

**Lessons Learned Workshop**

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## **Mozambique Floods 2001: Lessons Learned**



Zambezi River Basin Flooding: Supporting Affected Populations in Central Mozambique  
Visit of the OCHA Assistant Emergency Relief Coordinator, March 2001

**Summary Report produced by the  
Office of the United Nations Resident Coordinator  
Maputo**

## Workshop On Lessons Learned From The 2001 Floods In Mozambique

1. Mozambique's National Institute for Disaster Management (INGC) convened a *Lessons Learned Workshop* in Beira on 26/27 July 2001, funded by the Office for the Coordination of Humanitarian Affairs (OCHA), to draw lessons from the rescue and relief operations during the floods in the centre of the country from January to May 2001.
2. The flooding occurred on the Licungo, Cuacua, Lualua, Nipiode and Raraga Rivers in Zambezia province, the Chire River between Tete and Zambezia provinces, the Zambezi River, which flows through Tete, Manica, Zambezia and Sofala provinces, and the Buzi and Pungoe Rivers in Sofala province. The main coordinating centre for the operations was set up in the port city of Beira, Sofala province, to facilitate access to the affected areas, with sub-coordination centres in Quelimane, capital of Zambezia province, Tete, and a transit hub at Caia in the Zambezi valley.
3. In addition to emergency UN staff working on flood activities, OCHA, through the UN Resident Coordinator in Mozambique, assisted the INGC in its coordination of the national and international response to the disaster by providing staff for an Emergency Coordination Unit, attached to the UN Secretariat in Maputo, and located within the INGC in Maputo, Beira, Quelimane, Caia, Tete and Manica coordinated from the operational hub at the Beira airport.
4. The workshop had three specific objectives: to review the 2001 floods and the role of the main players; to draw lessons from the point of view of prevention, preparedness and response; and to propose adjustments to the Contingency Plan for the next rainy season.
5. The first session of the workshop was held in plenary, with a welcome by the Governor of Sofala and addresses by the Deputy Minister of State Administration and the Resident Coordinator of the United Nations System in Mozambique; a presentation on the floods and the humanitarian response by the Director of the INGC; and briefings from representatives from each provincial government on the specific experiences of that province. The plenary was then divided into the following four working groups:
  - Coordination, data gathering and processing, the press, training and response
  - Logistics, communication and food security
  - Health, water supply, sanitation and shelter
  - Warnings, public awareness, education and resettlement.
6. On the second day, the working groups presented summaries of their findings and recommendations in plenary, after which the Catholic University in Beira gave a presentation on its work in mapping flood-risk areas using geographical information systems (GIS).. A short communiqué summarising the proceedings was issued. Participants were invited to make comments and further contributions before the Deputy Minister of State Administration formally closed the workshop. Some 130 delegates attended the workshop, including the governors of three of the four affected provinces, as well as district administrators and representatives of Government departments, UN agencies, donors, and NGOs.

7. After the host governor of Sofala province welcomed the participants, the Deputy Minister of State Administration formally opened the proceedings. In his opening address, the Deputy Minister of State Administration stressed the need to utilise lessons learned to help reduce Mozambique's vulnerability to natural disasters. He further noted that the process of resettling the population displaced by the floods should be seized as an opportunity to improve the living conditions of people in flood-affected zones, where the level of poverty is extremely high.
8. The UN Resident Coordinator/OCHA Representative recalled the experience of responding to the 2000 floods in the centre and south of Mozambique, which brought improvements to many aspects of the rescue and relief operations in 2001, and specifically to national and provincial coordination. He noted that the contingency plan for 2001 was based on an accurate forecast of potential floods from January to April between Vilankulos in Inhambane province and Quelimane in Zambezia province. Moreover, the United Nations contingency plan, which was fully integrated with the national contingency plan, allowed the pre-positioning of much equipment and goods before the floods struck. In addition, the UN capacity for coordination was increased with the establishment of the UN Disaster Management Team (UNDMT), involving all UN agencies, Government, bilaterals, and NGOs. The UN Resident Coordinator pointed out that the UN joint appeal managed to raise over US\$10 million or 1/3 of the US\$30 million sought by the Government to respond to the disaster.
9. Representatives from each of the four affected provinces then recounted the experience of their respective province before and during the floods, as well as the specific lessons learned. Operations were guided by contingency plans, which served to encourage donors to provide timely supplies of food and relief goods, and for pre-positioning in areas at risk. The contingency plans also contemplated public awareness and risk warning, as well as the mobilisation of disaster management structures and resources available at local level. This groundwork was undertaken as soon as the forecast for higher than normal rainfall in the 2000/2001 rainy season, particularly in the centre of the country, was announced in September 2000. The preparation of contingency plans involved the identification of areas at risk and warning the population living in these areas, as well as the identification of safe areas for temporary accommodation and of existing resources and additional resources required. Warnings were broadcast on state radio in all local languages.
  - **Manica:** When the flooding began, the INGC in Manica seconded a staff member to the coordination centre in Beira and placed all Government trucks at the disposal of the INGC for humanitarian purposes. The Manica report highlights that relief operations were hampered by the failure to repair roads damaged in the floods of the previous year. A further obstacle in the relief operations was the shortage of tents and plastic sheeting to provide shelter to displaced people, who were housed in schools and clinics whenever possible.

### Lessons learned

- i) Assistance needs to continue with the affected populations who are still not fully recovered from the trauma;

- ii) Care must be taken in selecting secure locations for resettlement, since this is the greatest factor affecting people's safety;
  - iii) Efficient communication and the provision of basic supplies must be secured before the occurrence of a natural disaster;
  - iv) Coordination among the Government and other operators is very important to the mitigation of the effects of a disaster;
  - v) Epidemiological and nutritional surveillance are necessary to avoid the spread of disease and the incidence of malnutrition;
  - vi) Collaboration between sectors in order to guarantee water supplies, sanitation and shelter is essential to maintain healthy communities;
  - vii) The strengthening of rescue capacity should be one of the main preventive measures, since roads become impassable as soon as the rains begin;
  - viii) Local rescue committees should be set up to train volunteers through simulations and learning from past experience.
- **Tete:** The post-flood harvest prospects in the province were reported to be promising. However, the resettlement of households left homeless by the floods is proceeding very slowly in Mutarara district. A multidisciplinary team from the provincial government is currently working in the designated resettlement areas to survey the land and demarcate plots.

### Lessons learned

- i) The preparation of the contingency plan meant that even after the access road to Mutarara was cut, food supplies pre-positioned by WFP were available;
- ii) The provincial government acted with flexibility by decentralising NGO activities to the severely affected districts so that assistance reached beneficiaries directly and duplication could be avoided. This effort strengthened relations between district authorities and the NGOs;
- iii) Weekly technical meetings during the floods allowed for strategic planning to respond to the disaster;
- iv) When clean water supplies ran low, chlorine was distributed to households in Zumbo;
- v) Regular reporting contributed to the disaster information system;
- vi) Coordination in Caia was said to be impressive, demonstrating the value of teamwork in reaching common goals;
- vii) At certain times, health care was irregular, disrupted by fuel shortages;
- viii) Available boats were not always appropriate for evacuation;
- ix) INGC should have its own vehicles, since contributions were not always able to reach beneficiaries.

- x) An anthropological study is required in order to discover the best way to persuade the population in areas at risk to make their homes in safer zones.
- **Zambezia:** A total of 15 motorboats plus two helicopters were used in the rescue and relief operations in this province. When families were made homeless by the storms and flooding, they were initially housed in schools, shops, churches and other secure buildings. Accommodation centres were created later where the population was organised into groups according to their home location.

### Lessons learned

- i) While the rain continued, most of the humanitarian assistance depended on air transport and boats for delivery;
- ii) Funds need to be made available urgently to repair access roads, thus avoiding a general food crisis because of bottlenecks in commerce;
- iii) Two months after the start of the floods, the numbers in the accommodation centres rose considerably because of the arrival of people from isolated areas who were running out of food, mainly because food was distributed only in the accommodation centres and excluded the population outside;
- iv) Seeds and tools should be distributed to all the affected population, not only the displaced, because many households have homes on higher ground while farming in the valley bottoms;
- v) The health sector should be provided with enough capacity to continue with programmes in health care, water treatment, and sanitation.
- **Sofala:** Beira was the centre for coordination of the rescue and relief operations, and an operations room was set up at Beira airport. Moreover, the town of Caia, on the south bank of the Zambezi River, was a transit hub for assistance to districts in the other three provinces.

### Lessons learned

- i) Military units need to be better equipped with aircraft, boats and other vehicles;
- ii) Existing human resources should be fully utilised;
- iii) A decentralised emergency fund should be created;
- iv) Rescue equipment should be placed in areas identified as at risk to allow for prompt intervention;
- v) The Contingency Plan should also include a financial component and provision for radio equipment and vehicles;
- vi) Mechanisms are needed to improve the links between NGOs and the administration to ensure a mutual exchange of information.

10. Below is a summary of the four working groups' recommendations and conclusions:

- **Coordination, data gathering and processing, the press, training and response**

With regard to coordination, the group recommended a review of the terms of reference relating to the composition, frequency and purpose of meetings. It further recommended greater integration of activities by Government, the UN, and NGOs. In relation to regional coordination in times of emergency, the group recommended the establishment of a mandate for this purpose to avoid conflicts of authority and to allow for follow-up of decisions.

The group stressed that assessments should be multidisciplinary, with established terms of reference, under Government leadership. A schedule of assessments should be set to gather baseline data and avoid duplication.

With regard to public information, information should be validated and released by the INGC.

A training programme should be established for those responsible for responding to emergencies, particularly at central level.

- **Logistics, communication and food security**

The group noted inefficient use of the few communications facilities available. It recommended the establishment of local committees to process and analyse information to be transmitted through a previously identified channel. The person or organisation responsible should also be identified. With regard to local institutions and authorities, the group suggested that NGOs develop partnerships aimed at capacity building in communications.

In relation to food security, the group recommended that care be taken to ensure that the quality and quantity of seed and tool kits are appropriate for the conditions in each district, in order to facilitate the timely delivery to beneficiaries. It further suggested that efforts be made to improve coping mechanisms among local communities in times of disaster.

- **Health, water supply, sanitation and shelter**

The group recommended joint planning of activities by Government, the UN and NGOs to establish areas of intervention, with priority for the creation of basic sanitation and related appropriate training.

With regard to shelter, the group recommended the improvement in management of shelter materials, and suggested that donors provide better quality tents.

In relation to the Contingency Plan itself, the group recommended that it be revised to allow broad dissemination at all levels. Moreover, the Contingency Plan should involve the municipalities and local communities, as well as the provincial and district authorities, and its implementation should be evaluated.

- **Warnings, public awareness, education and resettlement**

The group was pleased to note the success in warning local communities, thanks to widespread public awareness activities in the provinces and districts at risk from cyclones and floods. However, it recommended continuous training, particularly in mechanisms for the dissemination of messages at the district level.

With regard to resettlement, the group called for more expeditiously released and decentralised resources. Resettlement should be regarded as a key component in vulnerability reduction in

areas at risk from floods, allowing active participation by the local communities. Moreover, the provincial governments should play a leading role in resettlement.

11. Several participants made further comments relating to various aspects of preparedness for disasters in general and of the response to this year's floods in particular.
  - The Beira representative of the National Meteorological Institute (INAM) stressed the importance of meteorological information. However, he noted that the public needed to be helped to understand the language of weather forecasting.
  - A representative of the Mozambique Air Force commented on poor coordination of air assets in the relief operations, calling on NGOs to be more flexible with regard to tasking aircraft.
  - The INGC director voiced his concern about the need for more community education in relation to disasters. Voluntary work among communities is being encouraged which could have a multiplier effect.
12. The UN Resident Coordinator/OCHA Representative praised the partnership among the international community in Mozambique. He mentioned in particular those who had participated in the workshop: USAID, Austria, South Africa, the International Committee of the Red Cross, WFP, UNICEF, FAO, WHO, UNDP, UNFPA, and OCHA. He further noted that the strong linkage between the international community and Mozambique partners was clearly demonstrated at the International 2001 Floods Reconstruction Conference for Central Mozambique held in Maputo on 12 July and at this second post-floods lessons learned workshop.
13. In his closing statement, the Deputy Minister of State Administration stressed the need to make disaster management an integral part of the planning process in each institution, since Mozambique is subject to cyclical disasters. Furthermore, he highlighted the regional efforts within the Southern African Development Community (SADC) for joint initiatives in disaster management that will improve warning systems and response capacity.
14. The Deputy Minister observed that the Government would continue to mobilise resources from the international community for capacity building to reduce vulnerability to natural disasters and reiterated its appreciation of donor commitment to this objective. He also urged NGOs to undertake local initiatives aimed at strengthening capacity. The lessons learned from the 2001 flood preparedness and response will be fully integrated into the revised national disaster contingency plan as well as the UN's contingency planning process.



**2001 Floods Lessons Learned Workshop  
Beira  
26 – 27 July**

**Intervention by:  
Emmanuel Dierckx de Casterlé  
UN Resident Coordinator/OCHA Representative**

Governors,  
Director Langa,  
Ladies and Gentlemen:

Last year, we were sitting together to review what we had learned from the 2000 flood response experience to ensure that our 2001 initiatives would be quicker, better informed, and well-coordinated to serve affected populations. We are here today to review the results of our efforts in order to continue improving our ability to properly prepare for and respond to natural disasters.

So we do not lose sight of last year's lessons, let me briefly list for you what we all said was learned and some of the actions we agreed to take in preparation for this year:

**Regarding Preparedness, we decided to...**

- ❖ prepare national and provincial contingency plans
- ❖ train national resources, including military and police, for rapid response
- ❖ work regionally to ensure cross-border coordination
- ❖ improve vulnerability assessment and mapping
- ❖ ensure weather and water level forecasting
- ❖ pre-position emergency assets
- ❖ remain on stand-by to response with needed transport, equipment and goods
- ❖ inform communities of emergency processes and procedures

*Regarding capacities at national, provincial, and local levels to...*

- ❖ increase emergency communication networks
- ❖ better coordinate efforts between Government and other working technical groups
- ❖ second line ministry staff to serve during emergencies and assist INGC
- ❖ improve accountability and mapping of emergency assets
- ❖ clearly define roles for Government public servants



- ❖ improve linkages between Government, NGOs and local communities
- ❖ reduce bureaucratic obstacles and procedures during emergency relief operations

In addition to this list of actions, each of us also conducted its own agency –specific reviews to improve our own agency’s procedures to work with leaders and affected populations during times of crises. For the United Nations itself, we too conducted our own internal lessons learned exercise this year. I would like to share with you some of the most significant positive lessons of the UN agencies in 2001:

Firstly, overall operations were much improved this year. Due to accurate weather forecasting, we were able to formulate a contingency plan based on potential 2001 flooding between January and April and between Vilankulos and Quelimane.

Secondly, due to the UN’s own Contingency Plan which was fully integrated with the National Plan, we were able to pre-position or warehouse much of the needed materials, goods, and equipment prior to the floods.

Thirdly, our own coordination was augmented by the establishment of the UN Disaster Management Team (UNDMT) which was comprised of UN agencies, donors, NGOs and Government departments. Meeting on a weekly basis, the UNDMT had available the latest information from INGC, from the provinces themselves, and from partners working in the field as well as up-to-date mapping, website, forecasts, river level measurement, and reports regarding logistics, health, water, shelter, communications, food security, and overall coordination in the Beira operational hub.

Fourthly, we were able again this year to successfully launch a common UN appeal which mobilised more than the total amount of \$30 million requested by Government.

We also learned where we need further improvement:

Assessments of disasters need to be much more immediate and must be conducted jointly with Government and partners. While we were finally able to implement joint assessment missions, they must begin sooner, use common assessment instruments, and feed into a common data base which all partners contribute to and utilize. Otherwise, we again end up with differing statistics, conflicting assessments, and competitive responses. Unlike in 2000, we assessment and implementation in such a widespread affected area is much more difficult, costly, and time-consuming. The need is even greater for full cooperation and collaboration if populations are to be served and lives saved.

We also learned that our own UN contingency plan and operational procedures must be reviewed, updated and modified every year to ensure that we are responding in the most effective way possible and in a way which is completely integrated with our partners. From use of aircraft to data distribution, we all have the responsibility to plan, position, forecast and ensure that staff are able and ready to proceed immediately to the field.

Finally, as the United Nations, we must improve our coordination role by working together with our partners to ensure that we facilitate the coordination process so that we all work together making the best use of our combined resources, talents, and assets and embrace a new culture of on-going planning and preparation rather than simply waiting for a catastrophe to happen.

Today and tomorrow, we have the opportunity to discuss how we accommodated last year's suggestions and what we learned from the 2001 flood response. The objective of our meeting is to improve existing contingency plans and begin the process now of preparations for 2002.

On behalf of the United Nations, I would like to welcome this important forum here in Beira especially given the overwhelming support shown by donors at the conference held in Maputo on the 12 and 13 of this month for the national post-flood reconstruction programme for the central region of Mozambique. The UN family has been working hand-in-hand with the INGC over this past year to improve both preparations for and response to this year's flooding. WFP, UNICEF, FAO, WHO, UNDP, UNFPA, UNESCO have all played a role with many of our partners including USAID, DFID, the Red Cross, the DEC group, and many others.

Of particular note was the role of the UN Office for Humanitarian Affairs (OCHA) which played a fundamental role again this year in assisting with the flood response. OCHA was able to secure funding and experts to join the UN team to ensure a smooth and effective disaster response using a collaborative team approach. Also, I would like to give special mention for the generosity of financial, human and technical resources from DFID and additional funding made available from Sweden.

Let me reiterate my appreciation for having the INGC and the United Nations System work together again this year on this important workshop which demonstrates our strong continued partnership towards improving our work together to avoid the unnecessary loss of life and property during times of disaster.

I wish us all a very successful workshop and look forward to open and constructive discussions based on lessons we have learned in order to improve disaster management efforts in the coming years.

Obrigado. Takuta. Tabonga. Tatenda. Brigado.