

World Conference on Disaster Reduction Kobe-Hyogo, Japan, 18-22 January 2005

MOZAMBIQUE NATIONAL REPORT ON DISASTER REDUCTION

1. POLITICAL COMMITMENT AND INSTITUTIONAL ASPECTS

1.1 National policy and legislation for disaster risk reduction

Disaster management activities in Mozambique are regulated by the Disaster National Policy. The Disaster Policy was approved by the Cabinet in 1999, through the Resolution 18/99 of 10 June. The major objectives of the National Policy for Disaster Management are:

- a) To save human lives and protect property from destruction due to natural or man-made disasters ;
- b) To incorporate disaster prevention and mitigation components in the overall economic and social development process of the country;
- c) To ensure effective coordination among government institutions, the private sector and NGOs in disaster management;
- d) To contribute for preservation of the environmental issues;
- e) To promote regional and international coordination in disaster management;
- f) To establish legal framework for the implementation of the Policy, including Disaster Management Act, National Disaster Management Strategic Plan, Contingency Plans and other norms and procedures for disaster management;
- g) To mobilize resources for humanitarian relief assistance to the victims of disasters and undertake post-disaster rehabilitation and reconstruction programmes.

1.2 Institutional Arrangements for Multi-sectoral Coordination and Collaboration in Disaster Management

The Coordinating Council for Disaster Management (CCGC) is responsible for overall coordination of disaster management activities. The Coordinating Council is a policy making body and its members include several Cabinet Ministers. The Prime Minister chairs the Coordinating Council for Disaster Management, with the Minister of Foreign Affairs and Cooperation standing as deputy chairperson. For details, please see the organogram in annex.

At operational level, the National Institute for Disaster Management (INGC) is the executive arm of the Coordinating Council for Disaster Management and it is responsible for coordination of day-to-day disaster management activities, including multi-sectoral prevention, mitigation, relief and post-disaster rehabilitation and reconstruction.

To fulfill its mandate the INGC is backed by the Technical Council for Disaster Management, which is composed by the multi-sectoral representatives that meet on a regular basis under the chairmanship of the INGC to prepare strategies and plans for implementation at sectoral level nationwide, down to the provinces and districts, including action plans and contingency plans. Other stakeholders such as UN agencies, NGO's and private sector representatives may attend the meetings of the Technical Council, depending upon the agenda.

1.3 Sectoral Plans or Initiatives for Risk Reduction

Within the framework of the National Policy for Disaster Management some key sectors are required to have specific plans for disaster management. Indeed, some sectors have developed plans for disaster reduction namely:

- epidemics control measures and malnutrition surveillance (health),
- drought and famine monitoring (agriculture),
- flood warning system (water) and ;
- cyclone warning system (meteorology)

The Ministry of Environmental issues has just completed the process of developing, with the INGC participation, of the National Plan of Action for Adaptation to Climate Changes and the National Plan of Action to Combat Desertification for 2004-2006.

The major challenges for implementation of sectoral plans are lack of funding and the need for a coordinated approach as these sectoral activities complement one other.

- 1.4 Disaster risk reduction is part of the National Strategy for Poverty Alleviation (PARPA) which is coordinated by the Ministry of Planning and Finance and is also part of the National Environmental Action Plan under the Ministry for coordination of Environmental issues.
- 1.5 Mozambique does not have building codes for seismic risk as the risk of seismic activity is so far deemed low, as there is no appropriate monitoring capacity.
- 1.6 The national annual budget includes only recurrent expenses with additional funding on decentralized and ad hoc basis for the provision for disaster response activities
- 1.7 The private sector, civil society, NGO's, academia and media participate in disaster risk reduction efforts. These institutions participate in the implementation of government initiatives for risk reduction such as annual contingency plans, awareness raising programmes for people living in areas prone to floods, cyclones and floods and they undertake training programmes on mitigation measures in coordination with the

National Institute for Disaster Management and other government institutions involved in disaster management activities.

2. RISK IDENTIFICATION

- 2.1 Mozambique carried out hazard mapping for floods, cyclones and drought. The hazard mapping was done for the whole country, but the most extensive assessments were done in the Limpopo and Buzi river basins for floods, in Southern and Central Mozambique, and they include characteristics, impacts and historical data. These assessments are available for a wide range of users including government institutions, academia and other institutions involved in disaster risk reduction.
- 2.2 There are mechanisms for risk monitoring and risk assessment. The Ministry of Agriculture and Rural Development is responsible for drought/famine monitoring; the Ministry of Health is responsible for epidemics; the Department of water is responsible for flood monitoring; and the Met services for monitoring cyclones and storms.
- 2.3 Yes. Socio-economic and environmental impacts and losses analysis are carried out after major disasters by the institutions involved in disaster management and the results are published in post-disaster assessment reports. For instance, bearing in mind that around 30% of the Mozambican GDP depends on the agriculture sectors, joint assessment mission are carried out by FAO/WFP.
- 2.4 Yes. Although still in development, there are early warning systems for floods, cyclones and droughts. The flood warning system was activated timely during the 2000 and 2001 floods, as well as the cyclone early warning system. The institutions involved are the National Met Service, Department of Water, Ministry of Agriculture, National Institute for Disaster Management and the Ministry of State Administration. The lessons learned are that warnings are important for people to evacuated the vulnerable areas at risk, although in some cases people are reluctant to leave due to several reasons (cultural reasons, inadequate language or not believing on the importance of warnings or eminent risk).

3 KNOWLEDGE MANAGEMENT

3.1 Disaster risk information management systems

Mozambique developed the following risk information management systems:

- **Food security and nutrition information system** – this system was developed by the Technical Secretariat for Food Security and Nutrition, which is a multisectoral body working under the Ministry of Agriculture and Rural Development. The information collected includes agricultural production, availability of and access to food and health and nutritional indicators. This information is disseminated through regular reports and bulletins to government institutions and other users;

- **Cyclones early warning system** – this system was jointly developed by the National Institute of Meteorology and National Institute for Disaster Management and it is aimed at monitoring the formation and development of cyclones along the Mozambican coast
- and provide timely warnings to people to reduce loss of human lives and damage to property;
- **Floods early warning system** – Developed by the National Directorate of Water/Ministry of Public Works and Housing, the system consists of regular gauging of water levels and interpretation of data in the major river basins. The information is then used to issue warnings on imminent floods in the river basins.

Moreover, aiming at improving the effectiveness of these Early Warning Systems on disaster risk reduction, INGC has been organizing training courses at national and sub-regional level on information management involving participants from SADC member states (disaster officials and media community). This takes into account the fact that disasters know no boundaries.

3.2 Academic and research communities linked to institutions dealing with disaster reduction

There are a number of academic and research institutions involved in disaster reduction, namely Eduardo Mondlane University, Mozambique Catholic University and the National Institute for Agricultural Research. These institutions participated in the following activities:

- Preparation of ATLAS of flood risk reduction in the Limpopo river basin and studies on the impact of floods in Mozambique;
- Preparation of flood hazard mapping for Buzi river basin;
- Research and dissemination of drought tolerant crops, as part of drought mitigation measures.

3.3 Education programmes related to disaster risk reduction in public school system

So far there are no formal educational programmes related to risks reduction, except training undertaken by INGC and others institutions.

3.4 Training programmes available

The National Institute for Disaster Management is conducting a training programme for awareness raising and information management targeting government institutions involved in disaster risk reduction at central, provincial and district levels, media and other stakeholders such as the community leaders. These training programmes have contributed to improve the knowledge of government officials and other stakeholders on the importance of disaster prevention and mitigation. Bearing in mind the regional dimension of most disasters and the fact that 12 out of 15 international river basins in SADC sub-region drain into

Mozambique resulting in floods, the training programme designed by INGC includes also participants from SADC.

3.5 National public awareness programmes on disaster risk reduction

Mozambique has developed public awareness programmes targeting local communities. These programmes are being implemented by the National Institute for Disaster Management with the involvement of NGO's, religious groups, community leaders and media. Communities have been adhering to these initiatives and they prove to be useful to improve public awareness of the negative effects of disasters and the need to take proactive approach towards the risk.

3. RISK MANAGEMENT APPLICATIONS/INSTRUMENTS

4.1 Examples of linking environmental management and risk reduction practices

- Wetland management in the Limpopo and Buzi river basins for floods control through construction of dykes and embankments. This project is being implemented by the Ministry of Public Works and Housing.;
- Reforestation projects to combat drought and desertification in Mapulanguene/Magude district and Chicualacuala district - implemented by the Ministry of Environment;
- Coastal zone management project to combat soil erosion in the coastal areas of Mozambique. This project is being implemented by the Ministry of Environment;
- Research and multiplication of drought tolerant crops such as cassava and sweet potatoes for distribution in drought prone areas - implemented jointly by the Ministry of Agriculture and Rural Development and the National Institute for Agricultural Research
- Promotion, by INGC and Water Sector, of small scheme water management, such as reservoirs for small scale irrigation agricultural projects in drought prone areas using food for work .

4.2 Financial instruments being utilized to reduce impact of disasters

The government of Mozambique allocates funds for recurrent expenses from State budget to the National Institute for Disaster Management to reduce the impact of disasters. INGC is promoting the use of the weather insurance as a risk reduction measures

4.3 Specific examples of technical measures on disaster risk reduction

The government of Mozambique in collaboration with academic institutions and NGO's developed ATLAS of flood risk in the Limpopo river basin and flood hazard mapping for Buzi river basin. The government also undertook a study of impact of floods in the Incomati

catchment. The government of Mozambique has developed a three colours flag and five category cyclones early warning system to help local communities to prepare for, and reduce the impacts of, cyclones. Additionally, sectoral and regional coordination in water issues backed by bilateral and joint agreements or memoranda has proved of paramount importance in improving the effectiveness of Early Warning Systems on flooding.

4. PREPAREDNESS AND CONTINGENCY PLANNING

5.1 Disaster contingency plans

Mozambique since 1996 is developing annual national contingency plans in anticipation of the rainy and cyclones season. The contingency plans are for both national and community levels. The main components of the contingency plans are prediction of possible scenarios during the season (floods, cyclones and droughts) and establishment of structural and non-structural measures that have to be taken before, during and after the disaster occur.

The contingency plans are activated by the National Institute for Disaster Management and are updated on annual basis. The contingency plans are used every year and proved to be a good exercise to reduce the impact of disasters.

5.2 Emergency funds for disaster response

The government allocates regular funds for the recurrent expenses to the National Institute for Disaster Management. The National Institute for Disaster Management in collaboration with other stakeholders established storage facilities for emergency relief items in key areas like provincial capitals and other strategic sites. In these facilities the government keeps a minimum of relief items that are readily available for initial relief operations in case of disasters. The emergency fund is envisaged in the Disaster Management Act proposal in the Parliament

5.3 Responsibility for coordination of disaster response preparedness

The National Institute for Disaster Management is the government institution responsible for disaster response activities. Coordination is done through the Technical Council for Disaster Management, which is a multisectoral body. However, the National Institute for Disaster Management does not have adequate human and financial resources to fulfill its role. Therefore, training programmes are being implemented to enhance the human resources of the institution, while seeking financial support from bi-lateral and multilateral cooperating partners.

6. Good practice in disaster risk management

Example 1: Drought Prevention and Mitigation Measures

1. Background

Mozambique is a country that is prone to recurrent droughts, related to the El Niño phenomenon, resulting in widespread famine due to loss of crops and death of animals. Indeed,

droughts exacerbate the already fragile economic base of majority of Mozambicans, especially the poor living in rural areas.

2. Strategy adopted to counter the effects of droughts

The government of Mozambique, through the Ministry of Agriculture and Rural Development developed strategies to reduce the impact of droughts. These strategies are two folded: (i) introduction of drought tolerant crops and (ii) intensive use of wetlands for food production in drought affected areas.

2.1 Introduction of drought tolerant crops

This strategy consists of making research of crops that do not require high amounts of moisture like cassava and sweet potatoes and select areas where they can easy adapt to local soil conditions.

Extension service workers establish multiplication plots of vegetative materials, which are then distributed to farmers in drought-affected areas. This experience has been replicated in many drought-prone areas throughout and farmers through their associations are now responsible for establishing multiplication plots for further distribution of sale of vegetative materials to other areas.

2.2 Use of wetlands for food production

Farmers living in drought stricken areas receive training and technical support from extension services and community based organizations to change their agricultural practices. Plots of land are distributed to farmers in low-lying areas so that they can produce even in drought conditions.

2.3. Small Scale irrigation

Farmers organized in associations are encouraged not depend only on the rain for producing. Rather are provided appropriated agricultural means such as pedestral and others irrigation pumps and trained on irrigation techniques and maintenance of pumps.

2. Lessons learned from drought mitigation strategies

These strategies have proved to be very useful and effective for drought mitigation as people now even in drought conditions are able to produce to meet their food requirements, therefore reducing pressure on government's limited resources and the negative effects of dependency on emergency handouts.

Example 2: Floods management experience in year 2000

The 2000 floods were the worst floods in the living memory in Mozambique, with a death toll of 699 people, plus 650,000 displaced and 4.5 million affected in South and Central of the country . The floods also caused disruption of economic and social activities with reported losses of more than USD 600 million and sharp decline of economic growth from 10% in the

previous year to 1.5%. These report highlights the actions taken by the government before, during and after the floods and lessons learned.

ACTIONS TAKEN

A) Before the floods

The weather forecast for the 1999/2000 rainy season indicated in October 1999 normal to above normal rains in central and southern Mozambique and below normal rains in the north. Based on these predictions the Technical Council for Disaster Management started to work on possible scenarios during the season, namely floods and cyclones. The Technical Council for Disaster Management prepared and submitted to the Coordinating Council for Disaster Management a contingency plan for the rainy season that included the following major components:

- Identification of areas likely to be affected by floods and/or cyclones and estimate of population at risk;
- Identification of safe areas for temporary shelter and resettlement of people to be evacuated from areas at risk;
- Mobilization of means for search and rescue operations in areas likely to be affected by floods,
- Estimation of food and non-food requirements for affected population;
- Pre-positioning of relief items for a three months period in areas likely to be affected or isolated;
- Dissemination of hydro-met updates to central, provincial and district authorities and local community in order to take precaution measures;
- Dissemination of warnings on eminent floods and actions to be taken to protect lives and property.

During a week inaugurated by the Prime Minister in October 1999, the Technical Council carried out jointly with the Mozambican Red Cross a simulation exercises on the possible flooding scenarios.

B) During the floods

As indicated in the weather forecast, during the period from December-99 to March-00 heavy rains were reported in southern Mozambique and upstream in Botswana, Zimbabwe and South Africa resulting in floods in many river basins across central and southern Mozambique. In addition, central and southern Mozambique was hit by cyclones Connie, Eline, Gloria and Huddah, which brought more rains. To face the drama caused by floods the government took the following actions:

- Search and rescue of people stranded in isolated areas using aircrafts, boats and trucks with international assistance;

- Establishment of temporary shelters for the thousands of homeless and evacuees;
- Provision of humanitarian emergency relief, including food and non-food requirements in more than 100 temporary accommodation centers in radius of more than 1,000 Km in five provinces;
- Monitoring of conditions in accommodation camps to prevent outbreak of diseases;
- Provision water purification equipment, sanitation and medical assistance in the camps;
- Preparation of humanitarian emergency appeals.

C) After the floods

The following actions were taken after the floods:

- Identification of safe areas for resettlement of displaced people and other people living in areas at risk of floods;
- Support to the resettlement process through provision of building materials and kitchen sets;
- Distribution of seeds and tools to displaced and affected population for them to resume agricultural activities;
- Preparation of the post-disaster reconstruction plan;
- Mapping of flood prone areas and resettlement of the vulnerable population .
- Rehabilitation of infrastructures that were destroyed by floods;

D) Lessons learned

Although the floods overstretched the capacity of the government, the establishment of contingency plan proved a vital instrument that enabled the government to act quickly in the wake of the floods. In addition, people relocated in new areas are safer now and are aware of the negative effects of floods. As a result of the good experience of managing the 2000 floods, the following floods in 2001 in the Zambeze basin although they affected a wider area their effects in terms of loss of lives and damage to infrastructures were negligible.

7. PRIORITIES WE WANT ADDRESSED AT THE WORLD CONFERENCE ON DISASTER REDUCTION

We would like to see the following topics addressed in the World Disaster Conference in Kobe:

- Strengthening of institutional capacity building on disaster risk reduction.
- Promotion of initiatives for networking for disaster prevention and preparedness at national, regional and international levels;
- Establishment of a process of information sharing and exchange of experiences among countries prone to the same type of disasters;
- Education and training as a key factor to reduce the risk of disasters both in schools and to the public at large;
- Emergency funding based on flexibility and operational mechanisms for disaster preparedness and response activities;

- Consolidation of the integration of disaster management policy in the all socio-economic development process.
- The awareness building of the consequences of climate changes, taking into account the possible impacts on the coastal countries such as Mozambique which is already vulnerable to floods, cyclones and droughts aggravated by poverty.

We would like to present our experience in the preparation of national contingency plans as a tool for disaster risk reduction.

