

**INTEGRATED SAFEGUARDS DATA SHEET
CONCEPT STAGE**

Report No.: AC5674

Date ISDS Prepared/Updated: 12/13/2010

I. BASIC INFORMATION

A. Basic Project Data

Country: Senegal	Project ID: P122841
Project Name: Flood Prevention and Drainage Project	
Task Team Leader: Denis Jean-Jacques Jordy	
Estimated Appraisal Date: July 20, 2011	Estimated Board Date: December 22, 2011
Managing Unit: AFTEN	Lending Instrument: Specific Investment Loan
Sector: Flood protection (60%);General water, sanitation and flood protection sector (40%)	
Theme: Other urban development (30%);Natural disaster management (30%);Climate change (20%);Other environment and natural resources management (20%)	
IBRD Amount (US\$m.):	0.00
IDA Amount (US\$m.):	50.00
GEF Amount (US\$m.):	0.00
PCF Amount (US\$m.):	0.00
Other financing amounts by source:	
<u>BORROWER/RECIPIENT</u>	<u>20.00</u>
	20.00

B. Project Objectives [from section 2 of PCN]

The project will contribute to reducing the risk of flooding in the peri-urban areas of Dakar and preserving household and business assets of those living in flood prone areas.

This will be achieved through a combination of infrastructure and non infrastructure measures which will address the underlying causes of the floods, including: i) the construction of priority primary drainage infrastructure which will allow rainwater evacuation out of the water basin to the sea, ii) the pumping of groundwater aquifer of Thiaroye to reduce rate of increase in the groundwater table; iii) providing more responsibilities to municipalities and local population in urban flood risk management, iv) flood prevention and mitigation through appropriate urban planning, strengthening of the disaster risk management system, and improved awareness-raising and education efforts of affected communities to promote behavioral change and resilience to flood risks.

C. Project Description [from section 3 of PCN]

The proposed project will have 4 components:

Component A: Institutional strengthening and capacity building in flood risk management and urban planning

Institutional strengthening and capacity building is needed in order to address the problem of urban floods, mainstream flood risks into urban planning, strongly reinforce the role of municipalities and local population in flood management and improve urban governance and land use regulation. Since these reforms and the construction of drainage networks will take time, a particular emphasis should also be given to flood preparedness and response. This component, which cost is estimated to amount US\$ 10 million, will include the following activities:

a) Preparation of general studies including a stocktaking assessment on urban planning and flood risks, an institutional and financial sustainability study, an urban drainage master plan for the Districts of Pikine and Guediawaye, detailed engineering design and bidding documents for priority investments, environmental and social impact assessment, capacity building needs assessment for flood preparedness and response, design of awareness raising campaigns. The overall design of the investment component of the project (Component B), the Environmental and Social Impact Assessment, Environmental Management Plan and Resettlement Action Plan are being prepared under PPA financing.

b) Mainstreaming of flood risks into urban management and planning. The subcomponent will support institutional reforms and capacity building for improved urban governance and effective integration of flood risks into urban planning and development. It will include the development of a Geographic Information System for flood risk mapping covering the District of Pikine and Guediawaye; the declaration of flood prone areas as uninhabitable zones to be incorporated in the Urban Development Plan; the enforcement of uninhabitable status of flood zones and wetlands (#The Niayes#) by physical means (e.g. planting of trees, vegetal fences#) and implementation of land use regulation through various means (restrictive regulations, economic incentives, knowledge enhancement, public investments#); and community risk management at municipal level. A particular attention will also be given to the establishment of a sustainable institutional and financial scheme and building strong operational capacity for the maintenance of the drainage system and pumping stations.

c) Strengthening of the disaster flood/risk management system in Senegal, including the establishment of an early warning system, capacity building of the national meteorological agency and the hydrology department; the improvement of flood preparedness and response systems; the establishment of an emergency funding mechanism, the reform and strengthening of the civil protection department; and awareness raising / communication for behavioral changes.

Component B: Development of priority primary drainage infrastructure

a) The construction of priority primary drainage infrastructure which will allow the evacuation of rainwater to the sea. Transferring the flood waters to the sea appears to be the most relevant approach, rather than channeling it within the basin given the risk of raising the level of

groundwater. The construction of a drainage network is already planned as a part of the urban restructuring of Pikine Irregulier Sud (APIX s.a., Dakar Diamniadio Toll Highway Project). The project will finance the construction of primary drainage infrastructure, mainly in the North of the Cap Vert Peninsula, which will allow the evacuation of stormwater of the district of Pikine and Guediawaye. A decision should be taken on the acceptable level of risk: drainage systems are often designed for a 10 or 20 year return period depending on the cost of climate proofing and socio-economic importance of protected areas. This sub-component would be subject to a rigorous technical study and an environmental and social assessment during project preparation. A drainage master scheme and a priority investment plan will be prepared and closely coordinated with the ongoing revision of the sanitation master plan already underway and funded by the European Investment Bank. The drainage investments will take into account the existing settlements and be designed / selected in order to minimize the resettlement of households, mainly those living where the drainage channel will be built. Maintenance costs have to be covered by municipalities, but a financial sustainability study is needed to explore various options. The cost is estimated to amount approximately US\$ 60 million.

b) The pumping of the groundwater of Thiaroye to avoid further increase of the groundwater table and saturation of the soil surface in inhabited areas. Several studies concluded that the pumping of 16 000 m³/day would result in a 0.5 to 1.5 meter decrease of the level of the groundwater table, without causing further sea water intrusion. The water would be transferred to the Niayes zone where it would be used for horticultural irrigation in substitution to potable water which is currently provided to smallholders by the water company of Senegal (SONES/SDE) and heavily subsidized (US\$ 4 million/year). The expected positive impacts are a more sustainable and cost effective management of water resources. This activity will require the rehabilitation of the Thiaroye boreholes and the creation of a duct that will allow the transfer of water to the Beer Thialane irrigation perimeter in the Niayes zone currently upgraded by the PDMAS/Canada. The estimated cost is US\$ 20 million. US\$ 7 million are already financed by Canada for the rehabilitation of Beer Thialane perimeter and US\$ 13 million are sought. The irrigation system will be operated by a Public Private Partnership to be established. It will be decided during project preparation whether this activity will be included in this project, or addressed through existing agricultural programs, such as the PDMAS a currently planned.

Component C: Participatory urban flood risk management

a) Community participation in urban flood risk management will be strongly supported in selected neighborhoods. This component will support innovative approaches and the participation of local population and NGOs in solving the problems related to flooding, based on similar successful initiatives in Burkina Faso (Urban environment project), Kenya (Voices of Kibera) and Indonesia (Kampung Improvement Program). Lessons learned from other flood management projects demonstrated that the construction of primary drainage networks had to be coordinated with municipalities and local population in order to facilitate their acceptance, while local participation can facilitate long-term maintenance. The subcomponent will finance pilot investments programs for the rehabilitation and maintenance of secondary and tertiary rainwater drainage network, urban roads network, and solid waste collection. A particular attention will be

given to capacity building in flood preparedness and response, awareness raising and behavioral changes for resilience. The project will also reinforce the role of municipalities in flood management, and promote the integration of flood risk management strategies and action plan in their local development plans (#plan d#urbanisme locaux#). The cost is estimated to amount to approximately US\$ 10 million. This activity will be closely tied up with the institutional and policy development under Component A. It will also ease the implementation of future urban requalification programs which were built on insalubrious grounds liable to flooding and lacking significant infrastructure, paved roads and other networks, such as the forthcoming restructuring of Pikine Irregulier Sud over 860 hectares (APIX s.a., Dakar Diamniadio Toll Highway Project).

Component D: Project coordination and management. This component will provide financing for the efficient implementation of the Project, including staff, operating costs, monitoring and evaluation, and cost of audits. The cost is estimated to amount US\$5 million.

Project safeguard consideration

The proposed project is designed to have beneficial impacts on the population in terms of reduced vulnerability to flooding and improved livelihoods conditions. The project is categorized A because of the potential adverse environmental and social impacts of the civil works related to the construction of the drainage infrastructure with the option to change it to a Category B depending on the findings and recommendations of the technical feasibility study and environmental and social impact assessment carried out during project preparation. Regarding social aspects, the drainage investments will take into account the existing settlements and be designed / selected in order to minimize the resettlement of households, mainly those living where the drainage channel will be built. In addition, a reformed urban planning process through a stronger involvement of municipalities and proper zoning will prevent flooded prone areas and wetlands from being inhabited.

Consequently, two major safeguard policies are triggered, namely, the Environmental Assessment (OP/BP 4.01 and Involuntary Resettlement (OB/BP 4.12) safeguard policies. The Natural Habitats (OP/BP 4.04) policies might need to be triggered depending on the impact of drainage on the wetlands (Niayes).

The Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) of the Local Authority Development Project (urban project) will be updated for the overall project and used for implementation purposes.

Regarding drainage investments (component B), an Environmental and Social Impact Assessment (ESIAs) and/or Environmental Management Plans (EMPs) will be prepared once specific sites and works are identified. The study will include a Resettlement Action Plan (RAP) which will be prepared in accordance to the Bank's Safeguard Policy on Involuntary Resettlement OP 4.12. This will be done as a part of the preliminary design stage so that recommendations can be included into the project design. The ESMF and RPF will fully apply for the pilot investments under component C.

The project includes land use planning aspects due consideration will be given to the Interim Land Use Guidance note. This includes the development of a GIS for flood risk mapping and the promotion of mechanisms to avoid installation of population in flood prone areas through communication/awareness raising and implementation of land use regulation.

The executing agency will be responsible for the preparation of the ESIA, EMP and RAP, as well as update of ESMF and RPF and their submission to the Bank for approval

D. Project location (if known)

The project will cover the peri-urban areas of Dakar, and mainly the District of Pikine and Guediawaye.

E. Borrower’s Institutional Capacity for Safeguard Policies [from PCN]

The Municipal Development Agency (MDA), the implementation agency of the Local Authority Development project is experienced in safeguard policies in line with existing country legislation and World Bank procedures. MDA has already prepared and implemented successfully an Environmental and Social Management Framework and a Resettlement Policy Framework for large urban investments with potential environmental and social impacts which as a part of the Local Authority Development Project.

F. Environmental and Social Safeguards Specialists

- Mr Demba Balde (AFTCS)
- Mr Africa Eshogba Olojoba (AFTEN)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies Triggered	Yes	No	TBD
Environmental Assessment (OP/BP 4.01)	X		
<p>The project is categorized A due to the potential adverse environmental and social impacts of the civil works associated with the construction of the drainage infrastructure with the option to change it to a Category B depending on the findings and recommendations of the technical feasibility study and environmental and social impact assessment carried out during project preparation. The Environmental and Social Management Framework (ESMF) of the Local Authority Development Project (urban project) will be revised and updated for the overall project and will fully apply for the pilot investments under component C. Concerning the drainage investments (component B), an Environmental and Social Impact Assessment (ESIA) and an Environmental Management Plan (EMP) will be prepared. These environmental safeguards instruments of ESMF, ESIA and EMP will be disclosed in-country and at the Info-shop prior to appraisal</p>			
Natural Habitats (OP/BP 4.04)			X
<p>The Natural Habitats (OP/BP 4.04) policies might need to be triggered depending on the impact of drainage on the wetlands (Niayes).</p>			

Safeguard Policies Triggered	Yes	No	TBD
Forests (OP/BP 4.36)		X	
Pest Management (OP 4.09)		X	
Physical Cultural Resources (OP/BP 4.11)		X	
Indigenous Peoples (OP/BP 4.10)		X	
Involuntary Resettlement (OP/BP 4.12)	X		
<p>The policy is triggered as there is the likelihood that infrastructural investments might lead to resettlement of households; in particular to those living where the drainage channels will be built. There is also the possibility of restriction of access to sources of livelihood during civil works. The existing Resettlement Policy Framework (RPF) of the Local Authority Development Project (urban project) will be revised and updated for the overall project and will fully apply for the pilot investments under component C. Concerning the drainage investments (component B), a Resettlement Action Plan (RAP) will be prepared. These social safeguards instruments of RPF and RAP will be disclosed in-country and at the Info-shop prior to appraisal.</p>			
Safety of Dams (OP/BP 4.37)		X	
Projects on International Waterways (OP/BP 7.50)		X	
Projects in Disputed Areas (OP/BP 7.60)		X	

Environmental Category: A - Full Assessment

III. SAFEGUARD PREPARATION PLAN

- A. Target date for the Quality Enhancement Review (QER), at which time the PAD-stage ISDS would be prepared: 05/27/2011
- B. For simple projects that will not require a QER, the target date for preparing the PAD-stage ISDS: N/A
- C. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing¹ should be specified in the PAD-stage ISDS.
 The safeguards instruments will be updated and prepared from February to June 2011. These instruments: ESMF, RPF, ESIA, EMP and RAP will be disclosed in-country and at the Bank's Infoshop prior to appraisal.

¹ Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in-country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.

IV. APPROVALS

<i>Signed and submitted by:</i>		
Task Team Leader:	Mr Denis Jean-Jacques Jordy	12/10/2010
<i>Approved by:</i>		
Regional Safeguards Coordinator:	Ms Alexandra C. Bezeredi	12/14/2010
Comments:		
Sector Manager:	Ms Dahlia Lotayef	12/13/2010
Comments:		