I. Country and Sector Background

1. Senegal is a Sahelian country located in the most western part of Africa with a national territory of 196,722 km². In 2009, the population of Senegal was estimated at around 13.7 million, growing at an annual rate of 2.7% (CIA, 2009).

2. Deforestation, overgrazing, soil erosion, and desertification constitute Senegal’s major environmental challenges. 84% of households still depend on wood-based fuel: 26% charcoal and 58% firewood (Direction de l’Energie, 2007). Biomass continues to dominate national energy consumption patterns (58%, as opposed to oil products with a share of 38%). The bulk of wood-based fuels is supplied from the southern and south-western zones (Kolda, Tambacounda), which account for around 80% of the country’s standing stock.

3. Senegal’s energy policy addresses environmental, economic and social aspects with the key objective of improving access to modern energy, so as to release the supposedly excessive pressure on forests (Direction de l’Energie, 2007).

4. In February 2008, the Government elaborated a development policy letter for the household energy sub-sector, whose main objective is to meet urban and rural demand for household fuels in an environmental sound manner. Four strategic focuses have been indentified: (i) Sustainable wood fuels supply management through participatory community forest management, to be extended to regions other than Tambacounda and Kolda; (ii) Demand management and inter-fuel substitution options through energy efficiency, using efficient cooking stoves, diversification of energy sources, R&D on alternative energy sources and cooking appliances; (iii) Improvement of the institutional and regulatory framework; and (iv) Modern energy access in rural areas.
II. Objectives

5. The project development objective is to increase the availability of diversified household fuels in a sustainable way, and to increase the income of affected communities while preserving the forest ecosystems.

6. This objective will be met through the following key interventions: (i) Enforcement of a sustainable forest and biomass energy management practice; (ii) Building upon the elimination of the “Charcoal Quota” system to strengthen the sustainable woodfuels production system; (iii) Charcoal production system based on existing forest capacity; (iv) Diversification of household fuels for cooking purpose (jatropha oil, charcoal briquettes from rice residues and typha, biogas); (v) Promotion of energy efficient stoves initiatives; (vi) Supporting income generating activities for local communities; and (vii) Strengthening central, decentralized government institutions, local government, and the civil society involvement in the management of the sector.

7. Key outcome indicators are as follows: (i) increased wood fuels production; (ii) increased alternative household fuels; (iii) reduced deforestation in target zones; (iv) reduced net CO2 emissions; (v) increased income of participating communities.

III. Rationale for Bank Involvement

8. The Government of Senegal has requested support from the Bank to build on the highly successful first phase of the Sustainable and Participatory Energy Management Project (PROGEDE), during which all outcome indicators exceeded their original targets. PROGEDE I had three main components: (i) the implementation and monitoring of 300,000 hectares of environmentally sustainable community-managed forest resource systems in the Tambacounda and Kolda regions of Senegal, creating a protection zone around the Niokolo-Koba National Park (Biosphere Reserve); (ii) the promotion of private sector inter-fuel substitution and private sector and NGO-based improved stoves initiatives; and (iii) the strengthening of the institutions involved in the management of the sector, and the promotion of the participation of the civil society (private sector, academic institutions, and NGO community) in the operation of the sector. The highly successful implementation rating of PROGEDE Phase I has led the Bank to support the proposed PROGEDE Phase II.

9. Given that Senegal will continue to rely on forest-based traditional fuels to meet its household energy demand for the years to come, and that large price increases in petroleum imports—as experienced since the crisis—cannot be sustained, PROGEDE’s Phase II has been designed to: (i) scale up key elements of sustainable forestry management; (ii) institutionalize the sustainable and participatory community-based forest management model within central government institutions, its decentralized offices, regional development agents, and other actors intervening in the sub-sector; (iii) move from a project to a programmatic approach; and (iv) focus on policy issues, while pursuing sustainable wood fuels supply management activities and household energy inter-fuel substitution options. It also aims at making the charcoal industry more economically and socially efficient.

10. The IDA allocation for PROGEDE Phase II (that is fully consistent with the Country Assistance Strategy (CAS), the Poverty Reduction Strategy Paper (PRSP), the Senegal forestry policy, the recent Energy Sector Development Policy Letter, the Decentralization law and the Forestry code) is US$ 15 million. The Bank is exploring co-financing from other donors and the Nordic Development Fund’s (NDF) Board of Directors has approved on March 9, 2010 that PROGEDE II be included in NDF’s pipeline of projects currently eligible for NDF grant. The Bank is also in
extensive collaboration with a number of bilateral partners who are intervening in the sub-sector. Currently, USAID is funding 80,000 ha of participatory forest management using the PROGEDE model. GEF is funding a biodiversity management project. Canada is financing participatory forest management for female entrepreneurs. Germany is financing household energy, as well as rural electrification.

IV. Description

11. The project has four major components: (i) Institutional Reforms of the Charcoal Value Chain; (ii) Sustainable Wood-fuels Supply Management; (iii) Promotion and Diversification of Modern Household Energy, and (iv) Institutional Arrangement for Project Management.

12. Component I: The Institutional Reforms of the Charcoal Value Chain
   • Challenges: (i) the exclusivity detained by charcoal traders to produce charcoal; (ii) the current legislative and regulatory texts that are not suitable for a complete implication of local actors in the production and commercialization of charcoal; (iii) the limited revenues of local communities and collectivities derived from charcoal production and distribution; (iv) the risk linked to the decrease in the revenues of certain charcoal traders and the exclusion of speculators in the charcoal value chain.
   • Objectives: (i) Ensure a good redistribution process of profits generated from the charcoal value chain by increasing the part of profits for the local communities and collectivities, and diversifying traditional traders’ activities; (ii) Establish an appropriate legislative and regulatory framework.
   • Subcomponents: (i) Organization of charcoal production concessions; (ii) Access to urban markets; (iii) Diversification of charcoal traders’ incomes.

   • Challenges: (i) the degradation of forest resources due to a non sustainable charcoal production practice, extensive agricultural practices, overgrazing, and bush fires; (ii) the progressive loss of biological diversity including in the surroundings of the Niokolo Koba Park; (iii) the lack of motivation of local communities to get involved in the management of forest resources due to the limited revenues they used to earn from it prior to PROGEDE’s interventions; and (iv) the need to consolidate achievements made within PROGEDE.
   • Objectives: Provide a sustainable wood-fuel supply to households, and increase revenues of beneficiary communities and local collectivities while preserving the biological diversity of the targeted forests.
   • Subcomponents: (i) Sustainable participatory community forests management; (ii) Consolidation and establishment of biodiversity community reserves; (iii) Eco-friendly agro-forestry income generating activities.

   • Challenges: In February 2008, a Development Policy Letter for the Household Energy Sub-sector was prepared for the first time by the Ministry of Energy, the Ministry of Finances and the Ministry of Environment. The overarching goal is to meet urban and rural demand for household fuels while preserving the environment. Its main challenges are: (i) the non rationalized use of cooking fuels; (ii) the strong dependence of households on wood-fuels that is provoking an environmental and biodiversity degradation; and (iii) the lack of reliable data on which optimal and rationalized decision-making mechanism can be based/grounded.
   • Objectives: (i) Promote alternative wood-fuels energy sources; (ii) Rationalize cooking fuels consumption; and, (iii) Ensure a better planning of the household energy subsector.
• **Subcomponents:** (i) Sensitization/Communication and promotion of efficient cooking equipments and sustainable biomass energy; (ii) Planning and management of the demand of cooking fuels; (iii) Institutional strengthening.

15. **Component IV: Institutional arrangement for project implementation**

• **Subcomponents:** (i) Participatory coordination, monitoring and evaluation of the project; (ii) Functioning (salaries, equipment, etc.).

V. **Financing**

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<th>Source</th>
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<tr>
<td>Nordic Development Fund</td>
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<td><strong>Total</strong></td>
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VI. **Implementation**

16. The project will be managed by the Ministry of Environment: The Directorate of Water and Forest will be the implementing agency and the Directorate of Forestry will be the project administrator. In order to build the required capacity within the ministry, the institutionalization will be conducted in two phases: The first phase or anchor phase will last three years. Under the direct supervision of the Director of Water and Forest, a Consultant/Expert will be hired to conduct the overall technical coordination and financial management of the project. A fiduciary team (financial management, accounting, procurement) will be hired and located at the Directorate of Forestry to handle the fiduciary aspects and provide technical assistance to their peers from the Directorate. The project will support proper government institutions in playing their rightful role in the scaling up of the program. During the second phase or ownership phase, all key positions previously held by the consultants will be transferred to ministry staff.

17. With regard to implementation, the sustainable wood-fuel supply will be under the direct supervision of the Directorate of Forestry, and its decentralized services and activities (related to the promotion and diversification of alternative energy sources) will be supervised by the Directorate of Household Energy. Overall project implementation will be supervised by a technical committee composed by representatives from the ministries of Environment, Energy and Finance, from the local government and civil society, and from the World Bank.

VII. **Sustainability**

18. The first operation (PROGEDE I) was rated as Highly Satisfactory. The long-term sustainability of the project’s development objectives and outcomes depends on two main factors: (i) the beneficiaries’ involvement and commitment to maintain the project’s major achievements; and (ii) the Government’s commitment to extend sustainable participatory forest resources management to the rest of the country. Specific activities and monitoring systems have been included in the project design with the view of addressing all these issues.

19. Presently, villages are covering some costs related to forest management: Indemnity for 10 local animators over six months for about US$ 6,700; costs related to the 2010 charcoal production campaign; and other recurrent costs. Two regional umbrella organizations for both regions of Tambacounda and Kolda, and a national one were put in place in 2009. These actions are geared towards sustainability but also to face the charcoal traders. A study to assess both the beneficiary communities and local collectivities’ capacities to support the costs related to forest resources...
management is been planned. Based on the results of this study, a suitable participatory community management plan will be developed.

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

20. Through PROGEDE’s first implementation operation, important lessons have been learned in terms of forest resources management at various levels:

(i) Involvement and commitment from the beneficiary communities and their respective local governments is crucial;

(ii) PROGEDE’s model of sustainable community-based and participatory forest resources management needs to be scaled up to the entire country;

(iii) For the model to be fully sustainable while keeping its participatory nature, it will be necessary to prohibit unmanaged production system of wood fuels in the country;

(iv) The project’s final objective, poverty alleviation and rural development, should be acknowledged and taken into consideration at every step of its development process.

(v) The institutionalization of forestry-based GIS, which enables the elaboration of computerized forest resources management plans and the household energy database system, has to be implemented at the Directorate of Forestry level and also at its decentralized offices, the regional development agencies, and the Directorate of household energy;

(vi) PROGEDE’s model of sustainable community-based and participatory forest resources management, based on an eight-year rotation plan/scheme started in 2005 needs to be completed.

(vii) Supply-side management is essential. Traditional energy sector stabilization essentially depends on the implementation of comprehensive changes in the wood-fuels supply systems and chains. It has also been demonstrated that the price for the improved stoves which is the most known in Senegal (“Diambar”) is relatively high for both poor urban and rural households. Therefore, massive production would enable private entities to reduce price while making some marginal profits.

(viii) Ownership and social accountability at both the government and the grassroots level are key. Institutional arrangements that involve the central government and its decentralized services, as well as local governments (i.e. collectivités locales) and their technical advisers during project implementation that lead to a full ownership of achievements are essential.

(ix) Last year irregularities have been raised in the charcoal value chain in some zones of PROGEDE I. Specific studies are planned to improve local governance, and more forest control actions were taken into account in the proposed project.

(x) The establishment of PROGEDE I sustainable participatory community-based forest resources management has progressively contributed to dismantle the monopoly of traditional charcoal traders. Communities are now producing charcoal, transparent control systems have been put in place, communities and their respective local governments are since making considerable money.
Consequently, traditional charcoal traders businesses are severely threatened. The proposed operation will support charcoal traders through business skills training, organization of charcoal production concessions (adjudication), and income diversification, etc.

IX. Safeguard Policies (including public consultation)

21. The project has triggered two safeguards policies, namely OP 4.01 (Environmental Assessment), and OP 4.36 (Forestry). It has also been assigned to the social and environmental category B due to the planned charcoal and wood-fuel production activities afferent to some sub-projects in suggested regions.

22. To ensure environmental and social sustainability of future sub-projects, the Borrower has prepared an *Environmental and Social Management Framework (ESMF)* for future Sub-Projects which lays forward the basic principles and procedures through which the social and environmental dimensions of the project will be adequately dealt with. This instrument was reviewed, cleared and publicly disclosed both in country (02/10/2010) and at the InfoShop (02/12/2010) prior to appraisal. In addition, to take stock of good practices and missed opportunities, the Borrower prepared also a quick impact evaluation of PROGEDE I’s main achievements.

<table>
<thead>
<tr>
<th>Safeguard Policies Triggered by the Project</th>
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<tbody>
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<td>Environmental Assessment (OP/BP/GP 4.01)</td>
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<td>Projects on International Waterways (OP/BP/GP 7.50)</td>
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23. **Contact point**

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