

PROVENTION CONSORTIUM
Community Risk Assessment
and Action Planning project

MOZAMBIQUE – Búzi



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Assessing the Role of Local Institutions in reducing the Vulnerability of At-Risk Communities in Búzi, Central Mozambique

CRA Toolkit
CASE STUDY

This case study is part of a broader ProVention Consortium initiative aimed at collecting and analyzing community risk assessment cases. For more information on this project, see www.proventionconsortium.org.

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Note:

A Guidance Note has been developed for this case study. It contains an abstract, analyzes the main findings of the study, provides contextual and strategic notes and highlights the main lessons learned from the case. The guidance note has been developed by Dr. Ben Wisner in close collaboration with the author(s) of the case study and the organization(s) involved.



United Nations Food
and Agricultural Organisation



Deutsche Gesellschaft
für Technische Zusammenarbeit



UNIVERSITY OF CAPE TOWN

Disaster Mitigation for Sustainable
Livelihoods Programme (DiMP)

THE ROLE OF LOCAL INSTITUTIONS IN REDUCING VULNERABILITY TO RECURRENT NATURAL DISASTERS AND IN SUSTAINABLE LIVELIHOODS DEVELOPMENT

Case study

Assessing the Role of Local Institutions in Reducing the Vulnerability of At-Risk Communities in Búzi, Central Mozambique

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Map of Mozambique showing the study area



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Abbreviations and acronyms

CCM – Mozambique Christian Council

CIG-UCM – Centro de Informação Geográfica da Universidade Católica de Moçambique (Geographic Information Centre of the Catholic University of Mozambique, Beira)

CVM – Cruz Vermelha de Moçambique (Mozambican Red Cross)

DIMP – Disaster Mitigation for Sustainable Livelihoods Programme

DNA – Direcção Nacional das Águas (National Directorate for Water Management representing the Ministry of Public Works and Housing),

DORCAS Aid – International Christian Aid and Development Organisation

ESMABAMA – A Catholic charity organisation working in four mission of southern Sofala (Estaquinha, Machanga, Barada and Mangunde)

FAO – Food and Agriculture Organisation of the United Nations

FCF – Foundation Against Famine

GRC – Committee for Risk Management

GTZ – (Deutsche) Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation Corporation)

INAM – Instituto Nacional de Meteorologia (National Institute for Weather Forecasting)

INE – Instituto Nacional de Estatística (National Statistics Institute)

INGC- Instituto Nacional de Gestão de Calamidades (National Institute for Disaster Management)

KULIMA – Mozambican NGO working on agricultural and rural development

NGO – Non-governmental organisation

MADER – Ministério da Agricultura e Desenvolvimento Rural (Ministry of Agriculture and Rural development)

MISAU – Ministério da Saúde Ministry of Health

ORAM – Rural Mutual Assistance (Mozambican NGO working on agriculture and Rural Development)

PMA – Programa Mundial para Alimentação (World Food Programme)

UCM – Universidade Católica de Moçambique (Catholic University of Mozambique)

UCT – University of Cape Town

UN – United Nations

UNDP – United Nations Development Programme

UNEP/HABITAT – United Nations Environment Programme

UNESCO – United Nations Educational, Scientific and Cultural Organization

UNFPA – United Nations Population Fund

UNHCR – United Nations High Commission for Refugees

UNICEF – United Nations Children Fund

USA – United States of America

USAID – United States Agency for International Development

WFP – World Food Programme

WHO – World Health Organisation

Executive Summary

Background

From December 1999 to March 2000, Mozambique recorded the highest rainfall rates since 1951. They were associated with twelve meteorological systems, and triggered massive flooding in the southern and central regions of the country, with disastrous consequences, including human, physical and economic losses. This event, reported as a 'flood event', with more people affected by flooding than directly by the rain, had a considerable affect on the livelihoods of over a million people. The heavy rains in other southern African countries such as Botswana, Zimbabwe, South Africa and Swaziland, caused in part by the cyclones Connie and Eline, were precursors to the flooding in Mozambique. Neighbouring countries were forced to open their dams, resulting in excessive volumes of water entering the Mozambique catchment areas.

The Búzi catchment in central Mozambique was one of those affected by waters released from the Chicamba Dam, causing rising levels in the Búzi River, with consequent flooding. This helps explain why floods in that area occurred some days after the cyclones had passed. Most communities in Búzi Province were declared disaster-affected.

With limited resources to respond to such an event, the Mozambique government was forced to seek assistance from the international community. They launched two international appeals, which resulted in aid being supplied for both evacuation and rehabilitation.

This study aims at understanding the role of local institutions and organisations in reducing people's vulnerability to natural hazards. It was based in Búzi District, where two villages, namely Munamicua and Boca, were selected for the fieldwork. Both sites still reflect the impact of the events of 2000 in the highly vulnerable livelihoods of their households. The research methodology involved multidisciplinary methods and techniques. Data was gathered from a number of institutions before the fieldwork was conducted.

The 2000 floods: Early warning, emergency response and recovery in Búzi

The uncharacteristic nature of the 2000 flooding event had serious implications for the early-warning system mechanisms, since riverine communities did not respond appropriately. The flooding in the Búzi catchment, triggered by the Búzi River inundation, was uncharacteristically higher than normal cyclone-triggered flooding. The Búzi administrative authorities were alerted to the rapidly rising river water by the Chibabava administrative authorities in the Búzi upper stream. Communities surrounding the Búzi headquarters were warned, but warnings failed to reach remote zones of the district on time. However even the alerted communities did not take the warning seriously because the rain had stopped some days before, and as a result no measures were taken to reduce the impact of what was later reported as one of the most intense floods in the communities' history.

In Búzi no formal rescue was provided at the beginning of the flooding, so that by the time rescue measures were provided by official authorities or external agencies, households had already evacuated themselves to safer locations. Both case studies show the prevalence and importance of informal social networks, local institutions and local authorities (traditional and

administrative) and locally-based organisations (e.g. churches) for disaster mitigation, response and recovery, using local natural resources.

The limited capacity of the national government to respond to the emergency was clear from the outset. Many of the emergency relief organisations provided immediate assistance that lasted almost six months and satisfied only immediate needs. Emergency aid relief consisted mainly of food, clothing, medicines and – in a few cases – money. This assistance was provided after a rapid needs assessment, conducted by the donors and the administrative authorities. The relief distribution encountered several problems because of the limited and non-standardised needs assessment, together with inefficient coordination of distribution. This meant that there was no coverage of many places, especially in the more remote areas.

After the immediate emergency situation was over most of these organisations disappeared, with only a few left, running reconstruction programmes for affected households. Unfortunately these were far from sufficient for the needs of the villagers, considering the level of destruction suffered. Most of the organisations assisted the communities for less than six months after the floods – the only organisations still working in the Búzi basin were those whose main activities were related to disaster risk management, such as the GTZ¹, CVM² and some organisations working on food and seeds distribution (CCM³, ESMABA MA⁴).

Recommendations

The study in the two villages highlighted the critical importance of both traditional authorities and informal social networks in mitigating the impact of recurrent disasters. Some problems did, however, arise because of corruption and nepotism between traditional authorities, as well as due to internal conflicts in the local traditional structures. This affected local communities after the 2000 floods because traditional authorities participated in the identification and assessment of flood-ravaged households within their area of jurisdiction.

In order to strengthen local capacity for reducing the people's vulnerability to natural hazards through efficient early warning and through adequate response and recovery action, the study presents the following specific recommendations:

Early warning and emergency planning

To include:

- a) Development of local management plans involving the local authorities and the most influential people within the community;
- b) Promotion of the local community radio station in Búzi to disseminate early warnings;
- c) Distribution of solar or wind-up radios, as villagers often cannot afford batteries;
- d) Active involvement of GRC members to complement the information broadcast from local radio to local communities, especially in remote locations along the Búzi catchment;
- e) Working with communities to inform them of the recurrence of extreme weather events, so that all warnings issued by government are taken seriously;

¹ A German government-owned corporation for international cooperation.

² The Mozambican Red Cross.

³ The Mozambique Christian Council (Protestant).

⁴ A Catholic charity organisation working in four missions of southern Sofala (Estaquinha, Machanga, Barada and Mangunde).

- f) Promotion of national and provincial teams for monitoring, recording and evaluating indicators of natural hazards, and subsequently disseminating information to potentially affected communities;
- g) Facilitation of environmental education programmes within local communities, to increase their knowledge of natural hazards, and especially to increase their capacity to understand uncharacteristically extreme events;
- h) Design of evacuation plans with at-risk communities, specifying locations to which they should evacuate in case of emergency, and where to access necessary resources;
- i) Integration of the scientific understanding of natural hazards with local “conventional wisdom” or traditional beliefs.

Designing of evacuation, search and rescue plans

To include:

- a) Development, for the youth in all vulnerable zones, of ongoing training programmes in emergency first aid and in evacuation and search-and-rescue procedures.

Impact assessment and relief distribution

To include:

- a) Standardisation of assessment procedures;
- b) Pre-assessment and monitoring of food relief distribution by the local authorities to avoid community conflicts;
- c) Encouragement of partnerships between the Mozambican government and external agencies to overcome the external agencies’ mistrust of local authorities, and promotion of collaborative work to avoid haphazard assessment and distribution of relief;
- d) Design of emergency food aid interventions, not only to provide immediate relief, but also to support mitigation activities;

Recovery and rehabilitation

To include:

- a) Establishment of long-term rehabilitation processes involving all community members;
- b) Design of planning and recovery programmes which take into account local cognitive factors that will influence their effectiveness;
- c) Support local informal support networks.

Reducing the vulnerability of at-risk communities by strengthening and diversifying community livelihoods

To include:

- a) Focus on extensive and diverse sustainable utilisation of the natural resource base (agriculture, livestock, wildlife, fishery, forestry) and efficient utilisation of river basins for crop production;
- b) Focus on female-headed households whose livelihoods are agriculturally dependent;
- c) Encouragement of local seed exchange between farmers from different communities (local seed is more resilient as it has adapted to local soil and climate conditions);
- d) Promoting local agrarian extension officers to help communities improve agricultural production;
- e) Encouragement of NGOs in implementing small projects for livestock production as a second means of livelihood.

Strengthening the coordination role of local institutions to reduce the vulnerability of at-risk communities

To include:

- a) Increased coordination between government institutions at national, provincial, district and local levels;
- b) Permanent operation of disaster committees at each level of government;
- c) Strengthening coordination between the Mozambican government and other southern Africa countries, especially in water management;
- d) Setting up a database of all institutions and organisations working on disaster management at local level;
- e) Establishment of communication mechanisms among local institutions to ensure better coordination;
- f) Strengthening of initiatives such as the GRC (Committee for Risk Management) set up by the Red Cross and GTZ;
- g) Strengthening the organisational capacity of local organisations;
- h) Government collaboration with NGOs and other agencies that have already understood the importance of local organisation.

Need for integration of disaster management in the sectoral policies

To include:

- a) Increased sectoral engagement between government departments on disaster risk management;
- b) Integration of disaster risk reduction principles into government programmes;

Promoting multidisciplinary research into vulnerability reduction

To include:

- a) Adoption of a multi-disciplinary approach to assess communities at-risk;
- b) Encouragement of government and local institutions to develop an interdisciplinary "vulnerability index";
- c) Work by local authorities on a long-term basis to persuade communities that extreme events like the 2000 floods can occur again.

PART 1

Introduction, background, identification of study sites and methodology

1.1 Introduction⁵

From December 1999 to March 2000, the highest rainfall rate since 1951 was recorded, triggering the worst flooding ever recorded in southern and central Mozambique. This rainfall was associated with twelve meteorological systems, namely cyclones and tropical storms (see Appendix 1) which originated in the Mozambique Channel in the Indian Ocean. The Mozambican Government assessed the dramatic consequences of this disaster over three dimensions:

- *Human dimension*: a total of 5.2 million people were affected (30% of the Mozambican population): 699 people died, 491,000 were displaced and 95 disappeared.
- *Physical dimension*: roads, railways and other infrastructures were destroyed; an area of 30,000 square kilometres was inundated from the Umbelúzi, Incomáti, Limpopo and Save River basins in southern Mozambique to the Búzi River basin in the central region of the country;
- *Economic losses*: economic losses were estimated to have totalled USD 600 million, with a reduction in the country's economic growth from 10 per cent to 3.8 per cent (GOM, 2000).

This event was reported as a flood event' because more people were affected by flooding than by rain. No exact data are available, but it affected the livelihoods of millions of people. In central Mozambique about 1,730,600 people were affected. In Sofala, a province with an 87.9% poverty index, 257,908 people were affected: 101 died and 94,200 were displaced (ibid.). The high level of poverty exacerbated existing conditions of vulnerability and impeded recovery.

The heavy rains in other southern African countries⁶, caused in part by cyclone Connie (which hit the area on 4th and 5th February 2000), and cyclone Eline (21st and 22nd February), were precursors to the Búzi flooding. This was in part because the extremely heavy downpour forced neighbouring countries to open their dams, resulting in excessive volumes of water entering Mozambique catchment areas. This exacerbated the local flooding triggered by the two successive cyclones. The Búzi basin, for example, was affected by waters released from neighbouring Zimbabwe, which forced the Chicamba Dam to be released, causing rising levels in the Búzi River and consequent flooding. This helps explain why floods in that area occurred some days after the cyclones had passed. Most communities in Búzi were declared disaster-affected.

With limited resources to respond to such an event, the Mozambique government was forced to seek assistance from the international community. From February to March 2000, they sent out international appeals which elicited a response of about USD 162 millions (GOM, 2000).

⁵ Most of the data reported in this section were taken from GOM (2000). We clearly acknowledge the source and the copyright.

⁶ Botswana, Zimbabwe, South Africa and Swaziland.

This assistance was destined mainly for food, infrastructure repair and rescue material (see Appendix 2). This assistance made it possible for people to buy essential goods, and funded services for the emergency operations being undertaken by state institutions, NGOs, UN agencies and religious organisations. The involvement of several organisations in the reception and distribution of aid made the operation more flexible and efficient. It was also possible to rescue 53,000 people, to provide emergency assistance to about 676,700 people in the established accommodation centres, and to start the process of population resettlement. Assistance was distributed using criteria based on the declaration of items lost.

This study aimed at understanding the role of local institutions and organisations in reducing people's vulnerability to natural hazards in Búzi. To explore institutional coordination, the 2000 Mozambique disaster (floods and cyclones) was taken as a point of reference. To reach our goal, a research methodology involving multidisciplinary methods and techniques, previously discussed at UCT with the South African team, was applied. This will be discussed later in Part 1, as well as the criteria for selecting the study sites.

This report is structured as follows:

Part 1 presents a general introduction to the study, background on Mozambique, and identification of study sites. It also presents the methodology used for data collection.

Part 2 describes how early-warning mechanisms were operated, the role of informal social networks in emergency response, emergency assistance itself, the role of institutions in long-term recovery and risk reduction of at-risk communities.

Part 3 deals with institutional assessment at national, provincial and district levels.

Part 4 presents the lessons learnt from the 2000 floods, and addresses some recommendations to improve emergency responses and to reduce the vulnerability of at-risk communities.

1.2 Background on Mozambique

Mozambique is one of the southern African countries most disposed to hydrometeorological hazards (Boudreau *et al*, 2002). In the last two decades climate-related shocks have tended to increase in frequency and severity, resulting in catastrophic damage to livelihood (ibid.). Data gathered during the last two decades suggest that, throughout the country, more than 8 million people were affected by natural phenomena (ibid.), the most frequent being droughts, floods and cyclones. They had a devastating impact on the most vulnerable 80% of the population, living in the rural areas.

The state of vulnerability of these people is aggravated by their extreme poverty, itself compounded by their limited access to essential services, by fragile infrastructures and by low productivity levels. Mozambique is one of the world's poorest and most in debt countries (Abrahamsson & Nilsson, 1995), occupying position 170 out of 174 in the world poverty ranking (UNDP, 2002).

The extreme vulnerability of rural livelihood was generated in part by the Mozambican civil war that lasted for 17 years after the country became independent in 1975. This war caused demographic upheavals, especially in the rural areas. About 3.5 million people were internally displaced or became refugees in bordering countries (Devereux & Palmero, 1999). Other

consequences included the loss of lives of approximately one million people (Pitcher, 1996), and landmines placed throughout the countryside made it almost impossible for rural people to access their cropping lands.

The civil war destroyed significant parts of the physical and commercial infrastructure in rural areas. Numerous roads, bridges, shops, schools and health-care institutions were destroyed (Devereux & Palmero, 1999; Pitcher, 1998) and caused US\$15 billion worth of damages (Pitcher, 1996). According to calculations made by the UN, the cost of the physical destruction during the 1980s amounted to 250 years' worth of exports at the 1992 level, and twice the annual influx of foreign aid (Devereux & Palmero, 1999 and Abrahamsson & Nilsson, 1995).

With the uncontrolled dispersion of communities, rural households lost their social networks, families were split up, and individuals were taken away from a context in which they could draw on mutual support, an important base for rural livelihoods. Mechanisms such as local norms and values, traditional rules, taboos and ceremonies that had influenced the sustainable use of natural resources and environmental protection were all abandoned, and traditional authorities that had been responsible for the dissemination of values and knowledge, especially to the younger generation, collapsed and lost their legitimacy. Indigenous knowledge of farming techniques, livestock production, and disaster prevention and preparedness were lost completely or replaced by others acquired from abroad or from other areas within the country, not always suitable for the local physical environment (Watson, *et al*, 1999). As an indirect consequence the vulnerability of rural livelihoods increased, placing these communities at greater risk to natural hazards.

The economic and political changes introduced in the early 1990s also exacerbated the situation of vulnerability. In 1987 when structural adjustments were introduced, state enterprises were privatised, leading to a decrease in the provision of goods and services to the poorest people, with negative impacts mostly on poor Mozambican households. Politically, the country observed changes of legislation in response to global economic and political changes. Several policies were amended and some new ones approved specifically to include a livelihood component, especially in rural communities, but most of these policies did not have the desired results. The most important policies and legislation are indicated in Appendix 3.

The 2000 floods that affected the country opened a window of opportunity for the government to move faster towards the definition of a legislative framework on disaster management. By 2001 the Law of Disaster Management was finally approved. This law aimed at establishing strategies, plans, legal norms and operational programmes for disaster prevention, aid and rehabilitation. It was also intended to reduce communities' vulnerability through a continuous, integrated, multidisciplinary and multi-sectoral process, based on an adequate information and communication system (Bill of the Law of Disaster Management, 2001). This legal tool recognises the role of local governance in reducing the vulnerability of communities at-risk, but its focus is still predominately on the protection of state resources. Indeed, national strategies are still based on disaster management or on strengthening the state's capacity to respond to disasters, with a limited focus on increasing the community's capacity to prepare for and respond to disasters or to reduce risk conditions. The challenge for local government is to strengthen local communities' capacity to cope, whilst linking them to external support at both local and national levels.

1.3 Reasons for selection of case study sites

The case study was to take place in the Búzi River basin, in central Mozambique. This region was chosen for the following reasons:

- This part of the country is one of the areas most subject to flooding;
- Since the floods of 2000, the area has been continuously affected by cyclones, affecting the livelihoods of thousands of people reliant on subsistence agriculture.
- During the floods of 2000 this region witnessed the arrival of hundreds relief workers from national and international organisations, both governmental and non-governmental. Although problems emerged from the lack of coordination between these organisations, the role of local institutions in disaster management became a significant issue of debate.

It should be noted that, although the Búzi basin was one of the areas most affected by the 2000 floods, the disaster situation has not been as extensively profiled as the flooding in the Limpopo basin, in southern Mozambique.

Initially two study sites were selected along the Búzi basin: the Búzi district in Sofala province, and the Mussorize district in Manica Province. Owing to unforeseen administrative circumstances it was, however, not possible to conduct research in the Mussorize district. The main reason for choosing these two sites was that, although the two districts were affected similarly by the 2000 floods, they were not covered in the same way by early warning information, rescue operations, assistance measures (sanitation, medical assistance and shelter) and resettlement and reconstruction programmes. Most of the aid supplied was concentrated in the Búzi district rather than in Mussorize. (See the map in Appendix 4).

Another reason for choosing these study sites was their geographical position: up till now most studies carried out in Mozambique have taken place in the south. This is a result of historical regional inequalities – infrastructure and accessibility are better developed in southern Mozambique, where the capital of the country is located. Central Mozambique, especially Sofala Province, is the poorest region of the country and has been neglected by the national government because it is considered as being dominated by opposition forces. It is also the area most affected by the recent civil war.

In addition, this region presents an historical picture of the influence of traditional authorities. After independence, power was removed from traditional authorities who were seen as the product of colonial rule. People unfortunately did not recognise the important role of existing local authorities in allocating resources to sustain their means of livelihood. However, these authorities continue to play important role in reducing people's dependence on natural resources, as they replace absent state institutions.

An administrative circumstance in the Mussorize district required a shift in the initial research design, and in the end research was undertaken only in Búzi. In this district two study sites, Munamúcia and Boca, were selected. The first criterion for selection of these sites was that both were affected by riverine flooding (natural events), although the intensity and impacts differ between the sites. The second criterion was based on geographical situation: Munamúcia is situated within the Bândua administrative area, while Boca falls under the Estaquinha administration. The proximity of Munamúcia and the remoteness of Boca from the Búzi headquarters were considered important elements in this selection. The underlying assumption was that, with Munamúcia closer to the Búzi headquarters, there would be more efficient institutional coordination and communication. This was understood as being a major factor in the rate of response and recovery, influencing the vulnerability of these communities.

In the case of Boca, where there are only limited social infrastructure and facilities, the vulnerability of the communities was considered higher.

It is also important to note that information collected in previous interviews with people in Maputo and Beira helped to choose these sites. Some organisations that had already worked in these areas provided us with basic information about the area, including the presence of local institutions, conditions of accessibility and working conditions.

1.3.1 Description of study sites

The Búzi district, with a population of about one and a half million (INE, 1999), covers an area of a little over 7000 square kilometres and is divided into three administrative posts namely Búzi, Estaquinha and Nova Sofala (see Figure 1 below). The two communities taken as study sites are situated along the lower part (floodplain) of the Búzi River. The river is 379 kilometres long, with its catchment in eastern Zimbabwe.

Búzi is characteristically a very poor district with households basing their means of livelihood on agriculture and livestock. In order of importance the most important crops are maize, sorghum, rice, beans, sweet potatoes, groundnuts and vegetables. Livestock is the second main activity that guarantees the subsistence of most of the households studied. Goats, chickens and ducks are the most common livestock produced in both areas. Livestock is partly used for consumption but mostly it is sold, especially in today's situation when diverse and regular sources of cash-based income are considered a more appropriate indication of wealth (Kepe, 2002). Money from these transactions is used to access health assistance, to buy food in time of hunger and to pay children's school fees.

1.3.1.1 Munamícuá (Bândua)

Munamícuá falls under the Bândua local administration in the Búzi administrative post. In terms of traditional structure⁷ it is a *Povoação* falling under the Bândua *Regulado*. According to the latest population census, there were 3,634 inhabitants in 1998, divided into 753 households (INE, 1999). The main activity of the population is small scale agricultural production, followed by livestock farming. Agriculture is seasonally based, with maize, sorghum, rice, beans and fruit constituting the main crops. In terms of livestock production (at household level) the most commonly reared animals are cows, goats, ducks and chickens. The impact of flooding on the livelihood of this community was very significant as a large part of the population use the floodplain for agricultural production and livestock farming.

⁷ To be explained later in this report.

Figure 1: Map of the case study area, showing Estaquinha and Bândua



1.3.1.2 Boca (Estaquinha)

Boca falls under the Estaquinha local administration, with 13,922 dwellers divided into 287 households⁸. In terms of traditional structure it falls under the Boca *Regulado*. The main means of livelihood of the population are based on agriculture and on livestock rearing. They too produce maize, sorghum, rice, beans and fruit. Many households also farm livestock, such as goats, ducks and chickens. Differing from Munamícuá, in Boca the cattle production has been problematic due to the prolific presence of tse-tse fly. In 2000 the Boca community was affected mainly by the tropical cyclones and not by flooding, as they are positioned away from the Búzi River.

1.4 Summary of methodology

1.4.1 Overview of research team and coordination

Preparatory meetings to discuss the research design and methodology were held with the Disaster Mitigation for Sustainable Livelihoods Programme (DiMP) of the University of Cape Town. Following the initial meetings, a profile of the study site was prepared and submitted to the FAO (United Nations Food and Agriculture Organisation) for approval. Subsequent meetings were held with the DiMP research team, who were conducting an assessment of the March cut off low in Montagu, South Africa, to streamline the research and ensure that approaches and methods were consistent.

⁸ Source: local traditional leaders; confirmed in INE (1999).

Coordinating the Mozambique team was Zefanias Matsimbe⁹, a Masters student from the University of the Western Cape. Assisting him were two researchers, Lúcio Chiteve and Chabane Injoma¹⁰, recommended by Franziska Steinbruch of the CIG-UCM

In the field, Nicolas Lamade of the GTZ provided logistical support, including the identification of institutions in Beira and Búzi working in disaster management, identification of the study sites, and transport.

1.4.2 Overview of the methods and techniques used for data collection

The Mozambican team used different methods for data collection in the field, from national, provincial and district structures, and from the local community (study sites). For a better understanding of the methods used, we divided these into two categories. The first category relates to *institutional assessment* of national and local government, international agencies and community leaders, and the second deals with *community assessment*. The following subsections give details of the methods used for data collection in both categories.

1.4.2.1 Institutional assessment from national to local government

The institutional assessment involved interviews at both national and local level, before community-based assessments were undertaken¹¹. At the national level several government departments were contacted, including the INGC, the UNDP, FAO, Save the Children (UK), UNICEF, the Ministry of Agriculture and Rural Development, the National Directorate for Water Management, Eduardo Mondlane University and the Land Studies Centre at Eduardo Mondlane University. Within each institution the internal emergency unit or section dealing with disaster management and emergency was contacted. For data collection, semi-structured interviews were conducted with the coordinator of the section or unit.

Interviews concentrated on the following three areas:

- the role of the whole organisation in reducing people's vulnerability to natural hazards;
- intra- and inter-institutional coordination between departments working on disaster management at national, provincial, district and local levels;
- assessment of the level of success and the challenges faced in terms of institutional coordination and the integration of disaster management plans into governmental development plans or programmes.

In each department visited, documents and reports relating to disaster management were collected for future analysis. In some of these departments preliminary information on the study sites was requested, especially in those that had developed activities in Búzi through their provincial branches in Sofala Province.

⁹ Having conducted related research in Mozambique on a number of occasions, Zefanias Matsimbe has been working with the Eduardo Mondlane University for the past three years, as well as with international institutions such as the Institute of Development at the University of Sussex, UK.

¹⁰ Students at Beira Pedagogic University, Mozambique.

¹¹ A recognised constraint was that the institutions were still highly bureaucratic. It is important to understand that over the previous decade Mozambique had been a communist country, characterised by a heavily structured institutional bureaucracy. Although this is no longer the official status of the country, it is still a reality deeply entrenched within government institutions.

In Maputo, the team attended a meeting between the government – represented by the Foreign Affairs Minister, government departments¹² – and the partners, donors and NGOs working on emergency programmes. This meeting provided insight into the inter-departmental and inter-agency coordination of disaster relief in Mozambique.

A similar approach was applied at provincial level in Beira, the capital of Sofala province, where interviews were held with the Head of the Provincial Department of Agriculture, Members of the Provincial Disaster Management Committee, researchers from the Catholic University of Mozambique, the Provincial Department of INGC, the Mozambican Red Cross (CVM), GTZ, and the Provincial Statistical Department. Fortunately, in Beira there were greater opportunities to interview government agencies and the Provincial Commission for Emergency Response than there had been in Maputo.

Semi-structured interviews were conducted in Beira with key members representing the government at the provincial level. The aim was to ascertain their role in disaster management, assess the challenges faced, and determine what were the institutional mechanisms for interdepartmental and interagency coordination at the local level. During these interviews, reports and government documents were requested. To complement these reports, local newspaper articles relating to disaster incidents were collected and analysed.

At the district level, in Búzi district headquarters, local administrative authorities and some government departments were interviewed using semi-structured interviews. The aim was to assess the coordination between the district- and provincial-level authorities, and between district and local authorities or local communities, as regards disaster management and risk reduction.

With the district administrative authorities, interviews were centred on profiling the district in terms of 'disasters', their impact on people's livelihoods, the most affected areas, organisations involved in disaster management (pre and post-disaster), the main problems faced by local communities, the role of the local government in disaster management and risk reduction (prevention, mitigation and relief coordination and recovery). Within the government departments, emphasis was placed on understanding their role in disaster management, and the mechanisms for coordination with provincial authorities on risk reduction. Current vulnerability and risk reduction initiatives with local communities were also explored.

1.4.2.2 Institutional assessment of international agencies

At a national level, UN agencies and one NGO (Save the Children) were assessed. Owing to time constraints it was however not possible to contact the CVM (Red Cross), a humanitarian institution that was actively involved in rescue and assessment after the floods of 2000.

At provincial and district levels, the Red Cross branches were the most important sectors in providing essential information as they had been actively involved in the management of the 2000 floods. They were in fact still running key projects on disaster prevention and livelihood improvement at local level. Other local NGOs and church-based organisations were also contacted. Interviews were conducted using semi-structured questionnaires.

¹² Weather Forecasting, Water Management, Agriculture & Rural Development, Health, Trade, and the INGC.

1.4.2.3 Community assessment: Boca and Munamícuá communities

Within the Boca and Munamícuá communities interviews were carried out with the local traditional authorities (community leaders) and randomly selected households. In both areas two group discussions meetings were arranged with men and women separately. This decision came after a discussion within the team, taking into consideration the cultural reality of the community. The team concluded that the probability of hearing ideas from women in joint group discussion was limited, because men traditionally monopolise discussion, preventing the expression of gender-sensitive issues. The idea of conducting interviews with separated groups was successful because all people were free to talk.

In both gender meetings the focus was on the following:

- frequency and intensity (taking the 2000 floods and cyclones as points of reference);
- impact on people's livelihoods;
- the role of local institutions in prevention, preparedness, mitigation and recovery before and after an event;
- institutional coordination within the community, and between the community and local administration.

In assessing the impact of natural hazards on the community livelihoods, the following were considered: resources available locally, access to and control over main livelihood strategies, and the challenges faced by the community in improving their livelihoods within the cycle of the agriculture calendar.

With a central focus on the 2000 event, the aim of the interviews with the community was to recreate their experiences of the event, to understand what had really happened, how they had survived, who had intervened and, if they had, how long after the disaster, whether organisations that intervened were still working within the community and, if they were, what kinds of programmes they were implementing to reduce vulnerability to natural hazards, and what was the role of traditional and administrative authorities in disaster management.

In each local community ten households were interviewed to understand in-depth the livelihood aspects of activities, assets, strategies, opportunities and the impact of natural hazards in the context of household coping mechanisms. However due to time and accessibility limitations it was not possible to cover more households. In the Boca community particularly, households are very dispersed around the forest and accessibility was very difficult and dangerous, due to wild animals. Some areas were only accessible by bicycle. In Boca, five of the ten households lived on upper ground and five alongside the Búzi River. In Munamícuá, five households were interviewed in the Zindoga sub-area, the most flood-prone area close to the river, and five in Inhankondo, a less vulnerable area to which people were moved during the 2000 floods.

At both sites interviews were also conducted with members of different organisations working locally such as teachers, church members, and rural agrarian extension officers, to assess their role in emergency response and risk reduction. Furthermore the challenges that they faced and the level of collaboration with and acceptance by the local communities was also assessed. Transect walks and participant-observation were used as complementary research methods to understand physical aspects that could not be expressed by the interviewers.

1.5 Limitations

In conducting the fieldwork a range of local factors limited research. The main constraints were:

- *Bureaucracy*: Due to an unforeseen administrative circumstance (no letter of permission) it was not possible to conduct research in Mussorize (Manica province);
- *Political atmosphere*: As the study was carried out in the year of municipal elections, in some cases team members carrying out fieldwork were misinterpreted as being members of a political party in the pre-electoral campaign;
- *Disasters' and false expectations*: Both study sites were affected by drought and famine while fieldwork was being carried out. The arrival of the research team (by car) gave the starving villagers false expectations: they assumed that they were members of a non-governmental organisation or government agency bringing aid assistance.
- *Long period after the event*: The fact that the research was undertaken two and half years after the event meant that many people could not remember exact details. This was exacerbated by high levels of illiteracy in the rural areas, which inhibited written documentation of the event. Both communities confirmed that they had received external assistance from many organisations, but most people could remember only a few of them. To name the organisations involved we had to use data from previous studies, especially that of the CIG-UCM (2003) who provided an overview of the institutions and organisations involved;
- *Physical inaccessibility*: Both study sites were situated in areas where, owing to poor road accessibility and the danger of wild animals, it became difficult to conduct interviews with the dispersed households.
- *Health Conditions*: The fieldwork was carried out during the peak of a measles and malaria epidemic, which had caused several deaths in the communities visited. In Munamícuá, for example, several interviews had to be cancelled because the potential interviewees had to attend funerals of relatives, neighbours or friends. In certain cases the team was involved directly in these events, for example with a family which had lost four children in two weeks due to measles. The situation was very risky and by the end of the fieldwork period all the team members were infected with malaria.

PART 2

Dealing with natural hazards in Mozambique: the case of the 2000 floods

2.1 Introduction

From December 1999 to March 2000, Mozambique was affected by extreme weather, with excessively heavy rains caused by twelve meteorological systems. In Mozambique this triggered flooding in both the southern and central parts of the country.

In Búzi particularly, cyclone Connie which moved over Mozambique on February 4th and 5th and cyclone Eline from February 21st to 22nd 2000, triggered minor flooding in the catchment. However, due to the intense rainfall in the Zimbabwean Eastern Highlands, the Chicamba Dam filled rapidly, resulting in the emergency release of water from the dam. As a result, flooding in the Búzi catchment was uncharacteristically higher than normal cyclone-triggered flooding. In this case the major Búzi River flooding was caused not by heavy rains in the region, but by the river inundation caused by the dam release. The uncharacteristic nature of this event had serious implications for early-warning system mechanisms since riverine communities did not respond appropriately by evacuating their homes and moving their livestock.

The national government, with limited resources to respond to such a disaster event, was forced to seek emergency assistance from the international community. It issued two appeals, the first on 10th February and the second on 24th February 2000. The objective of the appeals was to fill the gap between short-term humanitarian and recovery responses and the implementation of a portfolio of rehabilitation projects. The government provided a coordinated framework, and ensured the continuation of emergency assistance to those who had lost crops and houses, which marked the beginning of the transition towards rehabilitation in several sectors (GOM, 2000). The appeal was responded to positively by 55 countries, the United Nations, 52 NGOs and 56 different enterprises or institutions operating in Mozambique, and 27 religious organisations (ibid.). These institutions provided support in both central and southern Mozambique. The financial aid provided was destined mainly for six months' food assistance to victims, for the repair of public infrastructures and for rescue material.

2.2 Impact of the 2000 event on the livelihoods of Búzi residents

The flooding of the main river catchments in south and central Mozambique was a serious obstacle to the economic progress that the country had reached over the years following the civil war which ended in 1992. The small-scale agriculturalist farming sector was the most affected, with estimates from the Mozambican government indicating that 126,600 rural households had been affected by the flooding. In these affected areas a large proportion were farming families who had been displaced and lost their fields, homesteads, agricultural equipment, livestock and other assets. About 139,000 hectares of planted crops was estimated to have been destroyed or seriously affected, and this was compounded by the damaging of food and seed stocks. It is estimated that 70-80% of livestock (mainly cattle, goats and sheep) were seriously affected. There was also an increase in vector-borne diseases. Approximately 20,000 hectares of irrigation schemes were destroyed. Public

infrastructures did not escape: bridges, schools, hospitals and other public buildings were swept away, forcing residents to abandon their homes (GOM, 2000).

As result of poor recording of the impact of the 2000 flood disaster, no definitive estimates were available for Búzi. However, fieldwork in both study sites permitted an understanding of the impact on community livelihoods, which is still visible today.

The impact of the 2000 floods differed in our different study sites, but the general understanding within the visited communities was that riverine communities were the most severely affected, especially in Munamícu where households are more exposed to the risk of both flooding and cyclones, resulting in lost household structures, household assets, livestock and crops. This was exacerbated by the fact that their homesteads and their fields were both at risk from the inundating river. The impact caused by flooding in Boca was relatively low because most of the people live on high ground, although the cyclones destroyed more houses, infrastructure and livestock here than in Munamícu.

The 2000 events caused serious damage and disruption to crops with resulting food scarcities within both communities (Boca and Munamícu). What made the situation worse is that these events came a few weeks before the harvesting, when there were high expectations of a good harvest after almost six months of food insecurity. In Búzi the average annual crop production only lasts three to six months, with chronic food insecurity even during normal years (GOM, 2000). Compounding the food scarcity after the flooding was the absence of a second harvest. In the aftermath of the disaster, both communities faced serious food shortages, increasing the need for emergency assistance.

Box 1: The impact of successive floods on food security

Since 2000 we have been living in a state of growing hunger, with winds [cyclones] and floods destroying our crops before they have been harvested. We were hoping for a good harvest so that we could survive the drought. Hunger is high. The winds destroyed all the crops, especially maize and sorghum. The possibility of having something to eat is very limited, and we have to depend on donations or labour-for-food strategy. We have no time to increase the potential of our land. This has put us in a situation of permanent shame because we do not rest. We do not know what we have done to be punished like this. Our children leave school because when they come from school they do not find anything to eat at home; so they prefer to stay at home or move around the forest collecting wild fruit.

Local communities at both sites described the situation as having had a critical impact on food security. The story reported in the box on the previous page, told by a woman (almost 60 years old) in Munamícu, reflects how people see the impact of the 2000 floods and how it marked the start of, or exacerbated, chronic food insecurity.

As well as the very serious food insecurity there were high levels of housing destruction, displacement of flood-affected households and, in some areas, increased health risks due the emergence of water-borne diseases. Disease outbreaks were associated with the spreading of waste by floodwaters, the disruption of safe water supplies and the persistence of water in low-lying areas creating breeding grounds for mosquitoes. Compounding health risks was the disruption of what little in the way of health services had been available in the district. The

implications were that household recovery rates were reduced substantially, with increasing water-borne diseases, malnutrition and limited access to health services all impacting negatively on household resilience.

As Blaikie *et al.* (1994) point out, people facing cyclical flood hazards live in a situation of permanent vulnerability; the disruption to assets and livelihoods by one event often makes households yet more vulnerable to future flood hazards. In Búzi after each flood, the same families tend to lose their homes, possessions and means of livelihood, increasing their vulnerability to the next disaster event (Few, 2003). This is because local communities insist on living in the lower areas close to the river, where good soils and water conditions are made available for crops production and livestock farming. They move to safe places when a disaster (especially floods) comes, but once the threat passes the tendency is to return back. In these areas homesteads and their fields were both at risk from the inundating river.

2.3 Early warning in Búzi

The Búzi administrative authorities were warned about 48 hours beforehand by their Chibabava counterparts in the Búzi upper stream that river water levels were rising rapidly. The Búzi authorities warned at least the communities surrounding their headquarters, but owing to the inefficiency and weakness of institutional coordination and communication between the district authorities and lower levels structures, the early warning failed to reach the remote zones of the district on time. However even the alerted communities did not take the warning seriously. In the Munamúca study site, one of the communities most affected by floods, people confirmed that the traditional authorities issued the early warning, but they were not believed because the rain had stopped some days¹³ before, after cyclone Eline had passed on the 22nd February 2000. As a result, no preparedness measures were taken to reduce the impact of what was later reported as one of the most intense floods in the communities' history.

2.3.1 Factors influencing early warning

In the Búzi basin, communities anticipate and prepare for flooding with the encroachment of a tropical cyclone, but this flooding is typically a low and gradual inundation, with limited impact on community livelihoods. For this reason, these communities did not take seriously the warning issued by the local authorities since they related flooding with cyclones. In both study sites (Munamúca and Boca) local villagers were aware of their vulnerability to floods but nobody imagined the scale of these particular events. The 2000 flooding, although the worst in the last five decades, was not the first that year. Two floods of low intensity, triggered by cyclones, had already occurred in early 2000 in Búzi.

The case of Búzi is an important example for reflecting on early-warning mechanisms within communities vulnerable to weather events. A better understanding of how people interpret and respond to warnings is needed (Montz & Grunfest, 2002). For example, people are less likely to respond to a warning if the previous warning did not result in a serious disaster or if they have never experienced an event of considerable magnitude and intensity. In Búzi people did not take the warning seriously because the previous two warnings had resulted in floods of low intensity without any large impact on people's livelihoods. They assumed that this case

¹³ No data on how long.

would be the same. The message was also not clear in that it lacked information about what to do and where to go.

In Munamícuá, due to the proximity of the Búzi administrative headquarters, people were warned of the impending flood, but Boca is so far from the centre of decision-making and information flow – the Búzi headquarters – that no warning was received. It is hypothetical, but likely that this village would have responded to a warning in a way similar to Munamícuá. However, according to comments from a researcher working for the UCM Beira (Franziska Steinbruch), the lack of early warning for Boca in 2000 cannot be used as an example of the failure of the early-warning system in Búzi because Boca is not a flood-prone area.

2.3.2 Community based early-warning systems

It would be an error to assume that before 2000 Boca and Munamícuá had no early warnings at all. In conducting the research it became evident that, using their traditional knowledge, people knew the period of the year when floods, cyclones and droughts occur and which places are most at risk. In response, households have developed a number of strategies to reduce flood impact. For example, a man about 50 years old¹⁴ explained as follows:

“By the tenth month we start to improve our houses, putting stones on the roof to avoid our houses being destroyed by strong winds, because we know that the rainy season is coming.”

Rural communities have a traditional mechanism for predicting natural hazards through the interpretation of natural signs such as the movement of birds, the appearance of insects or the position of the new moon. However, the uncharacteristic nature of the 2000 event marked a change in the perception of natural hazards by Búzi communities. It also marked changes in terms of community organisation and mechanisms for local institutional coordination.

2.3.3 Early warning systems after the 2000 event

From 2000, community based early-warning systems have become more sophisticated, with new scientific equipment provided by external organisations such as the GTZ and CVM. Technical assistance from these organisations is helping local communities improve their early-warning systems. In both communities (Boca and Munamícuá) disaster committees now involve local members in forums for disaster prevention. The GTZ has been working with traditional leaders to improve their capacity to integrate scientific early-warning systems into their planning, and both villages now have new cyclone early-warning equipment. The GTZ has provided local traditional authorities with three flags of different colours and meanings:

- *blue* means that within 24 to 48 hours the area might be affected by a cyclone;
- *yellow* means that the cyclone might be affecting the region within 24 hours;
- *red* means that the area might be affected almost immediately.

These signs have been displayed in public places, especially where the court or the community assembles to discuss public matters. When one of these signs is displayed, people warn each other to take preventive measures. An old man from Munamícuá explained the preparations adopted by his family in case of a cyclone early warning:

“When we receive information that the wind or rain is coming, we store enough food (maize meal and dry fish) inside the house to last until the end of the event, which normally takes two

¹⁴ Interviewed in Boca, 15/05/03.

to three days. We only try to protect our lives and not our houses. We know they are very fragile because they are built with insecure material. We want to improve them to avoid such situations in the future, but we face problems of lack of zinc and nails to protect the roof against winds.”

In Boca, a cyclone-prone zone, other preventive measures include mobilising or advising people to:

- use stronger building materials (e.g. steel wire instead of ropes extracted from trees);
- remove the roofs from their houses at the beginning of a cyclone to avoid their being destroyed by winds;
- build houses in higher-lying areas or to build houses with upper floors
- plant bamboos around their houses to protect them from winds;
- build small huts to protect their livestock;
- avoid using canoes to cross the river by small boats and avoid walking under big trees.

Although improvements have been introduced at local level, there are still some problems that we observed in the field.

- (i) A man of about 47 years said that since 2000 he has received early warnings from the traditional authorities but, because cyclones usually start at night when people are sleeping, all the preventive measures become useless.
- (ii) A widowed woman of about 44 years from Boca explained that sometimes she receives information that a cyclone is coming, but sometimes it is when the cyclone it is already blowing in the area. “I don’t do anything to minimise the event; I just wait for miraculous help from God,” she said.
- (iii) A man of about 50 years from Boca said, “Sometimes the *régulo* warns that a cyclone is coming but they are not sure exactly when. We stay at home with some food provided, but we end up finishing the food because no cyclone happens. The consequence is that when it comes at last we have to face the danger of looking for food in rain and strong winds.”

2.4 Local responses to the event: The role of informal social networks in emergency response

In Búzi no formal rescue was provided at the beginning of the 2000 flooding because of unavailability of resources. By the time the means for rescue were provided by official authorities or external agencies, households had already evacuated themselves to safer locations. In the Búzi headquarters, the administration used Búzi Community Radio to warn flood-prone households about the rising river, and suggested safe places for people to evacuate to, such as the Búzi Company¹⁵ infrastructures (now inoperative). In Munamícuá people evacuated to the Bândua local administration headquarters, where medical assistance, food, temporary shelter (tents), blankets and clothing were later provided.

Informal social networks played an important role in 2000 in Búzi. In most cases the emergency response was initially taken by people organising their own informal social networks (neighbourhood, friendship, kinship, church, etc.). Small private boats belonging to the fishermen along the river were used for evacuation, especially of so-called vulnerable

¹⁵ The Búzi Company was an agricultural company whose main activity consisted of sugar cane cultivation and the production of sugar and other products extracted from sugarcane. The company was closed in 1992 due to financial problems, which were mainly as a result of the long civil war, which increased production costs.

people (elders, women and children), from the flooded areas to safer places, where they later received assistance.

Both case studies showed the extent and importance of informal social networks, local institutions and local authorities (traditional and administrative), and locally-based organisations (e.g. churches) for disaster mitigation and response using local natural resources. This occurred largely because the formal evacuation process started late. This was undertaken by the Mozambican Army, the South African Air Force, Beira MIL, ARSERV and the Mozambican Air Force, and countries like Portugal, Belgium, the United Kingdom, the USA, Germany and Spain sent rescue helicopters. Unfortunately the research team could not access the numbers of people evacuated or rescued.

In both communities we found that, before the 2000 floods, villages already had strong networks to reduce the impact of extreme weather events as well as for subsequent recovery. For example, to minimise the problem of lack of seeds after floods, people activate social networks based on kinship, friendship or neighbourhood ties – they help each other by exchanging vegetable or cereal seed free of charge, or with merely symbolic payment. People with no seed at all acquire it by working for those who do have seed, and also give part of their harvest to these donors. The same applies to mutual food assistance in field cultivation, or “*kulimila*” and “*likuku*”. However the chronic need for food during the 2000 event could not be provided for solely through these informal social networks, necessitating emergency food relief.

Many of the emergency relief organisations provided immediate assistance that lasted almost six months. Such assistance was directed at satisfying immediate needs as well as at addressing the underlying vulnerability to chronic food insecurity in the region. The emergency aid relief consisted mainly of bulk supplies of food, clothing and medicine and, in a few cases, money. CIG-UCM (2003) has identified the role of some of the institutions involved in disaster relief in 2000 in Búzi. (See Appendix 5.) This information was obtained from interviews at the study sites and other locations.

2.5 Coordinating the emergency assistance

In 2000, the Mozambican government established a national emergency coordination mechanism chaired by the INGC. Flood committees were established at provincial and district levels, with NGOs and religious organisations evaluating the needs of the affected people. In a WFP development project, some of the district administrators were trained in how to receive, store and distribute relief items, and in how to arrange transport from warehouses to transit centre committees (GOM, 2000).

The INGC (National Institute for Disaster Management) was appointed to coordinate the whole process of assistance. Its main roles were:

- to assess the needs of affected people;
- to coordinate the distribution of food and clothing by the organisations that had responded to the government appeals;
- to provide temporary accommodation in accommodation centres¹⁶, and
- to provide medical assistance to the victims, especially in accommodation centres.

¹⁶ Temporary camps, consisting mainly of tents, to accommodate the people affected by floods.

The government worked collaboratively with UN agencies (UNDP, FAO, WHO, UNESCO, UNICEF, WFP, UNFPA, UNEP/HABITAT), as well as with major NGOs and the private sector.

At the beginning of the disaster event, in agreement with the government of Mozambique, the UN Office for the Coordination of Humanitarian Affairs (OCHA) developed a UN Disaster Assessment and Co-ordination (UNDAC) team to assist the INGC and the UN Disaster Management Team. In facilitating the INGC's disaster response, the UNDAC team helped in the establishment and functioning of Coordination Centres in all the regions affected by the flooding. The UNDP, through its Emergency Response Division immediately made US\$50,000 available to the Coordination Centre, for office equipment and human resources. The WFP established a food distribution programme comprising a total of 53,000 tons of food, to meet the needs of 650,000 people over the following six months. A total of 99 transit camps were established nationwide, each camp housing anything from 3,000 to 60,000 people (GOM, 2000).

The main assistance provided by the UN to the affected people consisted of rescue, clothing, temporary shelter (tents), high-energy food, medical assistance, sanitation, water and vaccination against the water-borne diseases. The table below shows the roles played by some of the UN agencies.

Table 1: The role of the United Nations during the 2000 floods in Mozambique

Institution	Activity
WFP	- Distributed 53,000 tons of food to cover the needs of 650,000 people for six months
UNICEF, WHO	- Water supply for 29 towns
WHO, UNICEF, UNFPA	- Disinfecting and major clean-up operations - Health (immunisation campaigns and medical treatment) and nutrition
UNESCO, UNICEF, WFP	- Education (reconstruction of schools, teaching material and equipment) and food
FAO	- Agricultural sector and rural communities: immediate response and rehabilitation of essential services

Source: Adapted from GDM (2000)

2.6 Assessing need and the distribution of relief

Although the 2000 floods affected the whole Búzi basin, not all the administrative areas received the same attention. Due to the lack of a formal assessment procedure there were no solid criteria for a needs assessment.

The Búzi district was the most assisted district within the Búzi basin (see map in Appendix 4). The research team tried, without success, to discover the reasons for this preference of Búzi and exclusion of others. The Provincial Director of Agricultural and Rural Development in Chimoio said that Mussorize had been excluded from relief assistance, as it was not considered in need because it is a high-lying district with good soil and good rainfall throughout the year, and thus had a high level of food security. This was the only explanation that was forthcoming. Despite this assumption by the local authorities, the extreme nature of

the flood event had a recordable impact in Mussorize. The flooding turned hills and mountains into islands, where people gathered waiting to be rescued by helicopter.

Households in both Munamícuá and Boca were considered as disaster-affected. However, there were no criteria for selection. People living on higher ground were also considered affected because cyclones had an impact on the area as well as floods. This tendency of viewing hazard victims as homogeneous in terms of vulnerability and generalisable in terms of their needs has been seriously criticised¹⁷. In fact, communities or even households are not necessarily homogeneous, and present variations in level of vulnerability. Within a community, vulnerability variations could depend on socio-economic status, gender, age, political or even religious affiliation (Few, 2003).

Villagers in Munamícuá and Boca confirmed that they received assistance from different organisations, for between three to six months. However, many households stated that the quantities were not sufficient to cover their high levels of need until the next harvest. The assistance was provided after a rapid needs assessment conducted by the donors or administrative authorities. In other areas local traditional authorities were involved in listing affected households. The listing process sometimes was falsified because traditional leaders registered more than the actual number of households, in order to get more assistance. According to some interviewers, the numbers of affected people were inflated for this reason, even by the national government and some NGOs. As a result, while this study was taking place, the CCM was busy with an independent assessment, for food assistance, of the number of 'vulnerable' people within the Boca community. The difference in numbers between the two assessments was substantial. The CCM also showed disappointment with some administrative authorities who took advantage of the fact that people gathered in one place for food distribution, and used this as an opportunity for political mobilisation.

2.6.1 The role of traditional authorities in assessing households' needs and distributing relief

In both communities it was recognised that traditional authorities played an important role during the 2000 event, but they were sometimes limited by not knowing precisely what was going to happen, especially in Boca. In some cases it was reported that they appeared primarily interested in securing their own household assets as opposed to assisting the community.

Since the 2000 events, the way traditional authorities have been looked at by the government and other organisations working at local level has undergone a small positive change. At the Estaquinha administrative post, traditional authorities are now invited to attend monthly meetings where they are encouraged to report to the head of administration on problems and progress in their area of jurisdiction. The problem they report most frequently is hunger. All local state organs, especially the agriculture, health and education sectors, are involved in this meeting to discuss what to do in an emergency, and how to mobilise communities to take seriously the information they are given. During the fieldwork for this study, Estaquinha and Boca were seriously affected by drought; the message from this small committee to the villagers was to tell them to avoid selling crop stocks because their hunger was likely to continue for a long time. In Bândua, where Munamícuá is situated, we heard that a similar committee was working locally but with some problems in terms of frequency of meetings. In

¹⁷ See for example Few (2003) quoting Bhatt (1998) and Maskrey (1999).

Boca, local authorities also play an important role in land distribution, especially in areas close to the river, with fertile soil.

At both study sites there is conflict between administrative authorities (the President of the locality) and traditional authorities (*régulos*) regarding the apportionment of power. At the local level there is no clear definition of hierarchy between these authorities; they all use the same state symbols and report to the same level of administration – the chief of the administrative post. The situation is clearer in Bândua, where the geographical boundaries of the administrative and traditional authorities coincide. Within the *regulados*, conflicts also arise involving the *régulo* and his co-workers (*chefe da povoação and sagutas*): the *régulo* is paid by the state, so the co-workers also claim for state payment, alleging that they have been doing the same work as the *régulo*, including disaster early warning and mitigation, and the establishment of order within the villages. It is important that the state authority to avoid conflict that can undermine order, security and people's livelihood in rural areas investigate this aspect.

Although there are positive aspects as regards the role of the traditional authorities, they have been accused of nepotism when food assistance arrives. When they enrol people for food assistance, the names of their relatives or friends have been first on the list, and sometimes they register more than one member from the same household.

2.6.2 Institutional limitations and challenges in distributing relief

During the relief distribution, several constraints emerged in the field. There are many possible reasons for this. Firstly there was a severe scarcity of fiscal resources on account of the lack of institutional capacity to act quickly to solve emerging problems. Second was the problem of inefficient flow of information about what was happening at different administrative levels.

The limited capacity of the national government in terms of resources (human, material and financial) to respond to the emergency was clear from the outset. Although there was a positive international response to the government appeal, the lack of coordination of national and international agencies, and of governmental and non-governmental organisations, constituted a major limitation in addressing the needs of the rural population. This problem was especially bad at provincial level in Sofala, although the INGC played an important role in institutional coordination and relief distribution. According to a senior worker of the FAO, Sofala was notorious for very poor coordination. In other provinces things did go a little better.

Due to the inefficient coordination of relief distribution by the government entity, and because of a lack of trust that formal authorities would be able to deliver relief aid to households in need, some organisations and donors decided to distribute relief independently. In southern Mozambique a similar problem occurred when people, including the so-called most vulnerable (elders, women and children) were forced to struggle for food and resources from relief agencies, sometimes being involved in physical violence. This happened because the external organisations providing assistance did not work in coordination with the established authorities in the provisional accommodation centres.

In Búzi, similar social tensions arose when USAID distributed financial relief to women only. USAID had decided to allocate money to the community using selection criteria based on gender, with only women receiving the 1,500,000.00 MZM¹⁸ (about US\$60) designated per

¹⁸ Foreign Exchange Rate: 1USD ≈ 21,000.00 MZM (2000).

household. According to district authorities, the objective was to promote gender balance. USAID recognised that women were the most vulnerable and generally in a better position to manage financial resources, but men misinterpreted this decision, seeing it as a challenge to their authority within the household, thus creating social problems between men and women.

Box 2: The social influences of USAID within households

The financial aid provided by USAID caused many social problems within the community and within households:

- **Divorce** – some women, who had been forced to live with their husbands due to the *lobola*¹⁹ paid to their parents, after having received aid money, decided to repay their husbands an amount corresponding to the *lobola*, in order to end a 'forced' marriage. Such cases were reported at both study sites. This contributed to social instability within the communities and households.
- **Suicide** – some husbands forcibly took the money from their wives and used it for *lobola* to marry another woman. One case was reported in Munamicua, which had resulted in the suicide of the first wife.
- **Entertainment** – in both sites several cases were reported where husbands took the money from their wives to buy traditional beer and tobacco;
- **Homicide** – in a community outside our study sites, a member of the community killed a traditional chief because he was blamed for the exclusion of that community from the USAID financial donation.

Another criticism can be levelled at the way USAID was distributed: the organisation did not prepare local communities on how to use the money distributed in improving their lives. This resulted in misuse of resources – most of the money was spent on food and not on replacing household assets or weatherproofing houses to resist future extreme weather events.

Most of the villagers interviewed, including women (who benefited directly from the donation) stressed the negative side of the monetary assistance on the social relationship within the community, especially within some households, but it is completely true to assume that the donation brought more problems than solutions. In fact, the team observed on the ground that some households had opportunities to replace the lost households' assets and in some cases the money was used for increasing the portion of cultivated land as a way to increase the crops production. It is also important to emphasise that the mechanisms for resource (money) distribution involved in this process: by giving directly to the woman in the domestic sphere it became possible to expand the number of benefited people among the households because women focused on goods for family consumption, including children and elderly (the most vulnerable people). From this donation it was also possible to access certain services such as health and education, improving their living conditions. It was difficult to link this relief with development because the majority of the donated people used the money for goods for immediate consumption, rather than applying the funds in activities that could allow them receiving future benefits.

Other problems that emerged can be summarised as follows:

¹⁹ An amount paid in cash, livestock or goods to the parents of the wife as compensation for the loss of their daughter.

- (i) Limited government capacity to monitor relief distribution: at national level the government lacked capacity to coordinate the different organisations involved in relief distribution, resulting in a number of agencies working independently.
- (ii) Lack of institutional coordination resulted in limited identification of affected households.
- (iii) Limited disaster assessments: not all affected areas received relief; coverage of the more remote areas was particularly poor;
- (iv) Agencies and NGOs assisted with the immediate response and relief but left soon afterwards: Two years after the floods, many community members could not remember which agencies were active at the time, with the exception of the CVM, GTZ and INGC. Most organisations worked in Búzi for no longer than three months;
- (v) Lack of consideration of local traditions, culture or gender issues: This resulted in conflicts instead of alleviating the suffering of local communities. The information in the box on the previous page highlights some of the negative consequences of the financial aid offered by USAID.

2.7 Local perceptions of increasing disaster risk

The 2000 event marked the lives of most villagers in rural Mozambique. Most of the people interviewed reflected on how they had never experienced such a destructive phenomenon. They also said that since 2000 floods and cyclones had increased.

Community perceptions of risk varied, with some villagers considering drought as having the worst impact because it takes a long time to pass, whilst the impacts of cyclones and floods are short-lived. Others defined floods and cyclones as the most dangerous because they are very difficult to mitigate, due to their rapid onset. A man of about 55 years explained that mitigating the effect of drought is very easy because people just plough in the wetlands close to the river to produce food, especially vegetables. Droughts can also be mitigated through activities such as the sale of livestock to purchase food. Hunting and fishing are also used to generate alternative sources of food.

In an attempt to understand the perceptions of local communities of the increased prevalence of disasters since 2000, the question “*Why have extreme events increased in frequency over time?*” was asked. The box below summarises some of the answers to this question.

Box 3: Different interpretations for the increase in disasters

- *Change of customary rules and taboos*, resulting in the anger of the spirits of the local ancestors: young people engaging in relationships outside of marriage; bush burning and cultivation close to sacred places; fathers taking daughters as wives;
- *Natural phenomena must change – because of the social, political and economic changes in the world;*
- *Apocalyptic changes* (new things will happen, to mark the end of the world): we have to believe that each moment has its destiny; disasters happen to make people believe in God; if we accept good gifts from God, we have to accept the unpleasant ones also (sisters from the Catholic Church in Estaquinha).
- *Political injustice*: the floods happened a few months after the general elections – why? We were asked this question by an interviewer in Bândua, a prominent member of Renamo, the opposition party that claims to have actually won the general election in December 1999. According to this interviewer, the floods were a sign that the election results were due to intimidation. The increase in disasters since

2000 is a way [for God] to punish Frelimo, which some believe came to power without winning the election. According to the interviewer, this situation will persist until Frelimo allows others to rule the country.

- Scientific reasons: more extreme weather is just happening.

2.8 The role of institutions in long-term recovery and risk reduction in at-risk communities

Emergency response and relief was largely designed to be a temporary solution to the crisis, and this actually impeded the sustainable recovery of at-risk communities. Although communities have developed some mitigation strategies, these are often very limited, increasing the need for local institutions to support these communities on a long-term basis.

Reconstruction programmes for aiding affected households after the flood were implemented by a number of internal agencies and non-governmental and church organisations, but considering the level of destruction suffered, they were far too small to address the needs of the population. The government was mainly occupied with the reconstruction of public infrastructure such as hospitals and health centres, schools, roads and small bridges, but the level of these services is still far from adequate. For example, people in Munamúcia are still far from any hospital or clinic, and to get medical assistance need to walk about 15 kilometres in each direction to the Bândua or Búzi administrative headquarters. The Boca community benefited considerably because of its proximity to the Estaquinha administrative post where the Catholic Church took over the local primary school and the health centre after the war.

After the emergency was over most of the aid organisations disappeared. The only ones left working in the Búzi basin were those whose main activities were related to disaster risk management, such as the GTZ, CVM and some organisations working on food and seed distribution (CCM, ESMABAMA). Other smaller NGOs were working on projects related to agricultural development. The GTZ and the CVM are however the only organisations that have been actively involved in disaster prevention from after the 2000 event until 2003. However, they face certain constraints, mostly associated with financial and human resource limitations, which do not allow them to cover the extensive areas where people are living in permanently 'at-risk' situations. The GTZ has been working to strengthen the community-based organisations and now is attempting to draw on traditional coping strategies in its risk reduction (e.g. using traditional boats for rescue, floods simulation activities). These two organisations appear to be well-placed for playing a significant role in the mitigation of disasters resulting from natural events, as well as in preparing poorer and marginalised groups to cope with them.

Some other local organisations have been working on livelihood improvement. These include the PACDIB (Programme for the Development of the Búzi District), which works on micro credit and livestock replacement in rural communities, the CCM²⁰, which works with seed and food distribution, and the ESMABAMA, working on labour-for-food strategies.

A list of the organisations that were involved in Boca and Munamúcia in 2003 is given here. They are discussed in detail below.

²⁰ The majority of the protestant churches are members of this council.

- ESMABAMA (housing, food distribution, education, health centre, early warning);
- Red Cross (temporary shelter, food (biscuits and salt), water cleaning, fight against malaria and other diseases);
- FCF (food distribution);
- PMA (road rehabilitation);
- Kulima (agricultural tools);
- ORAM;
- DORCAS Aid;
- Methodist church (housing and food distribution).

INGC

The INGC is a permanent state institution funded in 1999, acting as a coordinating body under the Ministry of Foreign Affairs and Cooperation. This national disaster authority consists of two main departments, the planning and operation departments. Functions reserved to the planning department consist of proposing programs and projects on prevention, relief and infrastructure rehabilitation; production and dissemination of climatic and other disasters management information; implementation of early warning, preparedness and mitigation systems; proposing procedures for emergency situations and organisation of documentation centre with a database, the operation department is responsible for the contingency plan and coordination of the implementation of relief programmes.

During the 2000 floods the INGC and the CVM were responsible for coordination and distribution of emergency assistance nationwide. However, in Sofala province, due to problems related to high corruption and lack of effective coordination the INGC failed to reach its main. Due to the same reasons some donors organisations ignored the legitimacy and the role of the INGC, deciding to distribute emergency assistance directly to the affected people. In the visited areas the INGC is almost an unknown institution and when asked about the role played by any government institution most of our interviewers responded 'none'. It is not completely true that the INGC was not there, but comparing with actions and impact of the presence of other NGOs it was not visible. Since 2000 the tasks of the INGC go beyond the institutional capacity. Various NGOs have been working collaboratively or assisting the INGC to develop activities targeting the improvement of professional and administrative and technical skills.

CVM (Cruz Vermelha de Moçambique) – the Mozambican Red Cross

A district commission of the Mozambican Red Cross is situated at the Búzi district administrative headquarters, with small branches ("nuclei") in most localities around the district. The Búzi district commission reports to the provincial commission and this reports in turn to the national headquarters. The Red Cross is developing projects in Búzi in areas such as early warning, health, water treatment and sanitation.

Through the use local volunteers, the Red Cross works in coordination with the local administration and health authorities to combat water-borne diseases such as malaria and cholera. The Red Cross convenes meetings with the local communities to discuss matters such as natural hazards and mechanisms of prevention of water-borne disease, and assists in mobilising communities to abandon high-risk zones.

GRC – *Gestão de Risco de Calamidades* (Disaster Risk Management), a GTZ Project attached to GTZ-Proder²¹

The GTZ played an important role in Búzi during the 2000 floods, especially in terms of response and post-disaster assistance. After the floods, through its Proder project (Rural Development Project in Sofala), the GTZ participated in school and health centre rehabilitation, and assisted the government in implementing local disaster risk management.

The GTZ was the first organisation to implement a disaster management strategy based at community level, by establishing local committees for risk management in Búzi. Other important activities of the GTZ include:

- Providing local communities with basic kits for improved early warning, rescue and response;
- Promotion of workshops and training for local activists for disaster prevention, preparedness and better response;
- Introduction of new agricultural techniques and new crops, or the re-establishment of local crops, to reduce people's vulnerability to natural hazards.

According to members of the Red Cross in Búzi, the idea of creating the GRC came from a senior GTZ worker in Sofala province, in May 2000. The GRC has since expanded to include all localities of the district. In each community a nucleus or committee, consisting of seven volunteer members, represents the GRC. This committee works in coordination with local traditional authorities, mobilising people living in low-lying areas to move to safer places. Among other activities the GRC:

- promotes seminars with local authorities on risk management;
- monitors radio weather forecasts and gives this information to the local authorities who activate mechanisms to inform the community. GRC members themselves also disseminate early warnings to local communities;
- searches for the safest places for habitation;
- mobilises the owners of boats to participate in evacuation processes;
- evacuates the most vulnerable people to safe areas;
- mobilises people to abandon flood-prone regions in favour of higher-lying areas.

These committees face a number of constraints, which include the following problems:

- A lack of means, especially transport, to spread their activities to other areas through small nuclei, especially in remote areas. Although local initiatives have emerged from the communities to repair roads, some roads are still in need of engineering work.
- Although communities are being mobilised to seek safer places, some people refuse to leave the lower lands. The argument is that they cannot leave their crop trees (cashew nuts and other trees) unprotected. They also do not believe that a disaster similar to the 2000 floods will occur again. To try to convince the villagers that this is not necessarily the case, GRC workers use the example of lunar eclipses, which can occur twice in two years after not appearing for many years. What is really behind this refusal is that, although the risk is understood, people still prefer to stay in their original homes rather than move to new places without any certainty that conditions will improve.
- Only a few GRC agents have been given training in disaster management.

The Catholic Church and the CCM

These organisations use the Christian message to promote solidarity and a spirit of brotherhood for mutual assistance in cases of emergency. The Catholic Church commissions

²¹ A rural development project, in Sofala Province, of the GTZ.

within the church have developed a range of different assistance procedures. The Charity Commission is the most important of these, and is responsible for collecting goods for distribution to affected people. The church also works as an important instrument for disaster early warning, and for encouraging people to adopt preventive measures.

The local Catholic school in Estaquinha also works as an important institution for disaster management. When teachers receive an early warning via radio from the weather services, they transmit it to their students, who inform their parents back home. In Estaquinha, teachers also participate in the meeting held monthly at the administrative headquarters, where they discuss how to solve or minimise the problems of natural hazards.

ESMABAMA

ESMABAMA is a project created in 1995 by the Catholic Church to deal with post-conflict situations, but from 2000 it turned its focus to emergency food relief, and the distribution of seed and agricultural tools to flood victims along the Búzi River. This organisation has been working collaboratively with other organisations locally such as GTZ and the traditional authorities. During the fieldwork, ESMABAMA was focused on labour-for-food strategies to assist the local villagers against the drought that was affecting the study site. Other main activities of this organisation include:

- Training local communities in the care of livestock and the production of drought-resistant crops. Students also have a role in transmitting this knowledge to their parents and relatives back home and around the community.
- Promoting labour-for-food, in conjunction with the WFP: using work in road clearing and repair as a way to help people affected by drought.

PART 3

Institutional assessment

3.1 The changing role of disaster-risk related institutions after the 2000 event

The 2000 flood event presented an opportunity for the Mozambican government to develop a new strategy for managing 'disaster' events and for better coordination of operations within government and between the government and other organisations such as the United Nations, international agencies, NGOs and civil society. A benefit of assessing these changes, made in the context of the 2000 event, three years later was that the changes could be mapped at national, provincial and district level. Furthermore, the changing roles of the UN, international agencies and NGOs in the light of these policy developments could be assessed. In Part 3 of this report, the changing roles of the Mozambican government and disaster-risk management related agencies will be assessed, providing insight into how the 2000 event presented this opportunity for institutional change.

3.2 National level

The national institutional response to the 2000 event was centred largely on the coordination of international agencies, as resources to initiate an emergency response and relief operation were limited. This coordination was not efficient, as many agencies acted independently from the Mozambican government. After the 2000 event, the Mozambique government developed a new strategy to ensure better coordination for prevention of, mitigation of and response to future similar events. The government saw that it was time to redefine its role and improve its multi-sectoral coordination role.

This strategy involved the strengthening of the three national-level state organs falling under the National Policy for Disaster management. These are the National Board for the Coordination of Disaster management (CCGC), the Technical Council for Disaster Management (CTGC) and the National Institute for Disaster Management (INGC).

CCGC

The CCGC, operating at national, provincial and district levels, is headed by the Prime Minister, and integrates input from NGOs, the UN and civil society. This board meets monthly or, in an emergency, more regularly. Its main role is to ensure better coordination of emergency operations.

CTGC

The CTGC is a technical multi-sectoral organ reporting directly to the national government. It is comprised of technicians representing all the state ministries, especially the departments working on natural hazards, for coordinating emergency operations. The UN, NGOs and representatives of civil society are on its board. This board is divided into seven working groups, namely (i) coordination, (ii) early warning, (iii) sensitisation of people for disaster management and risk reduction, (iv) rescue and evacuation, (v) logistic, (vi) shelter, water and sanitation, and (vii) food security and agriculture. In terms of division of roles each working group is responsible for designing operational plans, simplified instructions and procedures to

ensure flexible actions towards effective assistance to affected people. Important measures to be taken include the releasing of some migration and customs rules to facilitate the movement of humanitarian assistance and people to help the victims of a disaster.

INGC

The INGC is the third organ established at national level, but has branches in all ten provinces and in some districts. In the districts without INGC branches it is replaced by a district emergency committee, which integrates the work of all locally represented state ministries, for multi-sectoral coordination for prevention, mitigation and response for disasters. This is the case in Búzi District. The INGC is responsible for the development of a contingency plan at national and provincial levels. Each one of the ten has its own contingency plan based on multi-sectoral information and according to the kind of the disaster likely to occur in the province. This contingency plan is a document containing strategic guidelines for disaster prevention and mitigation. It also identifies necessary and available resources for immediate response in case of an emergency. Although important tools for disasters management, the nature of contingency plans has been criticised because they are based on generalized information from national or provincial levels, which does not reflect the reality at the local level. It is therefore problematic at the local level to address the real needs of the affected by disasters, most of them living in rural communities. The discourse has been that provincial contingency plans must be based on information from the districts and different government sectors. Taking into consideration the Mozambican reality, characterized by poor mechanisms of communication and dissemination of information, the level of province seems to be very high to design effective contingency plans because there is no means for collecting accurate and up to date data that reflects the situation on the ground. Our experience showed that even the district authorities in Búzi are not aware of the content of the provincial plan, making it difficult to work collaboratively with the provincial authorities.

The actions to be taken are designed together with the UN, NGOs, donors, local authorities and civil society. At national level these members have annual meetings where each sector presents developed and planned activities, and assesses sectoral capacity for intervention in case of emergency.

Box 4: Main points from the meeting between the government and its partners (see below)

- (i) A senior member of the Mozambican Health Department condemned the current natural hazard management strategy since it was based on relief rather than on prevention. In addition, he emphasised that the relief given by the government and other organisations arrives too late for affected households.
- (ii) The Mozambican Minister of Foreign Affairs (chairperson of the meeting) also condemned the current response to natural hazards and appealed for preventive action, saying: "We do not want to wait until spectacular images are displayed on TV to take action. That is not good. We should be working at local level before an event occurs. We have to work with a long-term perspective. To make the country more resilient to natural hazards we have to work on small and modest activities to help the community be more resilient in order to avoid responding always to an emergency situation. We have to be proactive; it will be easier for us because we have the basic data to work toward prevention, because we know about each hazard before it happens... We also need to be very careful about issuing an appeal now, just to avoid [being seen as having] a culture of mendicity²² and dependency on external aid."
- (iii) The UN, represented by the UN Disaster Management Technical Group, defended the need for a shift in disaster management approach from sectoral to more integrated actions based on information-sharing between NGOs, the UN, government, donors, the private sector and civil society. The UN supported the strengthening of partnerships in disaster management and stressed the need for mapping humanitarian responses in case of emergency.

In late April 2003, a meeting between the government²³, the UN, NGOs and donors took place in Maputo to evaluate the progress of each sector towards the reduction of community vulnerability to natural hazards. At the meeting, entitled "Preliminary Assessment of the Emergency Situation 2002/2003" each sector presented its progress report and planned actions regarding disaster risk management. During the meeting, three important aspects were discussed in depth (as shown in the box above).

3.3 Provincial level

At the national level there is an apparently good indication of the governments' engagement in disaster risk management through the coordination of different state departments, the UN, NGOs and even the private sector. However at a provincial level this changes substantially as the provincial board or committee representing the Technical Council for Disaster Management (CTGC), which combines input from all provincial government departments, has a rather tenuous existence and questioned functionality. The committee works within and is

²² begging.

²³ Government Institutions represented included: INAM (National Institute for Weather Forecasting), DNA (National Directorate for Water Management as part of the Ministry of Public Works and Housing), MADER (Ministry of Agriculture and Rural development), Ministry of Health, Ministry of Trading and the INGC.

led by the INGC, but has no regular meetings to discuss mechanisms of prevention, mitigation and response for disasters resulting from natural events. According to a senior member of the committee interviewed in Beira, this commission meets regularly immediately before the season known for the occurrence of natural hazards²⁴ and ceases its activities as soon as the threat is over. According to our interviewer, the lack of financial and material resources forces this committee to work only intermittently and without being able to implement sound prevention programmes or projects that would help communities to decrease their vulnerability to future hazards. The provincial department of INGC believes that only coordinated work between different government departments, NGOs and civil society can prevent future losses.

Preventive measures and initiatives for strengthening community capacity to withstand natural hazards are apparently still limited, especially as regards implementation. Most provincial departments are facing serious financial shortages that do not even allow them to implement their current activities. Our general perception was that disaster risk management is still a secondary priority and not well integrated into governmental development plans or programmes. In addition, integrating the disaster committee into other state departments is problematic due to the double subordination of the committee members who have to report simultaneously to their corresponding provincial departments (that they are presenting within the committee) and also to this committee as a provincial coordinating body. What happens is that these state departments represented in this committee end up receiving two commands or orientations, which sometimes contradict each other; one is from the provincial department representing and another one from the coordinating committee. These situations make it difficult to these representatives and to the committee itself to work efficiently.

This problem of double subordination is reproduced at district level as well. The provincial authorities appointed for resource allocation in natural hazard management considered double subordination as a constraint. Because of the centralisation of Mozambican public administration, some departments working at local level (for example, the Provincial Directorate of Agriculture and Rural Development, working in agricultural development and food security) do not coordinate with corresponding provincial departments.

At the provincial, district and local community levels, the presence of other organisations, including the UN²⁵, working on disasters is limited. Some of these organisations worked only during the emergency, with their activities ceasing soon afterwards. Búzi is, however, an exception, with the Red Cross, the GTZ and some NGOs still doing extensive work on disaster risk management within the local communities.

3.4 District level

In Búzi the INGC has no representation, resulting in the local administration having created a district emergency committee, composed local representatives of all the ministries, maritime authorities, police and NGOs. The role of this committee includes the activities shown in the box below.

²⁴ This period, with some variation, coincides with the wet and hot period from October to April. In this period the probability of cyclones and high rainfall occurring is high, resulting in floods.

²⁵ The UN generally works in coordination with local NGOs.

Box 5: The role of the district emergency committee

- coordination of evacuation procedures;
- supervision of the affected areas during the time of emergency;
- pre-evaluation of the situation after the event (especially floods) to see if conditions are suitable for households to return. If this is not possible, people are required to choose a safer zone where they can build their houses, while continuing their farming activities in the lower area;
- post-disaster assessments (each administrative sector assesses the damages caused in its sector).

The coordination between district and provincial authorities is considered to fully be operational, with district authorities providing information on disasters to the provincial authorities, who in return provide assistance when needed.

In the Búzi administrative headquarters, the team was informed that a Búzi Basin Management Committee had been launched in 2001. This committee marked the limits of the river flooding in 2000, to be used as an indicator of flooding severity. This committee coordinates with the Chicamba Dam for efficient water management, in an attempt to avoid future disasters in the Búzi basin.

3.5 The role of the UN in coordinating a strategy for disaster management in Mozambique

The role of the United Nations in reducing community vulnerability to natural hazards was clearly visible at national level, with the UN acting as the main partner of the government in disaster management. Three UN organisations (UNDP, FAO, and UNICEF) were visited by this project's researchers and some interviews conducted, to understand the role of the UN and their mechanisms of intra- and inter-institutional coordination. In the late 1980s, the UN formed, under the United Nations Development Assistance Framework (UNDAF), a coordinated strategy for disaster management in accord with the Mozambique government. This agreement aimed to assist and enable the Government of Mozambique to:

- manage disasters effectively through **preventive measures** designed to mitigate the threat and impact of future disasters;
- **increase preparedness** in the form of preparedness plans, regulations, and resources for effective and efficient disaster response; and
- provide a **timely response** to the affected population when disaster strikes, to reduce loss of life (PNUD, 1998)

The UN also assisted the government to:

- (i) prepare a national disaster management policy and complementary legislation,
- (ii) establish a disaster management information system to inform decision-making, and
- (iii) implement the disaster management plan.

Some UN agencies sponsored and supported the insertion of a disaster management component in the plans of their counterpart ministries, and they provide technical support in important activities to sustain the global strategy for disaster management. For example, UNICEF provides technical support in the area of water and sanitation; the FAO in food security; WHO in epidemiological surveillance, and the UNHCR and WFP in strengthening

regional linkages in disaster management (PNUD, 1998) – especially with those SADC countries with which Mozambique shares river waters. The UNDP worked particularly for the creation of the INGC and has allocated experts to the INGC to work on institutional capacity building. A mini-office within the INGC has been established for better coordination of activities related to disaster risk management. To ensure good coordination between UN members, a UN Disaster Management Theme Group, composed of focal points from each agency (including the World Bank), has been created.

PART 4

Lessons learnt and recommendations

4.1 Introduction

The 2000 flood event presented a number of key lessons not only on how to coordinate an emergency better, but also on how necessary it is to integrate prevention, relief assistance, and rehabilitation into long-term risk reduction programmes. In Part 4 of this report these lessons are presented, followed by some recommendations based on what was observed in the field and, in some cases, drawn from reports and literature reviews about Mozambique and other regions around the world that face similar disaster risks.

4.2 Lessons learnt from the 2000 events

The 2000 floods and cyclones tested the Mozambican government capacity to respond efficiently; exposing its institutional weaknesses and limited capacity. At the onset of the event there were no clear programmes or plans for responding to the emergency – including preparedness, evacuation and response. Existing plans did not take account of an event of such magnitude nor the type of impacts that resulted. A main argument presented was that communities also did not anticipate an event of such magnitude, inhibiting appropriate responses, particularly to early warning.

The 2000 event did however represent an opportunity for the government to understand its institutional vulnerability expressed in:

- lack of institutional coordination to respond situations of extreme need;
- weak mechanisms of communication between different levels of the administration;
- lack of efficient channels and mechanisms to disseminate information on natural hazard management to communities that really need that information;
- centralisation of decision-making at national level and nonflexible mechanisms for information flow from bottom-up. As result, most of the decisions taken do not reflect the needs and expectations of the people on the ground;
- fragile and incompatible links between the different powers created in a context of new democratisation. At the local level there is no clear definition of roles between the traditional and administrative authorities; this sometimes results in conflict, which can have a negative effect on institutional coordination in disaster management.

The 2000 event provided the means to evaluate infrastructural vulnerability, especially as critical public infrastructures (roads, bridges, social infrastructures) are still in a state of disrepair, most of them destroyed during the recent civil war. Several million US dollars are reported to enter the country every year for development programmes and projects, but this is not reflected on the ground, probably due to an inefficient mechanism of monitoring the activities of private companies, NGOs or international agencies. High levels of corruption and misuse of funds also exacerbate this.

In other cases the government finds itself incapable of challenging donors' imposition of conditions for the application of the funds provided. Donors in many cases decide what to give or to build, in which community or area, when and how, without coordinating with government authorities or even the local authorities of the beneficiary communities. As a result, in some

cases their initiatives or projects fail to reach their goal. For example, in Búzi we knew that dozens of boreholes for water supply had been constructed by NGOs but they have no water because they were constructed in inappropriate zones where the water table is very deep. Those NGOs decided on their own where to build, without consulting the local authorities who know the region well.

A similar situation happened regarding the emergency assistance during the 2000 floods, where the CVM and INGC had been nominated to coordinate the reception and distribution of assistance. However, some organisations ignored these entities and their legitimate role, deciding, at their own discretion, which communities were in need. The result was that assistance was distributed outside of coordination with the Mozambican government. This happened, for example, in Chókwè District in the Limpopo River basin, specifically in the Chiaquelane accommodation centre. The government had to intervene to stop this process in this particular point, but we are sure it happened in some other points around the country.

The lesson here is that the government should strengthen local institutions and establish mechanisms for facilitating the emergence and maintenance of grassroots organisations with the capacity to become valid coordinating partners with international agencies in the case of an emergency. Internationally the Mozambican case was considered one of the most successful in terms of international coordination of assistance, but at local levels this was not always the case.

In terms of disaster prevention and mitigation, the Mozambique government recognised that strategies and programmes for addressing these issues are still far from reaching the necessary efficiency, and policies and programmes for addressing extreme poverty are still inadequate. The extent of the impact was due not only to the intensity and magnitude of the event, but also to the high levels of vulnerability within rural communities, compounded by HIV/AIDS and chronic food insecurity.

4.3 Recommendations

The high levels of vulnerability within Mozambican rural communities present a challenge in reducing their risk to natural hazards or poorly managed natural resources (e.g. the Chicamba Dam). Prevention and mitigation strategies therefore need to focus closely on reducing vulnerability through sustainable development initiatives. In both Munamícuá and Boca study sites, the role played by local authorities (traditional and administrative), local institutions and organisations (church based organisations, schools, etc.) in rescue and recovery during the time of crisis was significant. Informal social networks based on neighbourhood, kinship, friendship, and church ties were identified as important elements that replaced formal institutions in reducing the impact of the disaster in places where these institutions were limited or altogether absent. This role of the informal networks needs to be strengthened within local communities. The following paragraphs present some recommendations based on fieldwork experience. In each section, specific focus is given to the role of institutions, from a national to local level, with suggestions as to how they could be strengthened.

4.3.1 Emergency management of an extreme event

4.3.1.1 Early warning and emergency planning

A new tendency in the last decade has been to decentralise early-warning mechanisms, to introduce emergency planning at the local level, allowing communities to contribute local knowledge. The following recommendations are presented as means for strengthening early warnings and emergency planning in Búzi:

- **Development of local management plans involving the local authorities and the most influential people within the community.** The participatory development of these plans is critical, as the local communities know when to anticipate extreme weather events such as drought, floods and cyclones. Similarly, they know which are the most at-risk areas. Local management plans should also reflect local knowledge to ensure appropriate local buy-in of the procedures presented.
- **Promotion of the local community radio station in Búzi to disseminate early warnings.** One example of this is the role played by the Búzi Community Radio station in the Búzi administrative headquarters in 2000; where people were informed in good time about the rising of the Búzi River, with some people moving to safer places recommended in the bulletins. People who could not imagine the intensity of the event were seriously affected, as they did not evacuate in time. The GTZ has an interesting project for radio dissemination in Búzi that should be put in place as soon as possible. Radio is an important means of early warning because using the local language to disseminate information gives more opportunities to the many illiterate people to understand what is happening regarding natural hazards in their areas and to find out what to do or where to go.
- **Distribution of solar or wind-up radios, as the villagers often cannot afford to purchase batteries.**
- **Active involvement of GRC members to complement the information broadcast by the local radio to local communities, especially in remote locations along the Búzi catchment.**
- **Working with communities to inform them of the recurrence of extreme weather events,** so that all warnings issued by the government are taken seriously. What exacerbated the disastrous impact of 2000 was that no one, including the government, could imagine the magnitude of the event.
- **Promotion of national and provincial teams for monitoring, recording and evaluating indicators of the natural hazards and subsequent dissemination of information to potentially affected communities.** The GTZ, through its Proder project, is financing assessment studies and informative posters for the dissemination of information, to improve communities' knowledge of the nature and intensity of potential disasters and to improve prevention and preparedness mechanisms.
- **Facilitation of environmental education programmes with the local community to increase their knowledge of natural hazards.** This will increase the communities' capacity to understand unusually extreme events.

- **Design of evacuation plans with at-risk communities**, specifying where they should evacuate to and where to get access to the necessary resources in case of emergency.
- **Integration of the scientific understanding of natural hazards with local 'conventional wisdom' or traditional beliefs.** Technological advancement of early warnings must not be used to undermine the traditional knowledge of local communities about disasters. Efforts should be made to integrate these two kinds of knowledge, taking the better aspects of the traditional knowledge into the modern system, to enhance community understanding of the causes of disasters and improve mechanisms for prevention, mitigation and response. Traditional authorities can work as channels of communication between technical experts and government entities, and rural communities. The advantage of this is that as traditional authorities are largely legitimised in their communities, the probability of conflict or rejection of information disseminated through them is very low.

4.3.1.2 Evacuation, search and rescue

To avoid a situation similar to 2000, where the country had to depend on external forces for evacuation, search and rescue, ongoing training programmes for the youth resident in each vulnerable zone should be developed, providing them with the knowledge needed to conduct first aid in an emergency situation. The GTZ has initiated such a programme, but the number of people involved is still low. Other organisations should be encouraged to get involved in these initiatives, and if possible some tax relief should be given to organisations involved in these kinds of initiatives. Programmes such as these can reduce the vulnerability of communities at risk to small and medium scale recurrent events.

4.3.1.3 Assessing the impact and distributing relief

In Mozambique, damage and needs assessments were undertaken largely by external experts, while the government and aid agencies took responsibility for providing aid and made all distribution decisions. In addition, many of the agencies, who mistrusted the local authorities, conducted their own assessments. As a result of this uncoordinated assessment procedure, relief was distributed haphazardly, and not all affected communities were assisted.

- **Need for standardised assessment procedure.** From the experience of 2000 it is clear that the local authorities (including Búzi district) have no methods for assessing impacts. Each state department in Búzi did an assessment of its own infrastructure or goods; for example, the education department was interested only in the number of schools affected. So it is necessary to establish a standardised assessment, which focuses not only on structural impacts such as loss of physical assets but on impact on livelihoods. This assessment should be conducted by the traditional authorities because they live close to the households affected, and they are themselves part of the affected people.
- **Conduct pre-assessment and monitoring of food relief distribution by the local authorities to avoid community conflicts**
- **Supporting local support networks.** The role played by local support networks is more important than just 'simple relief'. Local networks are durable, more efficient and can guarantee longer-term food security than external simple relief, which normally

lasts no longer than six months following an emergency. Developing local networks avoids dependency of local communities on external donors.

- **Encourage partnerships between the Mozambican government and external agencies.** Good relationships between these two entities should be built up permanently for better coordination in case of an emergency situation. This would overcome the external agencies' mistrust of local authorities and promote collaborative work, thus avoiding haphazard assessment and distribution of relief.
- **Design of emergency food aid interventions to support mitigation activities as well as simply providing immediate relief,** for example river bank protection, soil and water conservation, rural infrastructure rehabilitation which would reduce exposure to impact of future risks (MAF *et al.*, 1998).

4.3.1.4 Recovery and rehabilitation

The recovery and rehabilitation phase is critical in reducing the long-term vulnerability of at-risk communities, when undertaken within a long-term time frame. The way in which post-disaster recovery and rehabilitation will be carried out determines the vulnerability or resilience of the local community to recurrent hydrometeorological hazards.

- **Establishment of long-term rehabilitation processes involving all community members.** Recovery programmes should not consist of simple clean ups and restoration of community *status quo*, but should be integrated with long-term rehabilitation programmes.
- **Design of planning and recovery programmes that take into consideration local cognitive factors that will influence their effectiveness.** To reduce levels of vulnerability and avoid perpetuating pre-disaster conditions, recovery planning should involve all members of civil society. It should take account of horizontal relationships to ensure that decision-making is not divorced from local level reality, including gender issues.

4.3.2 Reducing the vulnerability of at-risk communities

Mozambique is known to be one of the most cyclone-prone countries in southern Africa. Natural events occur almost annually dramatically affecting the livelihoods of thousands or even millions of people. The negative impact of these natural events is not mainly due to the high intensity or large magnitude of these events, but because of the high level of vulnerability of the people. Unless social, economic and political conditions are improved, these people will remain vulnerable to recurrent natural events.

4.3.2.1 Strengthening and diversifying community livelihoods

The livelihoods of more than 80% of the Mozambican population are based on agriculture. This sector is frequently seriously affected by natural hazards, especially droughts, cyclones and floods, which destroy the means of livelihood of local communities and impact severely on their food security. The situation is exacerbated by the limited capacity of local communities to diversify their livelihoods using the available natural resources.

order to strengthen and diversify community means of livelihood, the following are recommended

- **Focus on extensive and diverse sustainable utilisation of the natural resource base (agriculture, livestock, wildlife, fishery and forest resources) and efficient utilisation of river basins for crop production to reduce chronic vulnerability (MAF *et al.*, 1998).**
- **Focus on female-headed households whose livelihoods are agriculturally dependent.** Observation during the fieldwork showed that the number of female-headed households in Búzi is high. Most of these women lost their husbands during the civil war or due to prolonged sickness, probably linked to HIV/Aids. Administrative as well as traditional authorities should support these households, which depend mostly on agriculture – not by giving food but by helping them improve their livelihood strategies, based on land resources. What makes the situation yet worse for these families is that their heads are illiterate, with limited possibilities of livelihood diversification.
- **Encourage local seed exchanges between farmers from different communities** because local seed has adapted to local soil and climate conditions and is thus more resilient. An example would be some fruit trees (e.g. banana, paw-paw) and sweet potatoes, which are considered of great importance to local communities, due to their high resistance to drought.
- **Promoting local agrarian extension officers to help local communities improve agricultural production.** The GTZ, in collaboration with the Búzi agricultural authorities, is promoting local agrarian extension officers, but in many cases they still require training before working in the field.
- **Encouragement of NGOs in implementing small projects for livestock production as a second means of livelihood.** The advantage of this is that it introduces communities into the cash market, through the sale of chickens or goats. With cash-based income during crises, households can purchase food, replace lost assets or pay medical bills. This in turn decreases a community's dependency on external food aid and will incidentally support the growth of local markets during and after crises.

4.3.2.2 Strengthening the coordination role of local institutions in reducing the vulnerability of at-risk communities

Examples from different parts of the world show that communities with strong institutional coordination are likely to be less vulnerable than those with weak institutional coordination. More than ever it is clear that what turns a naturally-occurring hazard into a disaster is not the natural event itself, but the social context, the level of coordination between the different institutions that exist to reduce the effects of hazards.

- **Increased coordination between government institutions at national, provincial, district and local levels should be strengthened.** The information exchange between these different levels is very important for ensuring better coordination and more informed decision-making. They can also help international agencies or organisations because they will be informed as to what is

happening, where, how many people are involved and which local structures can be used as focal points.

- **Permanent operation of disaster committees at each level of government.**
These committees should integrate at least one specialist in natural hazards, who would facilitate the understanding of natural hazards and design mechanisms to ensure good communication between government authorities and local communities, especially those related to early warning;
- **Strengthen coordination between Mozambique and other southern African countries.**
Cooperation should be strengthened, especially as regards water management information, to avoid situations like that of 2000, where excessive volumes of water were released from Zimbabwe without the Mozambican authorities being notified.
- **Expansion of the database identifying all institutions and organisations working on disaster management at the local level.**
The UN has been actively involved in helping the government create such a database, and in information sharing between organisations working on disaster management, but more work needs to be done. Administrative or traditional authorities at local level should be involved to ensure adequate coverage of the country, especially the rural areas.
- **Establishment of communication mechanisms and information exchange among local institutions to ensure greater coordination.**
A set of common standards should be developed for assessing performance towards the shared goal of risk reduction. There should be regularly scheduled reviews of existing conditions, where feedback from all participants would help in the regular reassessment of contingency plans.
- **Strengthening of initiatives such as the GRC, by the CVM and GTZ.**
The Red Cross and GTZ should empower local communities to take over actions that until now they have carried out. The advantage of involving local community leaders is that they are known locally and uphold the same values as the community; so the probability of having a message accepted is higher than if it had been come from somebody outside the community;
- **Strengthen disaster committees to support communities in managing their own risk.**
This could include support for traditional coping strategies based on local resources (for example traditional boats). This would be important since the Mozambican context is characterised by a weak capacity of governmental institutions in risk reduction.
- **Strengthening the organisational capacity of local organisations.**
This can be achieved through increasing communities' resilience and resistance to hazards through sharing food, working animals, farm tools and other resources. Decision-making ability and know-how in managing community-wide activities, organising evacuations and managing emergency responses also need to be strengthened (Heijmans & Victoria, 2001).

- **The government should take advantage of collaboration with NGOs and other agencies that already understand the importance of local organisation.**
In Búzi, for example, the GTZ is one of the NGOs that have been working on creating new community-based organisations and strengthening those already existing (e.g. disaster committees composed of local villagers trained by the GTZ and CVM).

4.3.2.3 Integrating disaster management in sectoral policies

There are two policy frameworks that have the potential to reduce exposure to risk and increase the coping ability or resilience of households. The first is the Poverty Reduction Strategy (PARPA), which deals, among other things, with creating a disaster safety net to cope with natural hazards, and the second is the Disaster Management Policy, which seeks to ensure that disaster prevention, mitigation and response are integrated into sectoral policies and programmes. Although integrated in some sectoral policies (for example, the land and environment laws) these are still only weakly enforced.

- **Increased sectoral engagement between government departments on disaster risk management.**
- **Integration of disaster risk reduction principles into government programmes.**
For example, the PARPA should focus on disaster reduction as its main target before becoming involved in developmental programmes. The impact of the 2000 floods should be taken as an example, to show that if developmental programmes do not take disaster risk into consideration they may fail.

4.3.2.4 Promoting multidisciplinary research into vulnerability reduction

In the past few years some progress has been made in Mozambique regarding vulnerability assessment (see for example MAF *et al.*, 1998) and hazard risk assessment (see CIG-UCM, 2003). These assessments represent a positive attempt to understand the conditions that make communities more vulnerable to natural hazards, but their focus is still mostly one-dimensional.

- **Adoption of a multi-disciplinary approach to assess at-risk communities.**
This should involve assessing the economic capacity of communities or households to resist the impact of a hazard event, and their ability to recover from it (asset levels, mechanisms of access to natural resources, access to credit), the resistance of its physical structures (mainly housing) and infrastructures when an event occurs, the levels of social cohesion (informal social networks) and organisation (formal and informal), and cultural understanding (Few, 2003).
- **Encouragement of government and local institutions to develop an inter-disciplinary “vulnerability index”.**
This would provide a reliable measure of the differences between communities exposed to similar ranges of hazards (Comfort *et al.*, 1999).
- **Local authorities should work on a long-term basis to persuade local communities that extreme events like the 2000 can occur again.**

All warnings issued by government should be taken seriously. The problem of how to make people understand the probability of recurrence of extreme events is an issue of global concern.

Appendices

Appendix 1

Tropical depressions between January and April 2000

Order	Designation	Classification	Beginning	Dissipation
1	ASTRIDE	Tropical storm	99/12/25	00/01/03
2	BABIOLA	Tropical cyclone	00/01/06	00/01/12
3	CONNIE	Tropical cyclone	00/01/25	00/02/01
4	DAMIENNE	Tropical storm	00/02/01	00/02/02
5	ELINE	Tropical cyclone	00/02/08	00/02/23
6	FELICIA	Tropical storm	00/02/19	00/02/24
7	GLORIA	Tropical storm	00/02/29	00/03/02
8	09- 19992000	Tropical storm	00/03/12	00/03/07
9	11- 19992000	Tropical cyclone	00/03/06	00/03/08
10	HUDAH	Tropical cyclone	00/03/25	00/04/08
11	13- 19992000	Tropical depression	00/04/11	00/04/14
12	INNOCENTE	Tropical storm	00/04/13	00/04/19

Source: GDM (2000)

Appendix 2

Level of appeal and response

Sector/Activity	Appeal	Response	% R/Appeal
Food	35,585,828	19,519,767	54.85
Emergency	10,993,842	30,228,852	274.96
Transportation			
Roads Reparation	36,095,000	2,387,798	6.62
Electricity Reparation	14,000,000	-	-
Health and Nutrition	7,621,000	10,720,493	140.66
Education	2,850,400	903,207	31.69
Child Protection	622,150	-	-
Gender Issues	800,000	-	-
Water	6,586,630	3,909,545	59.36
Environment			
Rescue Material	27,774,600	5,494,996	19.78
Agriculture	13,190,000	1,237,640	9.38
Land Mines	2,865,000	908,403	31.71
Coordination	1,590,500	-	-
Cash	-	70,714,532	-
Others	-	16,200,644	-
Big Total (Cash)	160,575,650	162,225.87	101.03

Source: adapted from GDM (2000)

Appendix 3
Summary of assistance received as result of appeal

COUNTRIES

COUNTRY /INSTITUTION	TOTAL (in USD)
South Africa	1,713,347.39
Spain	5,224,617.41
Japan	1,333,042.30
Libya	1,500,000.00
Portugal	2,495,794.58
Italy	816,441.45
Namibia	800,000.00
Swaziland	832,995.00
Thailand	794,565.95

UN AGENCIES

OCHA/UNDP	826,687.66
WFP	7,747,722.63
UNICEF	12,782,435.64
FAO	721,260.73
ACNUR	1,096,728.00

NGOs

ADRA	913,875.47
CARITAS	2,115,251.95
DFID- UK	708,099.52
LWF	1,108,136.72
OXFAM	1,988,268.92
USAID	649,311.44
WVINT	1,993,836.10

FOREIGN COMPANIES WORKING IN MOZAMBIQUE

BAXTER	13,413,921.81
PARMALAT	110,666.31
CMA	95,000.00
SPEDITUR	30,000.00

MOZAMBIKAN ORGANIZATIONS

UGC	153,382.90
C. Muçulmana	368,262.43
KULIMA	226,966.99
MEDIMOC - MISAU	88,616.28
CVM	1,804,109.56

RELIGIOUS ORGANIZATIONS

Jesus Alive	442,335.32
Christian Aid	1,032,629.96
MOZ. Presbyterian Church	388,460.00
MOZ. Evangelic Association	112,086.91
CCM (Mozambican Christian Council)	151,392.65

Source: adapted from GDM, 2000.

Appendix 4
Main policies and legislation after 1990

Policies

POLICY	DESCRIPTION (KEY ASPECTS)
Land Policy (Resolution 10/95 of 17 th October, 1995)	<ul style="list-style-type: none"> (i) ensure the populations and investors' access to land; (ii) ensure women's access to and use of land; (iii) enforce an ecologically-sustainable use of the resources; (iv) promote national and foreign private investment without prejudicing the resident populations, and ensuring benefits to the state; and (v) ensure active participation by nationals as partners in private enterprises.
Forestry and Wildlife Policy Resolution 10/97 of 7th April) ²⁶	<p>The main objective of this policy is the conservation, utilization and development of forestry and wildlife resources for social, ecological and economic benefit of present and future generations of the Mozambican people. Other key aspects include:</p> <ul style="list-style-type: none"> i) Establishment of an economic value for Mozambique; ii) rural development through involvement of the communities in the management of profits obtained from forestry and wildlife exploration; iii) ecologically sustainable use of resources; iv) strengthening and organisation of the institutional capacity within the processes of decentralization and community handling of natural resources.
Agrarian Policy (1995)	It defends the sustainable use of natural resources for the development of agriculture
Water Policy (Council of Ministers Resolution 7/95 of 8 th August) ²⁷	It postulates the rational and economical use of water resources, with involvement of local communities.

²⁶ Resolution 10/97 of 7th April (Forestry and Wildlife Policy) [*Boletim da República (BR)* No. 14- Supp., Series I – 7th April 1997]. Maputo

²⁷ Council of Ministers. Resolution 7/95 of 8th August, 1995. *National Water Policy*. Maputo.

Legislation	
LAW (ACT)	DESCRIPTION (KEY ASPECTS)
Land Law (Law 19/97 of 1st October) ²⁸ .	The key aspect of the new law is its recognition of the right to land through occupation on part of rural families, based on oral testimonial. This is particularly important because it opens up opportunities for safeguarding the right to land of many Mozambicans who cultivate it. This law compels for: (i) recognition of the right to land use and/or utilisation according to customary norms and practices; and (ii) compulsory consultation to the communities when demarcating and titling the right to use and/or utilise land.
Environmental Law (Law 20/97 of 1st October 1997) ²⁹ .	(i) rational utilisation and management of environmental components; (ii) recognition and valorisation of traditions and community knowledge; (iii) participation of the citizens in the environmental management programme; (iv) international co-operation in view of finding solutions to environmental problems.
Forestry and Wildlife Law (Law 10/99 of 7th July 1999) ³⁰	(i) integration of local communities' interests, of the private sector and civil society; (ii) ecologically sustainable use of resources; (iii) establishment of mechanisms for private appropriation; and (iv) recognition of customary rights
Fishery Law (Law 3/1990)	This law emphasises the development of small scale fishing and envisages establishing conservation measures for fishing resources, and this includes determination of resting periods, areas of forbidden or limited access, maximum quantities of exploration, prohibition or regulation of fishing

²⁸ Law 19/97 of 1st October (Land Law) [Boletim da República (BR) No. 40 - 3rd Supp., Series I – 7th October 1997].

²⁹ Law 20/97 of 1st October (Environment Law) [Boletim da República (BR) No. 40- 3rd Supp., Series I – 7th October 1997].

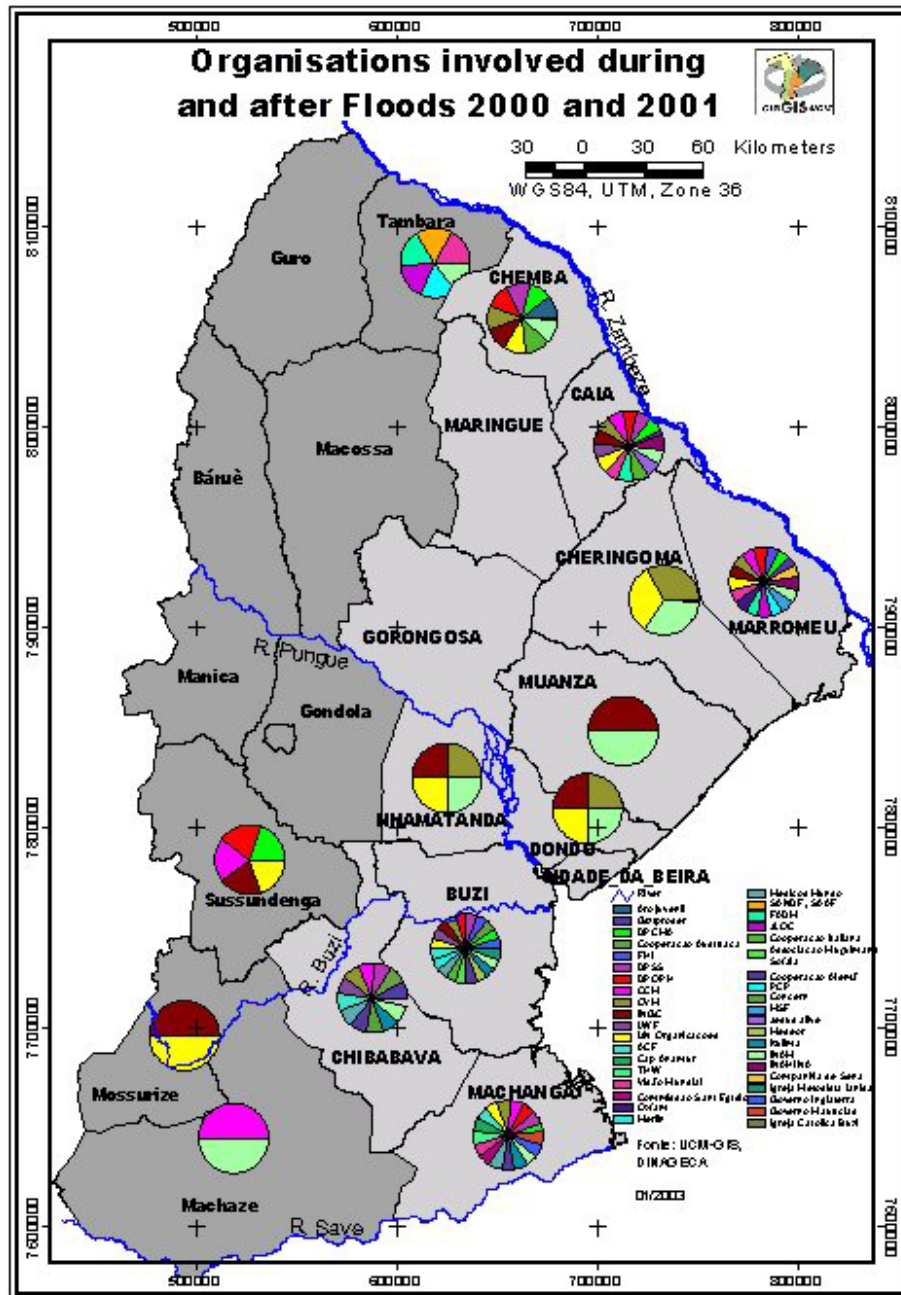
³⁰ Law 10/99 of 7th July (Forestry and Wildlife Law) [Boletim da República (BR) No. 27- 4th Supp., Series I – 12th July 1999].

	as far as internationally protected species are concerned and protection of rare and endemic species.
Water Law. (Law 16/91 of 3 August 1991) ³¹	<p>The law postulates that all traditionally established common uses must be recognised and recorded, and that there must not be any private utilisation of water in prejudice of the populations' right to potable water. It also adds that the holders of rights and of private utilisation will have to allow access of the neighbouring population to potable water.</p> <p>The law also defends the participation of the populations in the main decisions relating to the policy on water management. As one of its objectives, the Law states that the National Policy on Water must be geared towards the continuous and sufficient provision of potable water to the populations so that they meet their domestic and hygienic needs.</p>

Source: Adapted from Ntantumbo *et al*, 2001 and Chilundo & Cau, 2000.

³¹ Law 16/91 of 3 August 1991 (Water Law) [*Boletim da República* No. 31- 2nd Supp, Series I – 3 August 1991]. No implementing regulations were ever issued for this law.

Appendix 5
Map indicating the concentration of institutions in basin during the 2000 floods



Source: CIG-UCM (2003)

Appendix 6
Institutions and their role during the emergency in Búzi

ORGANISATION INSTITUTION	ROLE DURING THE EMERGENCY
Austrian Cooperation Development	- financial donation (US\$1 million donation: agricultural assistance, housing, and GIS research)
Foundation Against Hunger	- food distribution, provisory shelter (tents), plastic bags, latrines construction, blankets, household assistance distribution (buckets, material, basin, plates), hygiene material.
Health Department	- vaccination against epidemics - monitoring the epidemics evolution in the accommodation centres
Provincial Dept. of Public Works and Housing	- needs assessment - water provision - food distribution coordination (facilitating the identification of areas of concentration of affected communities)
CCM (Mozambique Christian Council) Mozambican Red Cross (Sofala Branch)	- identification of households in needs - food distribution - water treatment - definition and coordination of relief activities
INGC (Sofala Branch)	- definition and coordination of relief activities - transport and food distribution; - permanent evaluation of the situation in the affected areas
Lutheran Federation	- water pumps and boreholes - houses building - shelter and medical assistance - food distribution
UN Agencies	- food and emergency kits distribution - medical assistance and epidemic control - elaboration of emergency action plan - information gathering on affected communities - seeds and agricultural tools distribution - infrastructures rehabilitation
Medicus Mundi	- post disaster needs assessment - mobile clinics for medical assistance - Epidemiologic profile and control in the affected areas during the emergency situation
Sofala Association	- houses construction - food distribution
German Cooperation (GTZ)	- post disaster needs assessment - funds for infrastructure urgent reparation - generator for the district hospital
KULIMA (Socio-Economical Integrated Development)	- medical and sanitation assistance - food and houses building
Methodist Church	- housing and food distribution
Catholic Church (ESMABAMA ³² project)	- housing and food distribution
USAID	- financial assistance

Source: CIG-UCM (2003) and some interviews with local communities in Boca and Munamicua.

³² A Catholic charity organization working in four mission of southern Sofala (Estaquinha, Machanga, Barada and Mangurde).

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Glossary

Chefe da povoação	chief of the second level at the traditional leadership structure or sub-community
Povoação	sub-community, below the <i>regulado</i> or community
Regulado	correspond to the largest territory led by traditional leader/chief
Régulo	the traditional leader/chief
Sagutas	small groups of about ten households, falling under the povoação or sub-community