

# MOZAMBIQUE



## BACKGROUND

After the 2000 floods, Mozambique adopted a risk reduction approach, establishing a governance framework for disaster risk reduction—nationally and locally. With a disaster risk management (DRM) policy in place, a functioning DRM platform and a national action plan under implementation, the country now ranks among the most progressive in Africa in advancing the DRM agenda.

Mozambique ranks third among the African countries most exposed to multiple weather-related hazards, suffering from periodic cyclones, droughts, floods, and

related epidemics. Drought occurs primarily in the southern region, with a frequency of seven droughts for every 10 years. Floods occur every two to three years, with higher levels of risk in the central and southern regions.





Mozambique was greatly affected by upstream river use in the Zambezi and the construction of the Kariba Dam in 1959. Recently concluded studies (2012), and future models predict a reduction in the flow of the Zambezi River of 15 percent but a 25 percent increase in the magnitude of large flood peaks in the Limpopo and Save

## QUICK FACTS

### COUNTRY INDICATORS<sup>1</sup>

GDP per capita (PPP)	\$1,105
Total Population	25,833,752
Income Level	Low
Poverty <sup>2</sup>	55%
Urban Population	32%

### RISK PROFILE<sup>3</sup>

Lack of coping capacity	 7.2
Vulnerability	 6.0
Hazard and exposure	 4.4
Overall risk	 5.7

### KEY PRIORITIES

1. Integration of DRM into development policies
2. Risk financing mechanisms
3. Building codes, land use and contingency planning
4. National Disaster Management Institute (INGC) strengthening

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

<sup>2</sup> Poverty rates at national poverty lines, World Bank Open Data.

<sup>3</sup> 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/>

rivers, requiring major rethinking in power consumption strategies. Critical sectors that will be at higher risk include agriculture, infrastructure, power, water and sanitation, health, and nutrition.

To further advance the DRM agenda, priorities include:  
(i) Integrating DRM into development policies;

(ii) defining institutional responsibilities; (iii) developing risk financing mechanisms; (iv) developing building codes and comprehensive land use planning; (v) Integrating risk information in development and contingency plans; and (vi) strengthening the National Disaster Management Institute (INGC).

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## GFDRR PROGRESS TO DATE

To help the government of Mozambique and the INGC address the above mentioned challenges, GFDRR supported an economic vulnerability and DRM study that was finalized in 2010. This study produced a *Drought and Flood Risk Atlas* that provides detailed risk profiling to help guide decision-makers. Another study output is a report on participatory natural hazard and climate change risk mapping done in Maxixe and Inhambane cities. This improved the government's knowledge of climate change adaptation (CCA) measures and costs, and provided a general methodology on how to conduct similar studies in other cities.

With a World Bank DRM Country Plan running from 2011 to 2014, GFDRR supported the Meteorological Agency in the rehabilitation of weather radar for improved early

warning systems and the hydro-climatological network, as well as staff training. The Country Plan also supported the enhancement of spatial flood management in the Limpopo basin through high-resolution Lidar surveys coupled with digital orto-photos (photos assembled from several overlapping images) and a decision support system.

In addition, GFDRR and the Africa Disaster Risk Management team is currently preparing technical assistance to implement resilient school construction in two provinces, after the successful mapping of hazards affecting education institutions. The technical assistance will also support the drafting of guidelines to inform resilient construction in the country.













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## LOOKING AHEAD


In the next three years, GFDRR will support: (i) the implementation of resilient school building codes and expand the project to other public buildings; (ii) review the existing requirements for flood and cyclone forecasting and early warning; (iii) carry out vulnerability assessments of critical transportation infrastructure and selected priority public buildings;


(iv) carry out a study on a flood protection management plan for the Limpopo and Zambezi river basins; (v) enhance capacity for emergency management, coordination, communication and response; (vi) develop disaster risk financing mechanisms; and (vii) establish web-based data management platforms for the INGC to improve preparedness for disaster response and resilience.


**PROJECTS AWARDED BY GFDRR 2007-2015**

Project	Description
<b>Safer Schools Program Phase II</b>  <b>US\$1,500,000   Start date: 2015 (Ongoing)</b>	Supports the government in the identification and reduction of risks in the education sector. Activities include: (I) enhancing the training and regulatory environment to increase the resilience of schools; (ii) financing activities to support various ministries (iii) increasing the understanding of disaster and climate risks relevant to school construction; and (iv) improving the existing Geo-node geospatial data platform managed by INGC.
<b>Roads and Bridges Management and Maintenance Project – Phase II</b>   <b>US\$15,897,832   Start date 2014 (Ongoing)</b>	Supports the development of transport infrastructure in Mozambique. Activities include: (i) supporting urgent road and bridge construction (ii) strengthening capacity to manage and administer the road sector; and (iii) establishing financing mechanisms for road maintenance.
<b>Enhancing Spatial Data for Flood Risk Management Project (Limpopo &amp; Zambezi Lidar)</b>    <b>US\$9,103,616   Start date 2014 (Ongoing)</b>	Supports the increase of Mozambique’s capacity to prepare for and manage flood events in the Limpopo and Zambezi River basins. Activities include: (i) updating contingency plans; (ii) improving flood risk identification; and (iii) using geospatial data to “build back better” infrastructure.
<b>Development of Safer Schools Program in Mozambique and Malawi *</b>  <b>US\$200,000   Start date 2014 (Ongoing)</b>	Supports the development of Safer Schools Programs in Mozambique and Malawi. Activities include: (i) identifying drivers of risk; (ii) preparing a strategy for intervention; and (iii) developing a detailed concept, activities and implementation arrangements of a larger technical assistance program on Safer Schools.
<b>Programmatic Support to Disaster Risk Management</b>     <b>US\$1,707,000 I 2010-2015 (Completed)</b>	Supported the implementation of the National Master Plan for Prevention and Mitigation of Natural Calamities. Activities included: (i) a study on strengthening the hydro-climatological network; (ii) rehabilitation of weather radars for improved early warning; (iii) a review of disaster risk financing instruments.
<b>Mainstreaming Disaster Reduction for Sustainable Poverty Reduction</b>  <b>US\$1,331,100 I 2006–2011 (Completed)</b>	Supported mainstreaming DRR in development policies. Activities included: (i) technical assistance to INGC; (ii) an economic vulnerability and disaster risk assessment study; and (iii) a study on participatory natural hazard and climate change risk mapping in Maxixe and Inhambane. INGC plans to use the manual to implement similar risk mapping exercises in other cities.

 Pillar 1  
Risk Identification

 Pillar 2  
Risk Reduction

 Pillar 3  
Preparedness

 Pillar 4  
Financial Protection

 Pillar 5  
Resilient Reconsruction

### GFDRR KEY PARTNERS

<b>EU</b>	The Disaster Preparedness Program of the Humanitarian Aid and Civil Protection Department of the EU (DIPECHO) supports DRM through projects implemented by various international NGOs, community-based organizations, and UN agencies.
<b>UN</b>	United Nations (UN) agencies through the United Nations Development Assistance Framework for Mozambique (2012-2015) (UNDAF) are supporting the Joint Programme for Strengthening Disaster Risk Reduction, Emergency Preparedness, Sustainable Environmental Management and Adaptation to Climate Change.
	The following projects are part of the World Bank's efforts to mainstream DRM:
	<ul style="list-style-type: none"> <li>■ <b>Enhancing Spatial Data for Flood Risk Management Project:</b> Improves Mozambique's capacity to prepare for and manage flood events in the Limpopo and Zambezi River basins.</li> <li>■ <b>Greater Maputo Water Supply Expansion Project:</b> Increases access to clean water for residents in the Greater Maputo Area.</li> <li>■ <b>Roads and Bridges Management and Maintenance Project:</b> Stimulates growth and contributes to poverty reduction through improved road infrastructure, better sector policies, and enhanced roads sector management.</li> <li>■ <b>Water Resources Development Flood Response Project:</b> Strengthens the management of national water resources and increases the yield from the Corumana dam to augment water supply for the Greater Maputo Metropolitan Area.</li> </ul>
<b>World Bank</b>	<ul style="list-style-type: none"> <li>■ <b>Transforming Hydro-Meteorological Services Project:</b> Strengthens hydro-meteorological information services to deliver reliable and timely climate information to local communities and supports economic development.</li> <li>■ <b>Mining and Gas Technical Assistance Project:</b> Strengthens the capacity and governance systems of key institutions to manage the mining and hydrocarbon sectors in Mozambique.</li> <li>■ <b>Climate Change Technical Assistance Project:</b> Strengthens the institutional and technical capacity of the government of Mozambique to mainstream climate change resilience into key economic sectors and improve the evidentiary basis for future development policy and planning.</li> <li>■ <b>Social Protection Project:</b> Provides temporary income support to extremely poor households and puts in place the building blocks of a social safety net system.</li> <li>■ <b>Coastal Cities &amp; Climate Change Project:</b> Strengthens municipal capacity for sustainable urban infrastructure provision and environmental management which enhance resiliency to climate related risks.</li> </ul>

### GFDRR STAKEHOLDERS

<b>National Services</b>	Ministry of Economics & Finance, National Disaster Management Institute, Ministry of Public Works, Housing and Water Resources, Ministry for Land, Environment and Rural Development, National Institute of Meteorology, Ministry of Education & Human Development, National Water Directorate, Eduardo Mondlane University (UEM)
<b>Regional Organizations</b>	Southern African Development Community (SADC)
<b>International Organizations</b>	UN Agency For Human Settlements (UN-HABITAT), United Nations Development Programme (UNDP), International Federation of Red Cross and Red Crescent Societies (IFRC), World Meteorological Organization (WMO), European Commission Disaster Preparedness Humanitarian Aid, and Civil Protection Programme (DIPECHO), United Kingdom Department of International Development (DFID)
<b>Non-governmental Organizations and Civil Society Organizations</b>	Plan International