

**PROJECT INFORMATION DOCUMENT (PID)
APPRAISAL STAGE**

Report No.: **AB2145**

Project Name	Senegal River Basin Multi-purpose Water Resources Development Project
Region	AFRICA
Sector	Power (40%);General water, sanitation and flood protection sector (40%);Central government administration (20%)
Project ID	P093826
Borrower(s)	Guinea, Mali, Mauritania and Senegal
Implementing Agency	OMVS
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Environment Category	<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD
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1. Country and Sector Background

Regional context and key development issues. The four riparian countries of the Senegal River Basin (SRB) - Guinea, Mali, Mauritania, and Senegal - rank amongst the twenty-five poorest countries in the World¹. The total riparian population is estimated at 35 million inhabitants, of which 12 million live in the Basin. The population growth rate is estimated at 2.7% and the population is expected to double every 25 years. The Basin's hydropower potential is estimated at 1,200 MW, but less than 25% is currently exploited. Similarly the potential irrigable lands are estimated between 320,000 ha and 375,000 ha, of which less than 32% are currently developed. Increased water storage and infrastructure coupled with multipurpose water resources development and management are therefore crucial to address the growing demand for water and food, and to ensure sustainable growth and the welfare of the people living in the basin. Furthermore, waterborne diseases associated with large infrastructure, namely Schistosomiasis and Malaria have steadily increased thus negatively affecting the basin's population health and economic productivity. Malaria and Schistosomiasis control intervention coverage in the 4 riparian countries and in the River Basin is among the lowest in the world.

¹ UNDP Human Development Report, 2004, UNDP Human Development Index

The Senegal River Basin Organization (OMVS) was established in 1972 with the mandate of securing countries' economies and reducing the vulnerability of peoples' livelihoods through water resources and energy development. Since the mid-1980s, OMVS has pursued a progressive yet cautious approach towards multipurpose water resources development as witnessed by the lengthy completion of the multipurpose Manantali and Diama dams. An inclusive framework has been developed and preliminary studies within it have laid out a joint development program for the Basin. The Inclusive Framework provides for the full involvement of Guinea for the sustainable development of the basin. As unilateral actions in the Basin will inevitably place further strain on the limited water resources, all the riparians recognize that an inclusive framework is the optimal solution. By joining OMVS, through this inclusive framework, Guinea is to be fully involved in OMVS' decision making process and also realize tangible benefits from the joint management of the basin resources.

OMVS' vision for regional cooperation. The achievements of OMVS have been further encouraged by the Nouakchott Declaration of May 2003 which sets the new strategic orientation for development of the Senegal River Basin. Building upon the outcomes of the inclusive framework, OMVS' vision is to implement a joint development program of the Basin that reinforces regional integration; yields benefits and sustains growth among the four riparian countries. This includes: (i) development of multipurpose water resources infrastructure to increase water availability and hydropower generation; (ii) increasing income-generating activities at the local level to alleviate rural poverty in the basin; (iii) implementation of the regional health plan and its correlated activities; (iv) modernization of the Basin institutions within the context of the inclusive framework; (v) implementation of the water charter principles with the improvement of the basin management and planning tools and (vi) implementation of the regional infrastructure program. These perspectives align with the New Partnership for Africa's Development (NEPAD) program, in particular the infrastructure window.

Progress in Implementing the Inclusive Framework of the Senegal River Basin. OMVS and its member countries have acknowledged that Guinea cannot be left out from long-term development and sustainable management of the Senegal River Basin. Therefore, the inclusion of Guinea within OMVS has become a priority in yielding incentives for regional development and economic integration. By joining OMVS, Guinea benefits from cooperation through the lifting of financial constraints for developing its huge hydropower potential thereby, strategically positioning itself in the West Africa Power Pool market. In return, Guinea's contributions to cooperation and joint development and protection of the headwaters will benefit the other riparians. This mitigates the risks of upstream unilateral planning and any foreclosure of water-related development within the basin. For these reasons, the inclusive framework was developed to enable the preparation of the Senegal River Basin development program and also agreement on the key legal and institutional principles for Guinea's inclusion within OMVS. This process has been supported by the Nouakchott declaration of May 2003. The following policy and technical milestones have been achieved towards the joint management of the Senegal River Basin:

- ③ The 32nd Council of Ministers Meeting of OMVS established a Guinea/OMVS Inter-ministerial Committee for the preparation of the Inclusive Framework and appointed a

legal and technical task force to prepare all the relevant technical and legal requirements for Guinea's inclusion to OMVS;

- ③ The 2nd Guinea/OMVS Inter-ministerial Committee approved the Senegal River Basin development program and acknowledged the decision of Guinea to join OMVS as a fourth member country;
- ③ The 14th Conference of Head of States of OMVS ratified the adhesion of Guinea to OMVS and approved the implementation of the Senegal River basin development program.

The above-mentioned policy decisions endorsed by the highest levels of OMVS provide clear evidence of countries' ownership and readiness for overall management of the Senegal River Basin. In addition, OMVS has taken a consensual approach to ensuring that all relevant mechanisms (institutional, legal, consultative and technical) are in place for coherent and sustainable management of the basin. As a result, not only does the political will exist but also a solid foundation for the implementation of this regional program.

Overall Challenges. The pressing issues in the Senegal River Basin are to (i) optimize equitable uses of water during periods of water shortages and drought and provide improved access to safe water, (ii) restore favorable social and environmental conditions through improved land and water resource practices, (iii) increase incomes through increased agricultural productivity, and other related water resources-based activities, (iv) optimize benefits from existing infrastructure while developing appropriate new infrastructure, and (v) support cooperation and stakeholder participation to strengthen institutional capacities for sound decision-making and political and economic stability.

2. Objectives

The development objective of the MWRD program which comprises 2 phases, MWRD 1 and 2 is to enhance regional integration among the riparian countries of the Senegal River Basin through OMVS for multipurpose water resources development to foster growth including improved community livelihoods.

This objective will be achieved through (i) consolidating and modernizing the institutional, legal and technical framework of the Senegal River Basin to better serve the four riparian countries, (ii) developing concrete water resources development activities at the local level that generate significant income to reduce poverty, and (iii) defining and preparing new multipurpose infrastructure to harness the hydropower potential identified in the basin. In total, 2 million people are targeted in the first phase to benefit from this project. The project will focus on selected priority areas within the four riparian countries located in the upper basin, the upper valley, the lower valley and the delta.

Key progress and expected outcomes. The result indicators envisioned for the project include:

- a) OMVS legal, institutional, financial mechanisms updated and fully operational for effective execution of its mandate.
- b) Sustainable multipurpose water resources activities implemented to effect income generation and poverty reduction at local levels; and

- c) Regional planning and management framework developed for economically, environmentally and socially responsible multipurpose water resources development.

3. Rationale for Bank Involvement

Regional integration. The establishment of the Regional Integration Department within the Africa Region is a concrete expression of the Bank's commitment to support regional integration and to foster optimal sustainable economic growth across the continent. Through regional integration more sustainable multi-purpose development and multi-sectoral investments to supplement the West African Power Pool framework (WAPP) for the regional least-cost energy development market can be achieved. In so doing, transaction costs are significantly reduced and benefits better shared. The multi-purpose approach will broaden the range and scope of potential investments, and generate and capture a wider range of direct and indirect benefits. Specifically, integrated river basin management coupled with the installation of multipurpose water resources infrastructure are key to expanded opportunities for growth, reducing immigration and poverty and improving the health and livelihoods of the population, while preserving the environment. This is even more applicable to women and other vulnerable groups. Specifically, for the Senegal River Basin, this program will include for the first time the engagement of all four riparian countries of the Senegal River Basin, namely Guinea, Mali, Mauritania and Senegal.

The rationale for this program arose with the strong will and ownership of the riparian countries and OMVS to move the infrastructure development agenda forward as prioritized in the Senegal Basin development program. But, this needs to be done within a sound water resources management context. In addition, OMVS's commitment and readiness to use its shared waters as an incentive for regional integration via cooperation for win-win development in various economic sectors, meets the objective of Bank support for regional integration.

Proven lessons for engagement. The program design builds on a range of regional to local level experiences such as (i) the regional hydropower project that contributed to the development of jointly-owned energy infrastructure; (ii) the Inclusive Framework that encouraged the full involvement of Guinea in the joint management of the Senegal River Basin and most recently, the GEF Water Resources and Environmental Management Project which is strengthening the regional and national institutional capacities for cooperative land, water and environmental management in the Basin coupled with local environmental community-based activities. Lessons and experiences from the above coupled with the Bank's long standing involvement in the Senegal River Basin clearly demonstrate that regional integration fosters more effective sustainable development and multi-sectoral investments. Therefore, the project provides a unique comparative advantage to mainstream close collaboration between various institutions working on water resources management of the Senegal River Basin at different levels while consolidating donor's intervention through a coherent framework of actions.

4. Description

Overview of program design. The overall amount proposed for MWRD 1 & 2 is US\$261 million, of which the estimated budget for MWRD 1 is US\$161 million, inclusive of an IDA credit of US\$110 million and proposed US\$51 million from national counterpart funds, donor co-financing and parallel financing. Individual sector investment activities were considered as an alternative approach, in parallel with donor activities, however this does not advance regional

integration. The regional integration process establishes the various parameters for sustainable multi-purpose development and multi-sectoral investments, realized only by strengthened institutions and engaged and informed stakeholders. The program will support the Nouakchott Declaration for the development of the Senegal River Basin by focusing on five key targeted activities, namely: (i) modernizing the river basin institutions within the context of the Inclusive Framework, (ii) regional water resources planning, management and development, (iii) expanding regional multipurpose water resources infrastructure, (iv) mitigating the health impacts from the related multipurpose water infrastructure, and (v) fostering economic growth through related water-sector development while improving the social and environmental conditions in the Basin.

Component 1: Regional Institutional Development for Water Resources (US\$8.1 million)².

The first component will support actions at the regional level in order to consolidate and strengthen policies, plans and actions relating to integrated water resources development. Implementing the Inclusive Framework will require the strengthening of institutional knowledge and technical capacity but also strengthening of the legal, institutional and financial frameworks. Component activities will:

- a. *Modernize OMVS and Enhance Institutional Capacities.* This component will enhance the management and technical capacities as well as the systems of monitoring and evaluation. The institutional coordination, communication, information exchange and stakeholder participation among relevant institutions³ will also be improved thereby reinforcing the OMVS network and information management. This will likely involve:
 - i Review and expansion of responsibilities with supporting capacity enhancement for SOGED and SOGEM;
 - ii Revamping of OMVS and National Cellules including the definition of human resources management and performance monitoring and evaluation tools, improving access to and the flow of information with more accountability and transparency at all levels;
 - iii Modernization of the Permanent Water Commission – to include modalities for water flows and energy reserve (allocations) principles from multi-purpose infrastructure;
 - iv OMVS strategic coordination and collaboration with national water and agricultural technical bodies including SAED-SONADER-PDIAM –Direction Nationale du Genie Rural (DNGR) and SDE-SNDE-EDM;
 - v Developing an exchange of experiences, best practices and management tools in water resources between national agricultural agencies, namely SAED, SONADER, PDIAM and DNGR;
 - vi Strengthening of local-level organizations (such as WUAs, womens’ farmer cooperatives).

² Total financing for component 1 is expected to be approximately US\$12.50 million inclusive of country contributions and donor co-financing from the AFD and the Dutch Cooperation.

³ SOGED: *Société de Gestion de Diama*; SAED: *Société d’Aménagement et d’Exploitation du Delta* ; SONADER : *Société Nationale de Développement Rural*; PDIAM : *Programme de Développement de l’Irrigation en Aval de Manantali*; SDE : *Senegalaise des Eaux*; SNDE : *Société Nationale d’Exploitation des Eaux*; EDM : *Energie du Mali*

- b. *Enable Guinea's inclusion to OMVS.* The continuation of the Inclusive Framework dialogue requires the update and adaptation of the OMVS institutions and legal arrangements to include Guinea as the fourth riparian country. This will include : (i) an update of the institutional and legal framework within the OMVS High Commission; (ii) preparation of the additional legal instruments necessary to effectively implement the Inclusive Framework in line with the Water Charter principles; and (iii) definition of a new cost-sharing formula to accommodate Guinea as a new member of OMVS.
- c. *Rehabilitate the OMVS Documentation Center.* Securing the institutional history and expanding the information and knowledge network of the OMVS requires the rehabilitation of the Senegal River Basin Document Center in Saint-Louis. Activities will:
 - i Rehabilitate, upgrade, and secure the building facilities;
 - ii Acquire equipment for archiving and library establishment;
 - iii Train and develop management capacity of center staff;
 - iv Develop internet functionality with web access to relevant information; and
 - v Support or establish specific conventions with other institutions such as, the Sub-Saharan Africa Foundation Institute (IFAN), the Documentalists and Archivists School (EBAD), and relevant universities for more effective management and dissemination of Basin information.

Component 2: Local Level Multi-Purpose Water Resources Development (US\$96.4 million) ⁴.

To promote income-generation activities at the grassroots level and ensure that benefits spillover across the Basin, this component includes a number of critical water resources development activities in selected sub-basins areas. This approach also helps to ensure full ownership and commitment of the riparian population to secure the existing investments and those to be planned in the future. The planned activities will be undertaken in targeted areas suitable to realize fast results on the ground. They are framed in a manner to ensure appropriate responsibility assignments to- and accountability of- the relevant technical bodies with stakeholders' participation and involvement in decision making.

Three main criteria, technical, social and political were used by OMVS and the riparians to identify the selected areas. The technical criteria related to the in-country infrastructure needs as well as the suitability of locations for development. The social criteria mostly related to the degree of poverty and incidence of vulnerable groups throughout the basin. And, the political criteria is linked to countries aim to re-balance development activities across the basin. The areas and related activities were selected in a participatory process to form the first set of interventions in the basin. The scaling up of these interventions will be considered within the Master plan in component 3. The priority areas for actions include: the Upper Basin in Guinea (regions of Mamou and Labé); the Upper Basin in Mali (Circles of Bafoulabé and Kayes); the Middle Valley in Senegal (the departments of Dagana and Matam) and the Middle Valley and Delta in Mauritania (Wilayas of Trarza and Brakna). The local level activities are the following:

⁴ Total financing for component 2 is expected to be approximately US\$133.4 million inclusive of country contributions and donor co-financing such as the Islamic Development Bank, the Dutch and the French Development Agency (AFD).

- a. *Development of small hydraulic infrastructure and related activities.* This subcomponent will facilitate the development of recessional agriculture, expansion and rehabilitation of irrigation and drainage schemes in suitable areas. Key activities will: (i) design and develop infrastructure to improve access to and delivery of water for irrigation (intakes, pumping stations etc.), (ii) provide training for appropriate irrigation methods and related crop diversification and enhancement processes to enable farmers to make adequate choices for sustainable agricultural practices, (iii) identify suitable options for agricultural products, processing and marketing.
- b. *Improvement of traditional fisheries.* This sub-component will contribute to the development of traditional fisheries. Key activities will: (i) promote more effective fishing practices and fish production processing, (ii) provide technical modernization to enhance fishermen's livelihoods (training and equipment such as nets, boats, processing and storage), and (iii) support institutional strengthening for sustainable development of the fisheries activities.
- c. *Integrated Land and Water Management.* This sub-component will support planning and management of land and water resources at the community and sub-basin levels to provide community stakeholders tools and mechanisms for sustainable and long-term local development. Key activities will (i) map key micro-watersheds suitable for local income generation activities, (ii) introduce programs to restore and maintain river banks and (iii) provide support (develop a forestation map and program, training, etc.) for agro-forestry development.
- d. *Reduction of waterborne diseases.* This sub-component will focus on addressing waterborne diseases, primarily as it pertains to reducing the prevalence of *Schistosomiasis and Malaria* in the Basin. Key activities for the Schistosomiasis will (i) provide appropriate schistosomiasis mass treatment and awareness campaigns for targeted communities. For Malaria, activities will focus on improving access to and utilization of malaria control interventions, with the aim of reducing transmission, morbidity, and mortality from malaria through the Malaria Control Booster Program, including: (i) control of the mosquito vector (*Anopheles gambiae, funestus, arabiensis*) using insecticide-treated bed nets, indoor-spraying, improved irrigation practices and environmental management; (ii) adoption of an effective sub-regional malaria treatment policy in the Senegal River Basin; and (iii) strengthening of sub-regional coordination, surveillance, epidemic prevention and monitoring to control malaria. Particular attention will be paid to mitigating malaria infection risk related to water-resource development and the population movements that may accompany water-management related activities.

Component 3: Regional Multipurpose and Multi-sectoral Master Planning (US\$5.5 million)⁵.

The Comprehensive Senegal River Basin Master Plan or SDAGE (*Schema d'Aménagement et de Gestion des Eaux du fleuve Senegal*) will take into consideration all relevant sectors for optimal and sustainable planning, use, and management of the Basin's water resources, and make available the appropriate information necessary for sound decision-making. The SDAGE will also complement the on-going efforts initiated under the WAPP. The component activities will:

- a. *Prepare the SRB Comprehensive Master Plan.* Within the broad framework of the SDAGE, the sub-component activities will (i) evaluate and prepare several assessment studies, which take into account technical, policy, economic, environmental and social concerns (including health), over the range of potential multi-purpose and multi-sectoral investments in the Basin⁶, (ii) prepare the SRB Regional Master Plan, and prepare sub-basin development plans that would further guide OMVS and member countries in implementing decentralized water resources management.
- b. *Pre-investment support for the OMVS Gouina Hydroelectric Project (HEP):* This sub-component will support OMVS to accelerate pre-investment activities for early development and deployment of the Gouina HEP to help alleviate the widening power supply deficits that have resulted in chronic load shedding in OMVS member states. Key activities include: (i) preparation and public disclosure of the environmental Management Plan and Resettlement Action Plan associated with the implementation of the Gouina HEP, including facilities to interconnect with the existing 225 kV OMVS power transmission system; and (ii) preparation of comprehensive bidding documents for use in a competitive process to select a contractor to implement the Gouina HEP⁷ under a date-certain, fixed price, performance-based contract to "Design-Build-Operate-Transfer the Gouina HEP to the OMVS asset holding entity.
- c. *Pre-investment support for OMVS Multi-Purpose Dams (Balassa, Boureya, Goubassi and Koukoutamba):* This component will (i) support the OMVS to prepare comprehensive feasibility studies (and, if necessary update previous studies) for the prospective multi-purpose dams to be located in the Senegal River Basin at Goubassi (on the Faleme River in Mali), Balassa, Boureya, and Koukoutamba, all of which are located upstream of the Manantali Dam in Guinea and have been collectively prioritized by the riparian states;⁸ (ii) prepare an Options Assessment and a Strategic Regional Environmental Assessment for future deployment of these facilities in the Basin. The relevant assessments to determine the nature and scope of environmental and social safeguards to be addressed for each prospective site will also be performed under this sub-component.
- d. *Ensure stakeholder participation in Multipurpose and Master Planning.* This will be done to facilitate and ensure consensus building and to publicize support for the hydropower projects upfront of actual development and commencement of works.

⁵ Total financing for component 3 is expected to be approximately US\$14.91 million inclusive of country contributions and donor co-financing from the AFD, ADB, EU and the IDB.

⁶ The potential multi-purpose/multi-sectoral studies includes but is not limited to, transportation, energy, agriculture and fisheries, trade, tourism, environmental services, and watershed management

⁷ IDA credit financing for the actual implementation of the OMVS Gouina HEP will be provided within the framework of the FY07 WAPP APL 2 (Phase 2) operation.

⁸ The proposed FY07 WAPP APL 2 (Phase 2) operation will also provide technical assistance required to ascertain and plan for the least cost strategy and investment plan to extend the OMVS power transmission network to evacuate the electricity produced from these prospective multi-purpose dams.

The total project costs for the components, inclusive of riparian co-financing and donor co-financing are summarized in the table below.

Components	('000 US\$)							
	IDA	%	Govt. Co-financing	%	Donor Co-financing	%	Total	%
1. Regional Water Resources Development	8,100	64.8	1,365	10.9	3,036	24.3	12,501	7.8
2. Local Level Multi-purpose Water Resources Development	96,400	72.2	9,700	7.3	27,338	20.5	133,438	83.0
3. Comprehensive Multi-purpose and multi-sectoral Master Planning	5,500	36.9	935	6.3	8,473	56.8	14,908	9.3
Total PROJECT Costs	110,000	68.4	12,000	7.5	38,847	24.2	160,847	100.0
Front-end Fees	0		0		0		0	
Total Financing Required	110,000	68.4	12,000	7.5	38,847	24.2	160,847	100.0

MWRD 2 Components will depend largely on the implementation results of MWRD 1. This will include the selection of the second round of local level multi-purpose water resources development activities to be scaled up and the development of water resources infrastructure. Since the economies of the four riparian countries are highly vulnerable to water variability and energy shortages, additional multi-purpose infrastructure will be needed. Preliminary technical studies and consultations among the four riparian countries have already led to the pre-selection of the four dam sites (identified in component 3c above). With the additional technical studies to be carried out in MWRD 1, the prioritization of the development of these dams will be possible and it is then envisaged that such development will be undertaken in MWRD 2. Suitable performance indicators will be introduced and the relevant institutional and other necessary adjustments made to transition from MWRD1 to MWRD 2.

5. Financing

Source:	(\$m.)
BORROWER/RECIPIENT	12.00
INTERNATIONAL DEVELOPMENT ASSOCIATION	110.00
AFRICAN DEVELOPMENT BANK	2.00
EC: EUROPEAN COMMISSION	1.80
FRANCE: FRENCH AGENCY FOR DEVELOPMENT	8.41
ISLAMIC DEVELOPMENT BANK	20.00
NETHERLANDS: MIN. OF FOREIGN AFFAIRS / MIN. OF DEV. COOP.	6.63
Total	160.84

6. Implementation

1. Partnership arrangements

Consolidating Partnerships. The OMVS' Consultative Donors Committee has been the mechanism to complement the Bank's relationship with the range of donors engaged in the SRB. This program will build upon the current engagement. The anticipated parallel financing⁹ from the Dutch Government, the French Development Agency, the African Development Bank, and the Islamic Development Bank will be used to develop programs complementary to the proposed activities under this loan. Furthermore, the malaria control activities will benefit from coordination by the established Roll Back Malaria Partnership in West Africa, with strong technical leadership from the World Health Organization.

2. Legal, institutional and implementation arrangements

It is anticipated that legal arrangements for the Project will be similar to the arrangements put in place for the Manantali Hydropower Project i.e. the Bank will enter into financing agreements with each of the four member countries and into a project agreement with OMVS. The proceeds of the four Credits will be made available to OMVS under subsidiary agreements between each of the countries and OMVS. The coordination and implementation arrangements for the MWRD APL1 activities are detailed in annex 6. OMVS and its national cellules will assure the overall coordination and implementation of the project on behalf of the four riparian countries. As deemed necessary, additional staff will be recruited to ensure an efficient and effective implementation of the project. The institutional setting for the MWRD APL program implementation, monitoring and evaluation is as follows:

OMVS: will anchor the project at the regional level within its technical division. The existing regional coordination cellule established under the GEF project will also be responsible for coordinating the implementation of this project. The cellule will however be strengthened with the inclusion of additional expertise needed for the implementation of this project.

The OMVS National Cellules: the existing staff of the GEF project situated in the OMVS national cellules will also coordinate activities of this project at the national level. The National Cellule will however subcontract specific activities and works, taking stock of the competence and experience of the existing technical agencies.

Regional Steering Committee (RSC): this Committee, as established by the Council of Ministers of OMVS will maintain overall oversight of all initiatives supported by the MWRD APL program. The RSC will give overall guidance to OMVS and its national cellules and formally review and approve the proposed activities to be implemented under the MWRD program.

⁹ The following partners have indicated an interest in co-financing some of the planned activities within the first phase of the program: African Development Bank for the small hydraulics infrastructures and the waterborne diseases; the French Development Agency in regard to financing some master planning activities, institutional development and the *Schistosomiasis* reduction; and the Dutch for the institutional development and some of the local level activities.

National Steering Committees (NSCs): will provide guidance to the national cellules and the relevant technical agencies on the implementation of the national activities. The tasks of the NSC include the review and adoption of proposed local level water resources activities and the review of the project work program at the national level.

Local Coordination Committees (LCCs): are already operational within the GEF project and will provide support to the implementation of local level water resources activities and assist communities in this regard. The LCCs will be assisted if required by the technical agencies with regard to the design of the activities to be implemented.

The Environmental Observatory Service: was created in 2000, as the effective mechanism for monitoring and evaluation of the environmental of the Senegal river Basin, and as such, the observatory will handle data collection and all relevant tasks necessary for tracking the indicators of the MWRD APL 1. To this end, the existing database has been expanded to incorporate socio-economic data for more comprehensive physical and socio-economic M&E of the river basin.

SAED (Senegal), SONADER (Mauritania), PDIAM (Mali) and DNGR (Guinea) are the four line agencies who will execute some of the activities under component 2 within the respective four riparian countries. These agencies are responsible for agriculture-related development. These institutions are described in more detail in Annex 6.

West Africa RBM Regional Network (WARN): will coordinate malaria control activities in the River Basin and bring countries and partners together to share experiences and develop joint annual work plans. Importantly, it will ensure close linkages with WHO to broker technical support as needed. It will play a particularly important role in helping to ensure that the appropriate linkages are formed between sub-regional malaria control activities and country-specific malaria control activities, given its strategic position and involvement in both sub-regional and country malaria control planning processes.

7. Sustainability

The rationale for the program design is mainly long-term sustainability and commitment in the Senegal River Basin. As a result, the Project is designed with features to build in ownership, opportunities for scaling-up and replicability.

One of the principles of the Water Charter is institutional sustainability at the three main organizational levels – regional, national and local. The Project will support this principle. At the regional level, the Project will support the modernization of OMVS and the reconfiguration of the institution to include Guinea. Second, at the national level, improved capacities of and collaboration among national parastatals will enable greater constituency beyond water allocation to include more effective use and management of the water resources within the Basin. At the local level, a decentralized and participatory approach which includes all relevant stakeholders in the Project design and implementation process will strengthen local level water resources management through trust, empowerment and ownership.

Technical and environmental sustainability will be supported through appropriate capacity building. In particular, the technical skills of the dam management agencies (SOGED, SOGEM) as well as the Environmental Observatory Service will be enhanced. In addition, building on the on-going GEF project and the water charter principles, the program will further strive to improve environmental and social quality in the Senegal River Basin, for example through reduction of water weeds infestation and the prevalence of malaria and schistosomiasis.

Financial and economic sustainability would be assured by appropriate revision of the cost sharing arrangements with Guinea joining OMVS. In addition, the existing mechanisms for fee recovery from the dam operations will be improved. The energy and water reserve will also be reviewed and maintained. Mechanisms will be explored for an adequate water tariff system and to cover the operation and maintenance of small water infrastructure.

8. Lessons Learned from Past Operations in the Country/Sector

The Project design is an integrated, inclusive and multisectoral project prepared by regional, national and local counterparts with support from the Bank. Lessons are taken from the GEF, Inclusive Framework, and other public participation process during preparation, as well as from other regional and water infrastructure projects. Key lessons are identified below.

- ③ *Project design lessons - inclusivity and sustainability.* Active engagement of riparian counterparts is vital in defining the project objective, and it is also important that the stated objective remains realistic. Multi-country projects require additional attention to address all national concerns in an integrated, coherent manner. This too, requires a realistic implementation schedule and budget. Emphasis has been placed on an inclusive approach for the successful adhesion of Guinea as an equal partner in OMVS and their participation in the project preparation and implementation.
- ③ *Strengthening institutional capacity and partnerships.* To effectively implement the Project and ensure sustainability and achieve the stated results, it is important to foster an environment of trust, equity and open dialogue within which all riparians can together pursue their development aspirations. It is for this reason that the first component of this project focuses on institutional strengthening and capacity building at all levels. In addition, building broad partnerships among and within the riparian countries, and with NGOs, international agencies and donors is essential for a coordinated process in order to obtain the maximum leverage of funds.
- ③ *Regional integration and multi-purpose water resources development.* On the one hand, the cross-cutting challenges in the Basin and the common need for development on the other, fully advocate for regional integration in the Senegal Basin. Past experience in international waters scenarios demonstrated that cooperation and joint management could significantly improve regional stability and increase the benefit-sharing among countries. Conversely, unilateral planning has often led to tensions over scarce resources and less than optimal development. This is particularly relevant in the Senegal Basin where joint development has already yielded appreciable benefits for OMVS member countries, whereas Guinea's unilateral approach has not been successful despite their enormous hydropower opportunities. The inclusive framework establishes the prerequisites for

optimal cooperation for joint water resources development and while countries interests may vary across the basin, it is important to maintain a comprehensive picture of the development opportunities in the Basin and achieve sensible compromises which result in fair benefits for all the riparians.

- ③ *Progressive approach to water infrastructure development.* Sound planning is critical for water infrastructure development, moreover in accordance with all required standards and safeguards to fully meet compliance criteria. The regional option assessment pioneered in the Nile Basin will be considered for the design and planning approach that is to be used in the Senegal Basin. To avoid raising expectations too early, it is prudent to focus on key technical studies and build ownership into the planning process at all levels. Drawing from recent experiences in developing water infrastructure, such as the Bumbuna dam, this project will ensure careful design consideration through a consultative process and simultaneously provide some benefits upfront at the grassroots level. This will also help to bridge the divide between the benefits received by the poor local population and those received by the people living in the larger cities, the latter of which are often the primary beneficiaries of water infrastructure development.

9. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP/GP 4.01)	[X]	[]
Natural Habitats (OP/BP 4.04)	[]	[X]
Pest Management (OP 4.09)	[X]	[]
Cultural Property (OPN 11.03 , being revised as OP 4.11)	[]	[X]
Involuntary Resettlement (OP/BP 4.12)	[X]	[]
Indigenous Peoples (OD 4.20 , being revised as OP 4.10)	[]	[X]
Forests (OP/BP 4.36)	[X]	[]
Safety of Dams (OP/BP 4.37)	[X]	[]
Projects in Disputed Areas (OP/BP/GP 7.60)*	[]	[X]
Projects on International Waterways (OP/BP/GP 7.50)	[X]	[]

10. List of Factual Technical Documents

World Bank, 2003: Project Appraisal Document of the Senegal River Basin Water and Environmental Management Project;

World Bank, 2001: Rehabilitation of the Ecological Functions of the Senegal River Delta;

OMVS, 2005: Report on the research of existing international water law and compilation of relevant treaties, conventions, judicial, and arbitral decisions;

OMVS, 2005: Technical report on potential development opportunities in OMVS member countries and Guinea;

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

OMVS, 2005: Relevant OMVS treaties, Council of Ministers' decisions and Heads' of State decisions;

OMVS, 2005: Review of international principles and practices for shared water resources and their relevance to Senegal River Basin;

OMVS, 2005: Technical report on development opportunities in the Senegal River Basin;

OMVS, 2005: Existing agreements on water use within and between the four riparian countries in the Senegal River Basin;

OMVS, 2005: Technical report on selected priorities for development opportunities in the Senegal River Basin;

OMVS, 2005: International water laws and elements of relevance for consideration in inclusive management of Senegal River Basin;

OMVS, 2005: Technical report on the agreed development program for the Senegal River Basin

OMVS, 2005: Report on final legal aspects for an inclusive framework and proposed amendments on OMVS conventions for Guinea inclusion;

OMVS, 2005: Recommendations and Strategy note for implementing the inclusive framework to the attention of the OMVS-Guinea inter-ministerial Council;

OMVS, 2005: Inclusif du bassin du fleuve Sénégal – *Recueil d'Instruments Juridiques Relatifs au Fleuve Sénégal*;

OMVS, 2005: Programme de Gestion Intégrée des Ressources en Eau et de Développement des Usages a Buts Multiples dans le Bassin du Fleuve Sénégal - *Cadre de Politique de Réinstallation des Populations (CPRP)*;

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