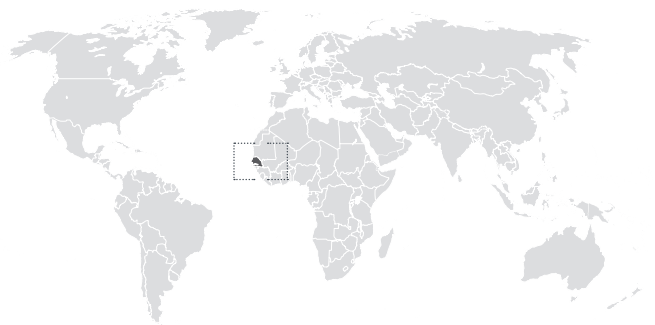


SENEGAL



BACKGROUND

Senegal is most vulnerable to droughts, locust invasions, floods and coastal erosion. Droughts primarily affect the arid and semi-arid Sahelian regions in the north of the country about once every three to four years, and floods most severely affect the lowest-income groups in urban areas. In addition, floods and droughts often lead to disease epidemics.

Flood risk is mainly the result of insufficient drainage infrastructure, as rapid urbanization has led to the occupation of low-lying areas and the reduction of soil infiltration potential. Some 74 percent of households in coastal areas are vulnerable to coastal erosion. Further,

rising sea levels and increasingly intense storms are exacerbating coastal erosion and flood risks. Projections suggest that sea levels could rise by up to one meter along the Senegalese coast by the end of the century, putting at least 110,000 people in low-lying southern Senegal at risk of coastal flooding.





In the past years, Senegal has scaled up disaster risk management (DRM) efforts considerably, with the government's National Civil Protection Agency placing DRM at the forefront of its fight against the negative socio-economic impacts that ordinary people experience from disasters. Additionally, DRM is one of the sub-

QUICK FACTS

COUNTRY INDICATORS¹

GDP per capita (PPP)	\$2,242
Total Population	14,133,280
Income Level	Lower middle
Poverty ²	47%
Urban Population	43%

RISK PROFILE³

Lack of coping capacity	 6.1
Vulnerability	 5.1
Hazard and exposure	 3.4
Overall risk	 4.7

KEY PRIORITIES

1. DRM into urban planning
2. DRM and CCA agenda integration
3. National DRM program
4. Financing mechanisms
5. Risk identification tools

¹ World Bank: free and open access to development data in countries around the globe. <http://data.worldbank.org/>

² Poverty rates at national poverty lines, World Bank Open Data.

³ INFORM: a global, open-source risk assessment for humanitarian crises and disasters. INFORM uses a scale from 0-10 (10 is the highest level of risk) <http://www.inform-index.org/>

components of Senegal's Poverty Reduction Strategy, and a national DRM program in line with the GFDRR Country Program was adopted in 2011. Moreover, the new Country Partnership Framework 2013-2017 identifies disaster risk and sustainable land management as strategic pillars of the World Bank's engagement in the country.

To further advance the DRM agenda, priorities include: (i) mainstreaming DRM in urban planning (ii) linking the DRM and climate change adaptation (CCA) agendas; (iii) supporting a national program for flood management; (iv) establishing financing mechanisms; and (v) developing risk identification tools.

GFDRR PROGRESS TO DATE

GFDRR's engagement began with the Spatial Analysis of Natural Hazards and Climate Variability Risks Project (2008), and a Post-Disaster Needs Assessment (PDNA) following the floods of 2009. Continuing, over US\$70 million in investments from the World Bank, Norway, Japan and the government of Senegal were allocated to develop the Africa Disaster Risk Management Team-led Storm Water and Climate Change Adaptation Project since November of 2012.

GFDRR is currently supporting the development of risk information and the coordination capacity of the National Platform for disaster risk reduction. The goal is to ensure better linkages between risk information,

development practices and emergency preparedness. The most recent support comes from the US\$1.1 million DRM and CCA project launched in September 2012, which complements the recently signed US\$55.5 million World Bank International Development Association (IDA) credit agreement with Senegal for storm water drainage in the Dakar's suburban neighborhoods.

In addition, GFDRR is providing assistance to partnerships established between the World Bank, the Food and Agriculture Organization (FAO), the United Nations Development Programme (UNDP), France, Japan, Norway and the European Union (EU) in flood risk management, coastal erosion, spatial planning and food security.








LOOKING AHEAD

In line with the new World Bank Country Partnership Strategy and the government's support of the national DRM program, the second phase of the project has begun. The second phase consolidates the country's capacity to manage risk through: (i) the development of geographic information systems (GIS) tools and a functioning early warning system; (ii) the implementation of a risk awareness campaign, (iii) strengthening of DRM

financing mechanisms; and (iv) supporting the national strategy for the protection of coastal zones.

In addition, GFDRR's Country Program will continue supporting capacities for flood prevention and early warning, with greater emphasis on linking national DRM and CCA agendas.


PROJECTS AWARDED BY GFDRR 2007-2015


Project	Description
Disaster Risk Management and Climate Change Adaptation – Phase II   US\$1,000,000 Start date: 2015 (Ongoing)	Enhances country capacities to better manage climate and disaster risks and leverage DRM entry points to promote long-term resilient development. Activities include: (i) enhancing the understanding of climate and disaster risks and vulnerabilities; (ii) creating an enabling policy, knowledge, and investment environment for resilient development and risk reduction at the country level; and (iii) developing tailored risk financing strategies.
Disaster Risk Management and Climate Change Adaptation – Phase I   US\$1,240,000 Start date: 2012 (Ongoing)	Develops technical capacities for early warning systems and institutional capacities in parallel, to ensure mainstreaming of DRM and CCA in development efforts. Activities include: (i) strengthening the operationalization capacity of the DRM national platform for coordination prevention, early warning, preparedness and response measures; (ii) establishing an institutional framework; and (iii) ensuring active engagement of relevant stakeholders in DRM and CCA
Economic Analysis of Coastal Adaptation  US\$150,000 2011-2013 (Completed)	Conducted an analysis on coastal vulnerability and identifying adaptation options for use in the coordination of coastal erosion activities. Activities included: include: (i) a final report with analysis and recommendations; (ii) a brochure for local decision makers and stakeholders; and (iii) a training session for local stakeholders. The analysis provided critical input for the development of an integrated coastal management plan supported by the European Union (EU) and identifies opportunities for policy reforms and investments.
Post-Disaster Needs Assessment (PDNA)  US\$174,199 2009-2011 (Completed)	Conducted a PDNA with a focus on flooding and coastal erosion. The PDNA allowed for the development of short, medium and long-term strategies, specifically for flood management and DRM. These strategies are now being implemented through the Storm Water Management and Climate Change Adaptation Project and the Economic and Spatial Study of the Vulnerability and Adaptation to Climate Change in Senegal's Coastal Zone, in close collaboration with the EU.
Spatial Analysis of Natural Hazard and Climate Variability Risks  US\$92,74 2008–2009 (Completed)	Conducted a spatial and economic analysis of the coastal zone's risk to climate change and climate variability, and related adaptation options in three pilot zones. The results of the study are being integrated for the development of climate resilience in local and national development plans related to Senegal's coastal zone. The project enabled testing and improving of analysis methodology, used in 2011-2012, for the nationwide climate change impact analysis focusing on coastal erosion.

 Pillar 1
Risk Identification

 Pillar 2
Risk Reduction

 Pillar 3
Preparedness

 Pillar 4
Financial Protection

 Pillar 5
Resilient Reconstruction

GFDRR KEY PARTNERS

EU	Through the Global Climate Change Alliance (GCCA), the European Union (EU) is providing US\$4 million to support the development of the Local Integrated Coastal Management Plans (2012–2014). This project shares pilot and technical committees with GFDRR-funded Spatial Analysis of Natural Hazard and Climate Variability Risks.
FAO	The Food And Agriculture Organization (FAO) (through its EMPRESS program) has provided technical support to the implementation of the African Emergency Locust Project (see World Bank below).
France	France is providing technical advice for the development of prevention and emergency preparedness plans, with a focus on urban sectors.
Japan	The Japan International Cooperation Agency (JICA) is conducting a study on storm water, wastewater and solid waste management for Kaolack (2011–2013), as an integrated solution to flooding. JICA is also considering contributing to the implementation of the Storm Water Management and Climate Change Adaptation Project by funding drainage systems in peri-urban Dakar area.
UNDP	From 2008-2009, the United Nations Development Programme (UNDP) supported the Senegalese government in the development of a national DRM program and a national DRM platform. The Country Plan funded by GFDRR will support the operational implementation of these outputs.
World Bank	<p>The following projects are part of the World Bank's efforts to mainstream DRM:</p> <ul style="list-style-type: none"> ■ Senegal Sustainable and Inclusive Agribusiness Project: Develops inclusive commercial agriculture and sustainable land management in project areas. ■ Senegal Disaster Risk Management and Climate Change Adaptation Project: Strengthens the capacity of the Directorate for Civil Protection to support the Disaster Risk Reduction platform and coordinate preparedness and response to floods. ■ Stormwater Management and Climate Change Adaptation Project: Improves stormwater drainage and flood prevention in peri-urban Dakar for the benefit of local residents.

GFDRR STAKEHOLDERS

National Services	Civil Protection Directorate, Local Governments, Urban Planning, Hydrological and Meteorological Services
International Organizations	World Bank, UNDP, World Food Programme (WFP), FAO, United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA)
Regional Organizations	Economic Community Of West African States (ECOWAS)
Non-governmental Organizations and Civil Society Organizations	CARITAS, Oxfam