on the linkages between the expected planned activities and the environmental benefits are summarized in the table below.

<u>Activities</u>	<u>Direct impact</u>	<u>Local and global environmental benefits</u>
Development of watershed and landscape management decision support tools	<ul style="list-style-type: none"> Improved knowledge of SLM practices/ increased adoption of SLM technologies (with direct benefit in terms of wind and water erosion of soil, waterlogging, etc.) SLM integrated in decision-making processes Upstream and off-site effects of land degradation taken into consideration in decision-making processes 	<ul style="list-style-type: none"> Land degradation/ desertification reduced (and possibly halted and reversed) Critical ecosystem' integrity, regulation functions and services (including microclimates, fauna and flora, areas of significance for migratory birds, etc.) preserved, restored and possibly improved Freshwater ecosystems/ waterways maintained and protected (specifically the <i>Oued Greigel</i> and the <i>Oued Tengarada</i> basins) Land-use conflicts and pasture pressure reduced thanks to better land use planning
Establishment and strengthening of watershed association and decision-making institutions related to watershed/land management, and training in the development, implementation and monitoring of watershed development plans		
Fostering collaboration between the project and national and local research to adopt watershed/ landscape management approach in developing and transferring SLM technologies. Encouraging partnerships between the communities and the research and extension services for using SLM technologies.		
Awareness training	<ul style="list-style-type: none"> Improved knowledge and awareness on land degradation, its causes and consequences, mitigation techniques, and new SLM technologies and applications 	
Review of policies, laws, regulations	<ul style="list-style-type: none"> Reforms in the policies, laws and regulations needed to support sustainable management of land resources at watershed and landscape levels identified Adequate incentives (in terms of tenure security, conflict resolution systems, etc.) identified Land degradation issues mainstreamed into local development processes, and enabling policy, legal and planning framework established Policies and regulations supporting sustainable management of resources at the watershed/landscape level harmonized 	
Exploration for future funding	<ul style="list-style-type: none"> Sustainability of interventions guaranteed 	

(f) GEF Alternative costs: 10,700,000 USD (IDA + GEF)

(g) Incremental cost: 1,500,000 USD (GEF)

II. Component 2: Investment Funds

(a) Baseline: This component aims at supporting the implementation of projects identified in the village and communal development plans while giving communities the opportunity to put into practice their strengthened capacities. The funds comprise: (a) a Village Investment Fund, which will target poor village communities and provide (ADCs) with capital input to implement their development plans, and (b) a Rural Communal Roads Fund, which will improve communities' access to rural roads.

(b) Expected scenario under the baseline scenario: the nature of investments and activities that will be supported through the local investment fund depends on the priorities identified in the village and communal development plans, and may range from activities to boost agriculture productivity, to off-farm income generating activities, to livestock health activities, to health and education activities, etc. As such, there is no guarantee that specific investments on environmental management are included.

(c) Baseline cost: 30,300,000 USD (IDA)

(d) GEF alternative scenario: A GEF component is sought to complement the project in areas of natural resource management that concern more than one village by providing investment capital, through the Local Investment Fund, for village communities to adopt sustainable resource management and conservation practices within a watershed area and at the inter-village community level. Particularly, the GEF component will support the development of a master plan for watershed management involving more than one community. Eligible activities would be detailed in the master plan and could include:

- (a) the research and development, demonstration and application of (1) new, innovative SLM technologies (e.g conservation agriculture technologies, tree-based technologies, upstream and river bank protection, etc.), (2) energy efficient technologies that reduce pressure on wood fuel harvesting (e.g., solar cooking stoves, solar electricity, biogas, etc.) at the watershed (regional or inter-village), and lower (village community) levels, and (3) establishment of upstream and river bank protection to minimize erosion and sediment transport in the watersheds, cattle routes/wells, pasture investments, inter-village forest management investments;
- (b) alternative income-generating activities (e.g. agro-forestry, nurseries, ecotourism, fishing, gum Arabic, medicinal plants); and
- (c) demonstrations of better management practices or mechanisms to strengthen traditional grazing management systems and systems to resolve livestock-agriculture conflicts such as installation of closures and boundaries for the protection of grazing areas and plantations.

(e) Expected local and global benefits under the GEF alternative: Local investments will be proposed by watershed associations (ABVs) in watershed community development plans (WCDPs) must be in harmony with the master plan for watershed management developed under the GEF component to be eligible for funding. Moreover, the project would not fund activities which are not linked to GEF objectives or provide direct or indirect benefits to the environment. Therefore, the proposed GEF alternative will contribute to the achievement of local and global environmental benefits as summarized in the table below.

<u>Activities</u>	<u>Direct impact</u>	<u>Local and global environmental benefits</u>
Research, development, demonstration and application of SLM technologies	<ul style="list-style-type: none"> ▪ Soil erosion by wind (in the Tengharada site) and water (in the Greiguel site) reduced/ soil and water conservation improved ▪ Surface crusting, soil compaction and declining soil fertility reduced ▪ Dune mechanic and biological fixation, particularly in the Tengharada basin, and between Ain Tengharada and Tod) ▪ Aquifer loss decreased ▪ Bank erosion, sedimentation, siltation reduced/ flow regimes regulated ▪ Natural vegetation rehabilitated 	<ul style="list-style-type: none"> ▪ Critical ecosystem' integrity, regulation functions and services (including microclimates, fauna and flora, areas of significance for migratory birds, etc.) preserved, restored and possibly improved ▪ Land degradation/ desertification reduced (and possibly halted and reversed) ▪ Freshwater ecosystem maintained and preserved through decreased bank erosion/ sedimentation/ siltation ▪ Frequency and incidence of dust storms decreased ▪ Productive capacity of land improved
Research, development, demonstration and application of energy efficient technologies that reduce pressure on wood fuel harvesting	<ul style="list-style-type: none"> ▪ Pressure on/ over-exploitation of forestry resources (particularly for fuelwood) reduced ▪ Use of manure for energy purposes decreased ▪ Workload burden on women due to fuelwood collection decreased 	<ul style="list-style-type: none"> ▪ Biodiversity loss reduced both because of reduced exploitation of natural resources and preservation of natural habitats; migration corridors maintained ▪ Forestry resources/ herbaceous or woody vegetation loss reduced (and possibly halted and reverted) ▪ Contribution to the improvement of carbon sequestration rates and to the reduction of GHG ▪ Degradation of soil quality reduced due to the increased availability of manure
Alternative income-generating activities	<ul style="list-style-type: none"> ▪ Pressure on/ over-exploitation of/ competition on natural resources (land, forestry, water, etc.) reduced 	<ul style="list-style-type: none"> ▪ Critical ecosystem' integrity, regulation functions and services (including microclimates, fauna and flora, areas of significance for migratory birds, etc.) preserved, restored and possibly improved ▪ Land degradation/ desertification reduced (and possibly halted and reversed)

		<ul style="list-style-type: none"> ▪ Biodiversity loss reduced both because of reduced exploitation of natural resources and preservation of natural habitats ▪ Contribution to the improvement of carbon sequestration rates and to the reduction of GHG ▪ Land-use conflicts reduced
Demonstrations of better management practices or mechanisms to strengthen traditional grazing management systems and systems to resolve livestock-agriculture conflicts	<ul style="list-style-type: none"> ▪ Grazing pressure on land and natural vegetation decreased 	<ul style="list-style-type: none"> ▪ Productive, pastoral and forestry functions of selected ecosystem preserved ▪ Soil/ forestry resources/ natural vegetation preserved ▪ Reduction of agriculture-livestock conflicts

(f) GEF Alternative costs: 33,800,000 USD (IDA + GEF)

(g) Beneficiary contribution: in-kind

(h) Incremental cost: 3,500,000 USD (GEF). The incremental cost will cover the costs for establishment and management of the fund, consultant services, training, recruitment of facilitators to train and assist the watershed associations in submitting investment proposals, and costs associated with acquisition of information, materials and equipment for the demonstration of new and innovative techniques in SLM and income-generating activities.

III. Component 3: Project Management and M&E

(a) Baseline: The CBRD will support general project management, coordination and M&E activities or both projects (CBRD and GEF component), and the development of a communication strategy. The M&E system will include poverty indicators.

(b) Expected scenario under the baseline scenario: The M&E system which would be established under the baseline scenario would not incorporate indicators and monitoring tools to assess ecosystem and land degradation processes. As a result, the M&E system would not allow a comprehensive understanding of the ecosystem dynamics and of the land degradation processes, thus preventing to effectively intervene in addressing this problem. The only environmental benefits may arise from the correct application of the Bank's environmental safeguards.

(c) Baseline cost: 4,100,000 USD (IDA)

GEF alternative scenario: The component will fund technical assistance associated with M&E, and the incremental operating costs associated with the execution of GEF activities or to assist in managing these activities. This component will focus on designing and implementing community and scientific M&E systems to monitor global and local environment indicators to assess their impact (desertification/ land degradation, carbon sequestration, biodiversity, international waters, climate change) in project areas, and on providing technical assistance associated with the M&E (e.g., scorecards, development of tools to assess land degradation costs and SLM benefits). The GEF component will focus on specific activities such as the development of community-based and scientific monitoring and evaluation system (with indicators than can be monitored

by communities, and scientific indicators on the other hand) for land degradation and watershed management assessment at the local and regional levels, and local and global environmental impact assessment.

(d) Expected local and global benefits under the GEF alternative: The establishment of a comprehensive M&E mechanism would allow a better understanding of the dynamics (root causes and processes) associated with land degradation, carbon sequestration, water resource management and biodiversity conservation. As a result, a reduction in land degradation is expected and consequent improvement in ecosystem functions, reduction in biodiversity loss, and protection of waterways.

<u>Activities</u>	<u>Direct impact</u>	<u>Local and global environmental benefits</u>
Technical assistance associated with the design and implementation of a M&E system to monitor local and global environment indicators	<ul style="list-style-type: none"> ▪ Better understanding of the underlying root causes, processes and dynamics associated with land degradation ▪ Environmental information system and environmental indicators 	<ul style="list-style-type: none"> ▪ Land degradation/ desertification reduced ▪ Ecosystem functions preserved and improved ▪ Aquatic ecosystems productivity and integrity sustained ▪ Biodiversity loss reduced

(e) GEF Alternative costs: 5,100,000 USD (IDA + GEF)

(f) Incremental cost: 1,000,000 USD (GEF). This incremental cost will specifically cover technical assistance, consultant services, studies and surveys, audits, trainings, study-tours and workshops associated with the development of NRM indicators and the implementation of the M&E tools to monitor NRM activities, and the incremental operating costs of additional personnel to technically assist to assist in managing GEF activities.

Incremental Cost Matrix

The incremental costs are calculated as the difference between the GEF alternative scenario and the CBRD baseline scenario. The results are reported in the matrix below. As most of the decisions, practices and technologies that the beneficiaries of the project will adopt cannot yet be determined, the analysis favors a qualitative approach.

Component	Category	Estimated Expenditures (US \$)	Local Benefit	Global Benefit
Capacity Building	Baseline	9,200,000	<ul style="list-style-type: none"> Capacity to design and implement development plans enhanced 	<ul style="list-style-type: none"> Possible, minor global environmental benefits may occur thanks to the design and implementation of development plans that include interventions in NRM
	With GEF Alternative	10,700,000	<ul style="list-style-type: none"> Local environmental benefits due to the adoption and replication of integrated watershed and landscape management Local environmental challenges due to expanded irrigated agriculture reduced through the integration of environmental concerns/ SLM approaches in the design and implementation of development plans Capacity for stakeholders to implement cross-sectoral approaches to land management increased Land-use conflicts reduced through a better land-use planning Rates of migration within and between regions reduced due to a better incentive system 	<p>Significant contribution to:</p> <ul style="list-style-type: none"> Reducing, and possibly halting and reversing land degradation and desertification Preserving, restoring and improving critical ecosystem' integrity, regulation functions and services (including oases microclimates, fauna and flora, areas of significance for migratory birds, etc.) Sustaining international aquatic ecosystem productivity and integrity (specifically the <i>Oued Greigel</i> and the <i>Oued Tengharada</i>)
	Incremental	1,500,000		

Investment Funds	Baseline	30,300,000	<ul style="list-style-type: none"> Local livelihoods supported and overall poverty reduced through the implementation of various income generation and other social activities Increased investments in local and regional infrastructures 	<ul style="list-style-type: none"> Possible sporadic, non-systematic activities addressing land degradation and other global environmental problems (in case environmental concerns are included in the VCDPs)
	With GEF Alternative	33,800,000	<ul style="list-style-type: none"> Land productivity improved Improved income flow and sustainability of local livelihoods ensured Vulnerability to natural hazards (particularly drought) decreased Water quality/ quantity for local use improved through restoration of degraded lands (resulting in decreased erosion rates and sediment flow into water bodies) Frequency and incidence of dust storms decreased Immediate options to address land degradation provided to communities Women role empowered Conflicts over resources/ agriculture-livestock conflicts reduced 	<ul style="list-style-type: none"> Land degradation (and specifically wind and water erosion) and desertification (through dune fixation) reduced, and possibly halted and reversed; Preserving, restoring and improving critical ecosystem' integrity, regulation functions and services (including oases microclimates, fauna and flora, areas of significance for migratory birds, etc.) Habitat fragmentation reduced/ Globally significant natural habitats and biodiversity conserved and sustained, including cattle migration corridors (e.g. towards Senegal and towards Guidimakha and Mali), threatened riparian plant species, etc. Deforestation rates decreased and reversed/ carbon sinks function improved and reduction of GHG (negotiable amount); Trans-boundary water resources of global value protected and maintained
	Incremental	3,500,000		

Project Management and Monitoring and Evaluation	Baseline	4,100,000	<ul style="list-style-type: none"> ▪ M&E system to monitor baseline activities established 	<ul style="list-style-type: none"> ▪ Limited knowledge of ecosystem dynamics and land degradation processes due to limited monitoring of ecosystem and land degradation processes ▪ Some global environmental benefits may arise from the application of the environmental safeguards
	With GEF Alternative	5,100,000	<ul style="list-style-type: none"> ▪ Establishment of a comprehensive mechanism for monitoring natural resources and land degradation processes and trends 	<p>Significant contribution to:</p> <ul style="list-style-type: none"> ▪ Reducing, halting and reversing land degradation and desertification ▪ Preserving, restoring and improving critical ecosystem' integrity, regulation functions and services (including microclimates, fauna and flora, areas of significance for migratory birds, etc.) ▪ Sustaining international aquatic ecosystem productivity and integrity <p>thanks to a better understanding of the underlying causes, processes and dynamics associated with land degradation</p>
	Incremental	1,000,000		
TOTAL	Baseline	43,600,000		
	With GEF Alternative	49,600,000		
	Incremental	6,000,000		

Annex 12: Technical Annex - Land Degradation

MAURITANIA: Community Based Watershed Management Project

1. Land degradation in Mauritania

Land degradation is a major concern in Mauritania and is an essential component of the National Environmental Action Plan (PANE), which is part of the Poverty Reduction Strategy Paper. Emphasis has been placed on land degradation since the 1970s, following the major droughts whose effects are still being felt because of demographic and pastoral pressures on the southern border zone of the country (and on the enclaves of productive areas forming the oases), where the agricultural, forest, and pastoral potential of the country come together. According to FAO estimates, the only source from which data can be obtained, [number missing] hectares of soil have been lost. This situation drastically compromises the integrity of the ecosystems, the sustainable ecological productivity of which is being reduced, while their original, rich biodiversity and regeneration capacity are diminishing. The main causes identified in the PAN, in the national preparatory studies, and at the pilot sites are presented in the table below:

Threats and consequences	Root causes	Measures currently being taken	Additional measures required
Loss of arable land			
- Reduction in yield, income, food security	<ul style="list-style-type: none"> - Drought - Lack of technical supervision - Lack of information, follow up, and distribution of available technologies - Increase in the size of the population - Lack of collective vision - Lack of long-term planning - Difficulty managing intercommunity areas 	<ul style="list-style-type: none"> - Operations to test measures in different projects (dune stabilization, tree planting, etc.) - Supervisory agents of the MDRE [<i>Ministre du développement rural et de l'environnement</i>/Ministry of Rural Development, Water and the Environment] present in the 12 <i>Wilayas</i> (provinces) of the country - Presence of active NGOs in the fight against desertification - Formulation of a local development plan at the ADC [community development associations] or village level 	<ul style="list-style-type: none"> - Enhancement of technical forums - Close supervision - Application of measures to combat degradation in a harmonized framework - Creation of a watershed association, watershed management plan - Establishment of NGOs - Involvement of traditional, local, and national authorities
Loss of pastureland			
- Increase in conflicts, greater competition for resources	<ul style="list-style-type: none"> - Inadequate tradition-based rules; - Lack of familiarity with and spotty application of the pastoral code - Spatial management difficulties; lack of recognition and participation of 	<ul style="list-style-type: none"> - Tradition-based rules - Adoption of the pastoral code - Delimitation of pastureland 	<ul style="list-style-type: none"> - Monitoring of inter-community pastureland by the communities - Watershed management plans - Dissemination and enforcement of the pastoral code

	communities; dearth of regulations and measures for managing intercommunity forums, especially with respect to foreigners		- Investment in farming systems
- Reduction in rearing potential; loss of jobs and financial resources; increase in food insecurity; migration to urban centers.	-Scant supervision - Poor veterinary care - Little investment for pastureland management	- Presence of certain projects in certain regions; mixed and often unsustainable results	- Familiarity with and application of the pastoral code at the community level
Loss of biodiversity			
- Disappearance of plant and animal species	- Uncontrolled hunting and fishing; little known regulations, limited personnel for monitoring - Disappearance or fragmentation of habitats due to land clearing - Reduction in water table - Uncontrolled deforestation - Poverty	- Hunting code	- Monitoring of natural resources by communities
- Disappearance and/or reduction in the supply of medicinal plants	-Lack of internal protection		- Establishing planting, gardens, and community protection measures
- Decrease in aerial pastureland	- Inappropriate removal techniques		- Dissemination of good practices
Loss of forest land			
- Reduction in the supply of firewood and timber	- Difficulty in accessing alternative technologies - Lack of supervision	- Distribution of improved stoves in certain regions - Local protection	- Improvement in access to alternative wood-based technologies - Recognition of community laws by the populations - Forestry management plan

Sources: 2002 PAN-LCD and 2005 on-site surveys

Mauritania's agro-pastoral and oases provide the ecosystems which serve as a primary source of water for the cattle populations, support agricultural and pastoral production, supply firewood and timber, supply crops, and also provide the habitat for flora and fauna.

In Mauritania, there are several types of soil degradation caused by wind erosion, water erosion, deterioration of chemical quality, deterioration of physical quality, biological degradation, and disappearance of the vegetative cover.

a) Wind-driven erosion

Mauritania is ecologically predisposed to this type of erosion because of its arid or desert climate, its violent winds, which are among the highest in the Sahara, the virtual absence of perennial plant cover, the presence of a sandstone substratum which, through the process of alteration creates large sand masses (ergs), denuded slopes (regs), and rocky plateaus (hamadas) with sand banks, all of which create an unstable setting for plant life.

Man-made factors such as the management of agro-sylvo-pastoral spaces (deforestation, overgrazing, etc.) facilitate this type of erosion. In fact, animal migration (small and large ruminants) from one region to another within the country, or towards Mali and Senegal, lead to further degradation of plant cover along the migration paths (migration corridors) and at the water supply points (wells, boreholes). The flattening of land by large herds of ruminants is also one of the main causes of land degradation, following the loss of structure of upper soil layers.

Wind erosion factors are well known: **mismanagement of natural resources, soil erodability, wind, the roughness coefficient, and geomorphology** in the relevant zones.

Mismanagement of natural resources is the most common cause of wind erosion in Mauritania and affects virtually all of the country's ecosystems. This is evident in:

- Overgrazing because of the migration of ruminants (cattle, camels, sheep, and goats) towards the rich pastureland, namely, the river valley and more specifically, the south of Gorgol (Adhf, Maghama zone), the Guidimaka, and the Hodhs.
- The felling of trees and uprooting of shrubs for wood and other domestic purposes. This phenomenon is very widespread in the Senegal River valley, where vast forest land has been cut down to meet various needs (charcoal, boundary control, etc.).
- Brush fires are often caused by man (unextinguished campfires, careless smokers, etc.).
- The loss of structure and crumbling of upper soil layers, as a result of flattening by animals and their reshuffling by the wind;
- Bad land tilling practices, especially the tilling or cover-cropping of clayey soil in dry conditions (case of irrigation schemes on the right bank of the Senegal River.)

Soil erodibility is proportionate to the sand content of soil. This factor is therefore fairly high in arid and sub-arid areas where the soil consists of large amounts of sand and silt. Consequently, sub-arid areas used for agro-pastoral purposes have a great deal of the reg or gravelly soil resulting from wind erosion of pastureland, which not long ago was both abundant and varied. This kind of landscape is common in Assaba, in the Hodhs, and, to a lesser extent, in the northern border zone of the Senegal River valley.

Soil roughness is determined by the extent of soil cover. For example, the wind drags sand particles at a speed five times higher when soil is bare compared to when it is covered.

With wind, speed and flows are factors. Mauritania has all kinds of wind flows – one-directional, bi-directional, and multi-directional. **The result is varying dunal formations which include the barchan dunes, linear dunes, transversal dunes, the Tamarix dunes, and the ripple dunes.**

b) Water-driven soil erosion

Water erosion is very significant in Mauritania owing to its quite hilly landscape, violent and torrential rains, and rich hydrographic network. The soil is very prone to rain-driven erosion. In the south of the country, areolar erosion caused by rain, and deep linear finger-shaped erosion [*doigts de gants par entrailles linéaires*] can be seen after heavy rainfall. According to the UNDP/FAO done study by SCET/AGRI, of one million hectares along the right bank of the Senegal River, one-third of dunal land is gullied or salty. This type of erosion is manifested in several ways – in groundwater, ravines, furrows, gulleys, or landslides, and affects virtually all the *wilayas*, particularly the hydraulic lines, land with steep inclines, and slopes. The regions of Assaba and Guidimaka are particularly hard hit by water erosion, as evidenced by:

- Rivulets taking the form of small furrows formed by water, particularly at the top of slopes, on the sides of roads, and in fields that have been plowed. Since expansion is created by the concentration of excessive surface runoff, these rivulets become ravines;
- Landscapes containing a great deal of surface pebbles and stones, located in pastoral and cultivated highlands, which are convex-shaped and have fairly steep slopes, once the finest soil particles have been removed by surface runoff.
- Furrows and ravines on non-dunal soil with a fairly compact ferruginous crust and ferruginous "beige" soil on convex-shaped, average-falling gradients with vegetative cover;
- Surface erosion of loamy-sandy soil, sometimes creates an exposed, hardened crust;
- Soil deposits on gentle slopes or gravel, sand, and silt in streambeds caused by upstream water erosion.

Water erosion is particularly serious in watersheds owing to their complexity and the density of micro-basins.

In Brakna (the area surrounding Barkla), and in the *wadi* areas, water erosion is having a significant impact and has even cut off access to some roads. Several watersheds can be seen at the Lebher site alongside small rivulets which empty, from upstream to downstream, in the Hasseï Sidi Ahmed *wadi*, the Oum Chdeïg *wadi*, and the Greïguel *wadi*.

c) Deterioration of the chemical properties in soil

Degradation of the chemical properties in soil may be the result of the salination or alkalization of the soil. This degradation may also be attributable to the leaching of the soil base and acidification, as well as by other forms on toxicity not linked to excessive salt or sodium. The reduction in the fertilizing elements absorbed by plants represents another form of degradation of the chemical properties in soil. This decline in fertilizing properties could also be caused by a succession of leachings, or by cultural practices which can be described as extractive, given that there is no compensation for the loss of nutritive elements linked to farming.

d) Deterioration of the physical quality of soil

Degradation linked to a deterioration of the physical quality of soil is evident in the loss of soil structure, soil crusting, silting, reduced permeability, and lower aeration, all factors that limit rooting. Physical degradation of soil may be attributable to several phenomena, among them, depletion of the organic matter in soil, formation of impermeable plough soil, compacting as soil is flattened by fairly sedentary herds, etc. Degradation can also be caused by waterlogged soil, which leads to hydromorphy.

e) Biological degradation of soil

Biological degradation of soil is reflected in a decline in microbiological activity in the upper layers of the soil. This imbalance in microbiological activity in the soil is attributable to deforestation, brush fires, overgrazing, excessive use of chemical fertilizers, etc. Naturally, the result is a considerable decrease in the productivity of agricultural land.

f) Disappearance of the vegetative cover/desertification

Insofar as soil degradation in Mauritania is concerned, the desertification problem is the most acute, given that this process is occurring at a rapid rate virtually everywhere in the country. The Senegal River valley is the only area where the vegetative cover is still adequate; however, it too is gradually deteriorating because of poor land management.

Studies conducted on pilot sites indicate that the soil is depleted, resulting in lower yield as a result of the loss of soil nutrients. This has prompted the migration of farming to the central *wadi* (Assaba region), which in turn has exacerbated erosion. No comprehensive measures have been taken to address the situation. In the oasis regions studied, soil degradation has led to a diminished capacity for replenishment of the watertable and to salinization of the soil, resulting in a decrease in irrigated crops. The lowering of the watertable has led to the loss of date palm trees, an important source of revenue and food security in these regions, resulting in the exodus of one segment of the population.

Observation of the land and the information provided by the population concerned show that forest resources are scant and are exploited in an uncontrolled manner, without the use of cutting and removal techniques that are compatible with long-term management.

The populations living in the areas studied can readily point to the disappearance of vegetable or animal species; primarily due to the loss of their habitat and to uncontrolled exploitation.

2. Current measures

In view of the desertification problems, the Government of the Islamic Republic of Mauritania has implemented several long-term measures, among them:

Institutional and legal measures: the country acceded to the International Convention to Combat Desertification in 1997 and launched its National Desertification Action Plan [PAN-LCD] in 2002. This program is an integral part of the National Environmental Action Plan (PANE) which is in turn part of the National Poverty Reduction Program. Various laws have been adopted such as the pastoral code and the environmental law, as well as the hunting and fisheries code. Implementing regulations to these laws have not yet been prepared, and the population as a whole is not aware of them all. The Government is also in the process of establishing decentralization mechanisms; however, the role of communities has not yet been well defined in terms of the management of natural resources at the local level.

Plans are under way for the establishment of a national environmental fund to permit communities to obtain resources for their initiatives to combat soil degradation. Several projects also provide financial resources to communities; however, it is not certain that these communities have the capacity to submit clearly articulated and functional programs to combat soil degradation effectively.

At the national level, MDRE technicians are available to communities in the 12 *wilayas*; however, these technicians lack the financial resources and training to provide support for community initiatives. A number of NGOs have acquired expertise in implementing programs to combat desertification.

Technical measures: Through projects realized in the past, Mauritania has acquired expertise in a number of technological areas. For example, the PLEMVASP [*Projet de Lutte contre l'Enselement/sand dune protection project*] has successfully tested several anti-erosion techniques; the dune stabilization technique has been fairly well mastered by government technicians and has facilitated the protection of a number of infrastructures and towns.

Several dikes and dams have been built for purposes of soil and water retention; however, a significant portion of this work has been stopped as a result of ruptures caused by flooding upstream, which, increasingly, has been attracting the attention of the Office of Rural Development Planning [*Direction des Aménagements Rural*], which is focused on watershed approaches that take entire watercourses into account.

Local measures: In villages, the populations in pilot sites (agro-pastoral and desert areas) have tried a number of anti-erosion techniques such as brushwood barriers, construction of slowdown barriers, and retaining reservoirs. However, it must be acknowledged that these solutions have not been as successful as expected, owing to a lack of comprehensive vision, technical expertise, continuity, and follow up.

Populations have also conducted small-scale experiments involving the protection of pastoral and forestry reserves; however, in addition to pressure exerted by outsiders, these initiatives are not sufficiently wide in scope.

Inter-village cooperation systems are in place; however, they have not been mobilized to address common ecological problems.

3. Alternative solutions envisioned

Based on an analysis of the situation, a comprehensive approach seems to be most appropriate. Such an approach should cover a broader swath of territory extending beyond villages and including inter-village areas, thus leading to a long-term vision that mobilizes and assigns accountability to communities. This in turn will help solve development problems and expand access by populations to technology, and, in so doing, will bring to the fore the economic dimension of soil protection and the environment in general.

Appropriateness of a watershed approach

The watershed approach applies to a specific geographical unit, the boundaries of which are established by a separating line. Running through this unit is a body of water or principal *wadi*, which empties into the affluent of another bigger body of water. From a management standpoint, the watershed can be sub-divided into smaller sub-units, thereby making them easier to manage. This territory usually does not fall within administrative boundaries; the territory

covered by the watershed can cut through several departments and communes, and even part of a village. The *wadi* basin is, however, clearly recognized by the communities living in those areas.

Following the lessons learned on this subject and observations made during preparatory studies, the establishment of a program to combat soil degradation through a watershed approach in order to reestablish and maintain the functions of ecosystems, is based on the following principles:

- Involvement and participation of communities;
- Planning covering a geographical area wider than villages;
- Giving due consideration to local traditional knowledge;
- Supporting economic and ecological investments;
- Strengthening technical capacity at the local, regional, and national levels;
- Providing information and building awareness at the community level;
- Providing technical support, follow up, and overseeing the work of communities;
- Integrating approaches tested at the national level.

At the local level, the methodology envisioned is based on the following steps:

1. Choosing sites and building awareness at the community level

During the pilot phase, two typical watersheds were identified. Testing of this approach was started, using the following criteria: i) the watersheds had to be representative of the Mauritanian ecosystem; ii) a development project capable of financing the basic needs of the communities had to be in place; iii) signs of degradation had to be evident; and iv) the watershed had to be adequately populated. Basic studies identify approximately thirty other watersheds to which this approach can be expanded in agro-pastoral and desert areas; however, studies and closer cooperation in agro-pastoral zones are necessary in the case of each potential intervention. The intervention unit could be a subdivision or offshoot of the watershed or, for drier ecosystems, the agro-pastoral area.

The process will begin with consultations and exchanges between the technicians responsible for oversight and the communities regarding their perceptions of soil degradation problems in the case of those communities whose input has been requested on deeply-rooted causes as well as solutions that have already been tried at the local level. If the communities are willing and a consensus is obtained, the process can then begin.

2. Inventory and studies of the ecosystems considered

Initially, basic studies will be carried out with a view to obtaining a better understanding of the social and bio-physical setting. These studies will be carried out, insofar as possible, with the participation of the communities, thereby combining scientific knowledge and local know-how. Feedback on the main elements will be provided to the communities at the time of preparation of the management plan. On this basis, planners will submit proposals. Studies will cover all aspects of watersheds that are useful from a management standpoint, namely, the biophysical setting (hydrology, pedology, fauna, and flora), the human setting (composition of the populations, economic activities - agriculture, livestock rearing, commerce), roles and responsibilities, practices regarding the use and management of natural resources, priorities of the communities, role of marginalized groups, etc., and will be carried out by various providers (NGOs, local consultants, and consulting firms).

3. Establishment of an inter-community management structure

Studies and consultations will shed light of the current social structure of watershed communities and their views on the most effective means of community organization for them, so that they can assume responsibility for watershed management. During this phase, the communities will be assisted and supervised so that they can clearly understand their roles and responsibilities within this new entity and establish its operating rules (statutes, rules of procedure), so that their group can be recognized by local and national authorities, and additional training needs of the main officials can be determined. This new entity will need to provide adequate communication mechanisms, management capacity, and the investment necessary. This entity can be different from on-site organizations that have already been established.

4. Preparation and negotiation with the communities of a watershed management plan

Following the identification of the main obstacles to be removed and of the priorities needs of communities, an initial management proposal will be prepared and negotiated with the community management entity. This proposal should contain natural resource governance measures (local management rules to be established), community and inter-community investment proposals, economic measures (revenue-generating activities for the communities), as well as an ordering of priorities, which will be reflected in yearly or multi-year planning. This plan will serve as the reference document on which an agreement was reached by consensus between the communities themselves and the authorities. It will provide a long-term vision of the future of the watershed, as well as the roles and responsibilities of each stakeholder.

A positive list of acceptable investments can serve as a guide for community proposals. However, it would be better for actual initiatives to come from the populations. There will be technical and/or financial participation by communities in investments (counterpart).

A subsequent exercise will be to ensure that community and inter-community management proposals are included in the local development plans of communities or ADCs.

5. Establishment of structural investments

Investments will be established on the basis of CBRD (rural community development project) procedures for the identification and selection of providers, follow up, and evaluation. Communities and community organizations will receive training in this area, using CBRD resources or, in the case of inter-community activities beyond the scope of the CBRD, CBWM resources. Demonstrations will be designed to encourage the use of technological innovations.

6. Training of stakeholders

The management plan will identify certain types of training to be provided to communities and technicians at the local and national levels, and NGOs. It will be aimed at enhancing the skills of communities and the new entity in the areas of planning/follow up and evaluation, administrative and financial management of investments, and in a number of technical areas (anti-erosion techniques, management of forestry resources, management of fisheries resources, etc.).

Study trips will also be needed in some communities so that useful lessons can be learned from other projects.

Technical demonstrations are planned in order to increase the technological opportunities available to communities. Follow up related to these demonstrations will be carried out by national research officials.

7. Participatory follow up and evaluation

Communities and their community organizations will be assisted by CBRD technicians who will do follow work up and will receive training in this area. Communities may also be assisted by specialized NGOs, after evaluation of the scope of the work needed. Follow up will take place mainly on two levels:

- at the level of implementation of the management plan: indicators and regular inter-community meetings.
- at the investment level: this follow up will take place through the CBRD-established entities.

8. Integration at the national level of the practical methodology developed

In practice, integration of the watershed approach means that laws, particularly those pertaining to decentralization, must be favorable, that the main technicians involved (local and national MDRE agents) should master the concept, and that appropriate financial resources should be earmarked in the national budget and in desertification-related programs and projects. To that end, plans should be made for activities aimed at:

- Disseminating information and building awareness at the national level through articles, radio and television broadcasts, and instructional materials;
- Including specific programs in government negotiations with donors, at round tables, and consultations related to other projects;
- Training a critical mass of civil society stakeholders (NGOs and consulting firms) so that they can acquire knowledge related to the procedure.

List of threatened species (IUCN Red List, 2004)

Species no longer found in ADRAR:

	Scientific	Species	Popular name
1	Addax nasomaculus	Addax	Werque
2	Oryxdana	Oryxalgazelle	Lemha
3	Damaliscus Korrigum	Damalique	Erikmin
4	Syncerus coffer	Bufte	Ejernoul
5	Panthera jardus	Panthere	
6	Panthera leo	Lims	Sbâo
7	Arinonya jubatus	Guyard	El vihid
8	Strutrocornelis	Autriche	Nagme

Source: CBWM bio-physical study, July 2005

Annex 13: STAP Roster Review
MAURITANIA: Community Based Watershed Management Project

Reviewer: William Critchley
Vrije Universiteit Amsterdam
(November 3, 2005)

PREAMBLE

This GEF Scientific and Technical Advisory Panel (STAP) review of the Community-Based Watershed Management Project (CBWM) in Mauritania follows the standard terms of reference (TOR) relating to such exercises. The thirteen issues in the TOR are covered, including the eight sub-questions under the first issue. There is also a general comment section. The basic documents presented for review were (drafts of) the Project Appraisal Document (PAD) dated 25 Oct 2005, the Technical Annex, and the Incremental Cost Analysis. These were supplemented by the PAD of the base project (Community-Based Rural Development Project: CBRD), the original concept note of CBWM, and a consultant's project preparation report dated May 2005.

GENERAL COMMENTS

The draft PAD is at an advanced stage. With some revisions and additions, the PAD sets out a case for a project (CBWM) which is innovative, imaginative, and one that this reviewer can recommend to the GEF for support. The core of the project is sustainable land management (SLM) which is the theme of the OP 15 funding window of GEF. The innovative aspect is the addition of value to a base project (CBRD)⁹ by stimulating the establishment of watershed associations (ABV), and then supplying them with funds to finance their own work plans¹⁰ (subject to compliance with the 'master plan'¹¹ for the watersheds). These 'inter-communal areas' between villages where common property resources are located, are indeed often underplayed by resource conservation/ livelihood projects, and are serious land degradation liabilities. A viable but flexible model could indeed be the outcome of the project. It is further gratifying to see the attention given to poverty and disadvantaged members of society. The project is MDG compliant. It is, furthermore, demand driven, having been set up specifically at the behest of the host government.

The PAD follows a GEF path, emphasizing the global implications of combating land degradation in a particular problem area – the drought and degradation-prone strip of land along the Senegal river, where oases are important and both wind and water erosion serious. This is a very specific zone, and while limited in area, strategically important in global terms, and there will potentially be lessons applicable to many other countries. However the connection to climate change through carbon sequestration and potential impact on biodiversity¹², and specifically agrobiodiversity are underplayed. Nor is there explicit (any?) mention of ecosystem function.

⁹ Curious that one acronym should have a 'P' (signifying project) and the other, not.

¹⁰ It would be logical and helpful if both the associations (the village level ADCs and watershed level ABVs) and their respective work plans (VCD plans and WCD plans) had matching French and English acronyms. Currently the former are French and the latter English.

¹¹ An unfortunate term that should be replaced by something like 'framework plan'

¹² 20 endangered spp. in the concept note becomes 30 in the PAD, and there are merely 8 named in the Technical Annex. All appear to be macrofauna: mammals and birds. Many other, less visible, fauna and flora will surely be impacted upon.

There clearly is potential global environmental significance in terms of both biodiversity and carbon storage. This requires more prominently highlighting in the PAD.

SPECIFIC ISSUES REVIEWED

Scientific and Technical Soundness

Will the approach achieve objective of addressing land degradation?

The land degradation problems of the zone in question are well articulated in the technical annex – though more qualitatively than quantitatively. The SLM interventions outlined are conventional and broadly appropriate, though there ought to be some room left open for spontaneous community initiative and innovation. The objective of addressing land degradation should be achievable if implementation goes ahead according to plan, and is begun early enough in the (relatively short) project lifespan, and is continued throughout. The four year span is however effectively lengthened somewhat by CBWM's two year lag behind the base project.

Risks and constraints associated with project?

There are a number of risks associated with this project, but this is to be expected with such an imaginative approach. The first, and most important, is the assumption that communities/ groups of villages within a watershed will be agreeable to set up associations that will jointly assemble work plans, manage funds well, and come together in implementation. This will require skilful facilitation, support and mediation. But this will also be helped by the fact that there has been previous experience with such approaches elsewhere in the world. It is also explicit in the PAD that the concepts behind the project have been significantly influenced through a participatory design process.

Gaps?

As was pointed out in the introduction there is little attention in the document given to carbon sequestration or biodiversity, ecosystem function or hydrology. Missing from the PAD – though present in the concept note - is mention of monitoring and evaluation (M&E) indicators of biodiversity and carbon sequestered. That is an omission that should be rectified. The PAD also doesn't make it clear how large these watersheds/ areas of intervention are, and how many families will be involved. As has been mentioned already, there should be a window left open for identification of local, innovative forms of either (a) social organisation or (2) technical interventions. 'Small-scale experiments' are noted to have occurred, but that is the only reference to such initiatives.

Controversial aspects?

None evident.

Aspects requiring extra research?

As long as the monitoring and evaluation set-up makes a concerted effort to track what occurs – in technical, financial and social terms – then the supporting research base is adequate. This M&E will be particularly important to provide supporting evidence in terms of global credibility and relevance.

How will model of sustainable use be developed? How effective will it be?

While the ‘master plan’ for watershed development will act as the overall framework, the work plans for each watershed association will be negotiated and developed. If proved successful, these will constitute models of genuine sustainable use. From the arguments presented in the PAD and annexes, it is anticipated that at least some successful basic models will emerge.

Sufficient evidence that project offers best long-term solutions?

There is every reason to be confident that this mixture of a strong participatory base to decision making together with a basket of technical remedies and self-imposed governance regulations should indeed offer the best solutions –at least in the short term and with committed support from outside (it is noted that the Government seeks to establish a national environment fund), then in the longer term too.

Global environmental benefits

Sustainable land management in terms of common property resources is the focus of CBWM. SLM in turn is at the heart of ecosystem function with its positive impacts on biodiversity above and below ground, and carbon sequestration. The latter, carbon sequestration, addresses climate change. International waters are also addressed. There are no drawbacks envisaged.

Project’s context within GEF goals

CBWM fits comfortably within the GEF context. Its focus on natural resource management in an area with severe problems of water and wind erosion, poor arable and livestock related land management practices and resultant land degradation - and thus relevance to OP 15 - is clear. There is also a strong connection with OP 12 through the proposed better management of common grazing and other forms of land use, including wooded areas, and thus an integrated ecosystem approach. Beside these technical aspects, CBWM is founded in the common aspirations of stakeholders, both local and the national level. It exudes a strong flavor of demand-drivenness and participatory involvement in planning and activities.

Importance of the area of intervention from a conservation perspective

The zone of implementation is certainly important in national terms, and as has been pointed out already, such *relatively* well-endowed areas with better rainfall, oases and infrastructure are critical to Sahelian and other desert-dominated countries like Mauritania. There are specific land degradation problems here: especially wind erosion and riparian zone degradation. At a lower level, it is the common property/ between-village focus of the project that is crucial – rather than the actual hydrological watershed that tends to be highlighted in the documents. Nevertheless it should be noted that the ‘selected ecosystems’ are not defined, and the five pilot sites not identified in the document.

Scope for replication of the project

Potential replicability is a strength of CBWM, and it is one of the justifications for the project in the first place. As noted already, it could be relevant in a number of countries with similar problems. Being founded on participatory methodology and a flexible, responsive funding arrangement for the new composite groups, it is the broad approach that will be replicable rather than any particular technical (or institutional) prescription. Naturally there is a cost implication in this concept of replicability – it can’t easily spread spontaneously - and in this context the proposed national environment fund (and other potential future sources of funding) will be

critical determinants of replication. In terms of replication outside Mauritania, it is not apparent what mechanisms will be used in this context, or which immediate neighbours will share an interest.

Potential for continuation of changes the project aims to achieve

Most of the comments in 3.5 are relevant to this question also. Some of the interventions will be self-maintaining if they yield production benefits quickly. Probably most technical interventions, in such a dry area on the inter-community lands will need continued maintenance funding until proven, and fully appreciated by the associations. On the organisational front, the viability of the watershed associations (the ABVs) will be critical. One question that needs answering is: what will be the legal status of the ABVs? Will they be answerable to the communes under which they fall? Certainly the PAD appreciates that an enabling legislative environment is necessary to help pull (rather than push) the process forward.

Consistency of project design with operational strategies of other focal areas.

The focus on SLM implies that biodiversity and climate change are addressed, as already noted. The direct relevance of this project to integrated ecosystem management is also self-evident. It is hard to envisage any negative impacts.

Linkage to other programs/ action plans

A large number of other programs and action plans have connections with CBWM and this is explicit in the PAD. The most obvious is the association with the base or 'mother' project, the IDA-financed CBRD. CBWM is designed to fill gaps within that larger project, and there will certainly be synergies. A list is given of Mauritania's national priorities, policies and strategies, which mesh well with CBWM. For example there is a good fit with the National Desertification Action Plan which is part of the National Environmental Action Plan - which in turn falls under the Poverty Reduction Strategy Policy. Annex Two of the PAD lists five World Bank supported projects that are related, and ten supported by other agencies that are related also. At a continental level NEPAD's thematic area # 01 is supported – though this is not made explicit in the PAD.

Mechanisms for participation and influence on management of the project

The project design has been participatory, at various levels, as well as the original idea being demand-led by the Government of Mauritania. During the project's implementation the watershed associations will be involved in (indeed responsible for) the development of work plans. Throughout CBWM there is a participatory theme, but of course putting this into practice will depend on multiple factors, including awareness raising and appropriate training – both of which are features of the project.

Other beneficial or possible damaging environmental effects

The PAD doesn't specifically mention (or highlight) hydrological benefits that may occur from improved ecosystem function. It is unlikely that there could be any damaging environmental effects.

Capacity building

CBWM will benefit from the already trained and experienced staff of the immediate forerunner project, and presumably from CBRD scientists and facilitators also. There is an overview of the

planned capacity building for CBWM in the Incremental Cost Analysis. Training/ capacity building will be a strong component of the project, and will be provided at various levels, to communities, as well as to research and extension cadres. It could be made clearer how the existing knowledge and creativity of the watershed communities can be developed and tapped into.

Innovativeness of the project

CBWM is certainly an innovative project. There are three main aspects that immediately step forward. The first is the way that the project seeks to establish associations that are responsible for their common resources, the design of their own work plans, and then provided with funds on a response-to-need basis, rather than fixed allocations for specific purposes. The second is the participatory monitoring and evaluation systems to be established, which will give feedback on the community's perception of environmental and production benefits – as well as helping to empower the communities. The third is the way in which the project will seek innovative future options for sustainable funding including environmental funds, carbon markets and bio-carbon funds.

Potential for impact based on lessons and best practices from other projects

The PAD and other supporting documents make it very clear that CBWM is not being created in a vacuum. There are comprehensive lessons learnt from previous World Bank supported, and other projects within Mauritania, as well as experience from elsewhere – as far as East Asia (but nevertheless relevant in principle) that lend credence to the probability of technical impact based on this participatory, community based watershed management approach.

Annex 14: Project Preparation and Supervision
MAURITANIA: Community Based Watershed Management Project

	Planned	Actual
PCN review	November 15, 2004	November 16, 2004
Initial PID to PIC	March 9, 2004	March 8, 2005
Initial ISDS to PIC	February 25, 2005	February 15, 2005
Appraisal	January 31, 2005	March 3, 2006
Negotiations	February 20, 2006	April 20, 2006
Board/RVP approval	April 25, 2006	June 15, 2006
Planned date of effectiveness	July 26, 2006	September 15, 2006
Planned date of mid-term review	June 16, 2008	March 2009
Planned closing date	September 30, 2011	

Key institutions responsible for preparation of the project:

Community-Based Rural Development preparation unit (CBRD), Ministry of Rural Development and Environment (MDRE)

Bank staff and consultants who worked on the project included:

Name	Title	Unit
Lucie Tran	Operations Officer (TTL)	AFTS4
Ismael Ouedraogo	Sr. Agricultural Economist	AFTS4
Amadou Oumar Ba	Sr. Agricultural Specialist	AFTS4
Yves-Coffi Prudencio	Sr. Agriculturalist	AFTS2
El Hadj Adama Toure	Sr. Agricultural Economist	AFTS4
Salamata Bal	Social Development Specialist	AFTS4
Helene Bertaud	Senior Counsel	LEGAF
Sossena Tassew	Language Program Assistant	AFTS4
Nestor Coffi	Financial Management Specialist	AFTFM
Moustapha Ould El Bechir	Procurement Specialist	AFTPC
Renee Desclaux	Finance Officer	LOAG2
Yahya Ould Aly Jean	Disbursement Assistant	AFMMR
Batouly Dieng	Team Assistant	AFMMR
Amadou Konare	Safeguard Specialist	AFTS1
William Critchley	Coordinator, Resource Development Unit, CIS-Centre for International Cooperation	Consultant
Matteo Machisio	Consultant	Consultant
Franz Schorosh	Consultant	FAO

Bank funds expended to date on project preparation:

1. Bank resources: US\$119,235
2. Trust funds: n.a.
3. Total: US\$119,235

Estimated Approval and Supervision costs:

1. Remaining costs to approval: US\$6,000
2. Estimated annual supervision cost: US\$65,000

Annex 15: Documents in the Project File
MAURITANIA: Community Based Watershed Management Project

« Analyse économique et financière des micro-réalisations génératrices de revenus prévues dans le cadre du PACBV en Mauritanie », Rapport de Mission, Nicola Gergely, Mars 2006.

« Caractérisation de la Dégradation des Sols en Mauritanie », Diop Aliou, Octobre 2005.

« Etude Relative à l'Analyse Politique, Juridique et Institutionnelle », Dr. Aly Fall, Octobre 2005.

« Etude Biophysique des Sous Bassins Versants de l'Oued Greiguel (Assaba), et l'Oued Tengharada (Adrar) », Kane Nalla, Juillet 2005.

« Evaluation Sociale et Economique des Bassins Versants de Goussa (Assaba) et Ain Tengharada (Adrar), Da Ould Khour, Juillet 2005.

« Rapport National sur la Mise en Œuvre de la CCD en Mauritanie », Ministère du Développement Rural et de l'Environnement, Direction de l'Environnement, République Islamique de Mauritanie, Janvier 2005.

Project Cost Tables (COSTAB).

Annex 16: Statement of Loans and Credits
MAURITANIA: Community Based Watershed Management Project

Project ID	FY	Purpose	Original Amount in US\$ Millions				Cancel.	Undisb.	Difference between expected and actual disbursements	
			IBRD	IDA	SF	GEF			Orig.	Frm. Rev'd
P088828	2005	MR: Integr. Dev. Prog. for Irr. Agric - APL2	0.00	39.00	0.00	0.00	0.00	39.00	0.00	0.00
P087180	2005	MR Higher Education	0.00	15.00	0.00	0.00	0.00	15.52	2.27	0.00
P081368	2004	MR: Community-Based Rural Development	0.00	45.00	0.00	0.00	0.00	41.84	0.70	0.00
P078383	2004	MR 2nd MINING SECTOR TA PROJECT	0.00	18.00	0.00	0.00	0.00	17.49	1.64	0.00
P078368	2004	HIV/AIDS Multisector Control	0.00	0.00	0.00	0.00	0.00	17.85	-1.26	0.00
P071881	2002	MR Global Dist. Learning Center	0.00	3.30	0.00	0.00	0.00	1.71	1.01	0.42
P071308	2002	MR-Edu Sec Dev APL (FY02)	0.00	49.20	0.00	0.00	0.00	39.18	17.97	0.00
P069095	2002	MR Urban Development Program	0.00	70.00	0.00	0.00	0.00	61.19	31.53	0.00
P066345	2000	MR EGY/WATER/SANITATION SECTOR REFORM TA	0.00	9.90	0.00	0.00	0.00	2.75	5.69	0.00
P044711	2000	MR INTEG DEV PROG FOR IRRIGATED AGRIC	0.00	38.10	0.00	0.00	0.00	2.42	1.86	0.00
Total:			0.00	287.50	0.00	0.00	0.00	238.95	61.41	0.42

MAURITANIA
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

FY Approval	Company	Committed IFC				Disbursed IFC			
		Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
2000/04	GBM	5.00	0.00	5.00	0.00	5.00	0.00	5.00	0.00
	PAL-Tiviski	0.46	0.00	0.00	0.00	0.46	0.00	0.00	0.00
Total portfolio:		5.46	0.00	5.00	0.00	5.46	0.00	5.00	0.00

FY Approval	Company	Approvals Pending Commitment			
		Loan	Equity	Quasi	Partic.
	Total pending committment:	0.00	0.00	0.00	0.00

Annex 17: Country at a Glance

MAURITANIA: Community Based Watershed Management Project

Mauritania at a glance

4/7/06

POVERTY and SOCIAL

2004

Population, mid-year (<i>millions</i>)	Mauritania	Sub-Saharan Africa	Low-income
	2.7	719	2,338
GNI per capita (<i>Atlas method, US\$</i>)	570	600	510
GNI (<i>Atlas method, US\$ billions</i>)	1.6	432	1,184

Average annual growth, 1998-04

Population (%)	Mauritania	Sub-Saharan Africa	Low-income
	2.4	2.2	1.8
Labor force (%)	3.2	1.0	2.1

Most recent estimate (latest year available, 1998-04)

Poverty (% of population below national poverty line)	46	..	..
Urban population (% of total population)	62	37	31
Life expectancy at birth (<i>years</i>)	54	46	58
Infant mortality (<i>per 1,000 live births</i>)	87	101	79
Child malnutrition (% of children under 5)	30	..	44
Access to an improved water source (% of population)	35	58	75
Literacy (% of population age 15+)	41	65	61
Gross primary enrollment (% of school-age population)	89	95	94
Male	89	102	101
Female	85	88	88

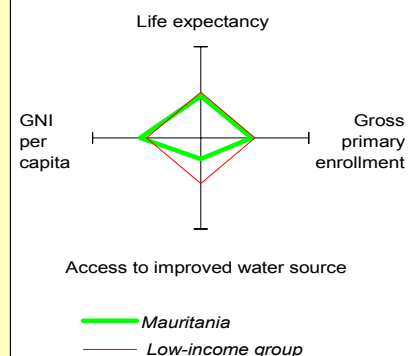
KEY ECONOMIC RATIOS and LONG-TERM TRENDS

	1984	1994	2003	2004
GDP (<i>US\$ billions</i>)	0.83	1.0	1.3	1.5
Gross capital formation/GDP	21.3	20.7	19.5	21.5
Exports of goods and services/GDP	39.7	42.0	26.8	29.4
Gross domestic savings/GDP	-2.7	16.9	21.3	25.4
Gross national savings/GDP	..	21.2	5.4	19.4
Current account balance/GDP	-26.1	-3.6	-18.0	-35.6
Interest payments/GDP	4.3	7.0	1.1	0.9
Total debt/GDP	158.5	216.5	133.8	123.3
Total debt service/exports	20.1	22.2	26.8	21.0
Present value of debt/GDP	..	..	46.5	41.1
Present value of debt/exports	..	..	131.3	104.6

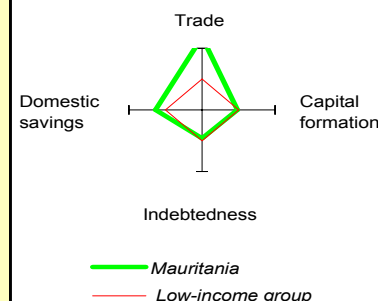
(average annual growth)

	1984-94	1994-04	2003	2004	2004-08
GDP	2.2	4.8	6.4	6.9	11.8
GDP per capita	0.0	2.3	3.8	4.3	9.2
Exports of goods and services	-2.1	-3.1	-9.5	8.5	53.9

Development diamond*



Economic ratios*



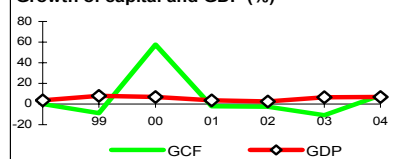
STRUCTURE of the ECONOMY

(% of GDP)	1984	1994	2003	2004
Agriculture	28.6	27.0	20.0	18.3
Industry	25.4	31.1	30.4	33.6
Manufacturing	..	11.6	10.2	10.1
Services	46.0	41.9	49.6	48.1
Household final consumption expenditure	75.6	66.6	63.0	59.7
General gov't final consumption expenditure	27.1	16.5	15.7	14.9
Imports of goods and services	63.7	45.8	63.9	69.7

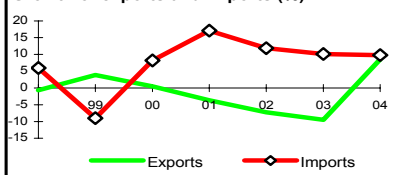
(average annual growth)

	1984-94	1994-04	2003	2004
Agriculture	3.3	1.3	6.0	-2.7
Industry	2.8	2.5	5.6	5.6
Manufacturing	0.0	-6.5	6.8	6.3
Services	3.5	7.9	6.6	10.5
Household final consumption expenditure	4.2	4.9	22.2	7.0
General gov't final consumption expenditure	-3.2	7.2	3.8	8.4
Gross capital formation	-4.2	8.5	-10.8	8.3
Imports of goods and services	-5.2	4.7	10.1	9.8

Growth of capital and GDP (%)



Growth of exports and imports (%)



Note: 2004 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

Annex 18: Maps
MAURITANIA: Community Based Watershed Management Project

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