

**THE UNITED REPUBLIC OF TANZANIA**



**NATIONAL AUDIT OFFICE**

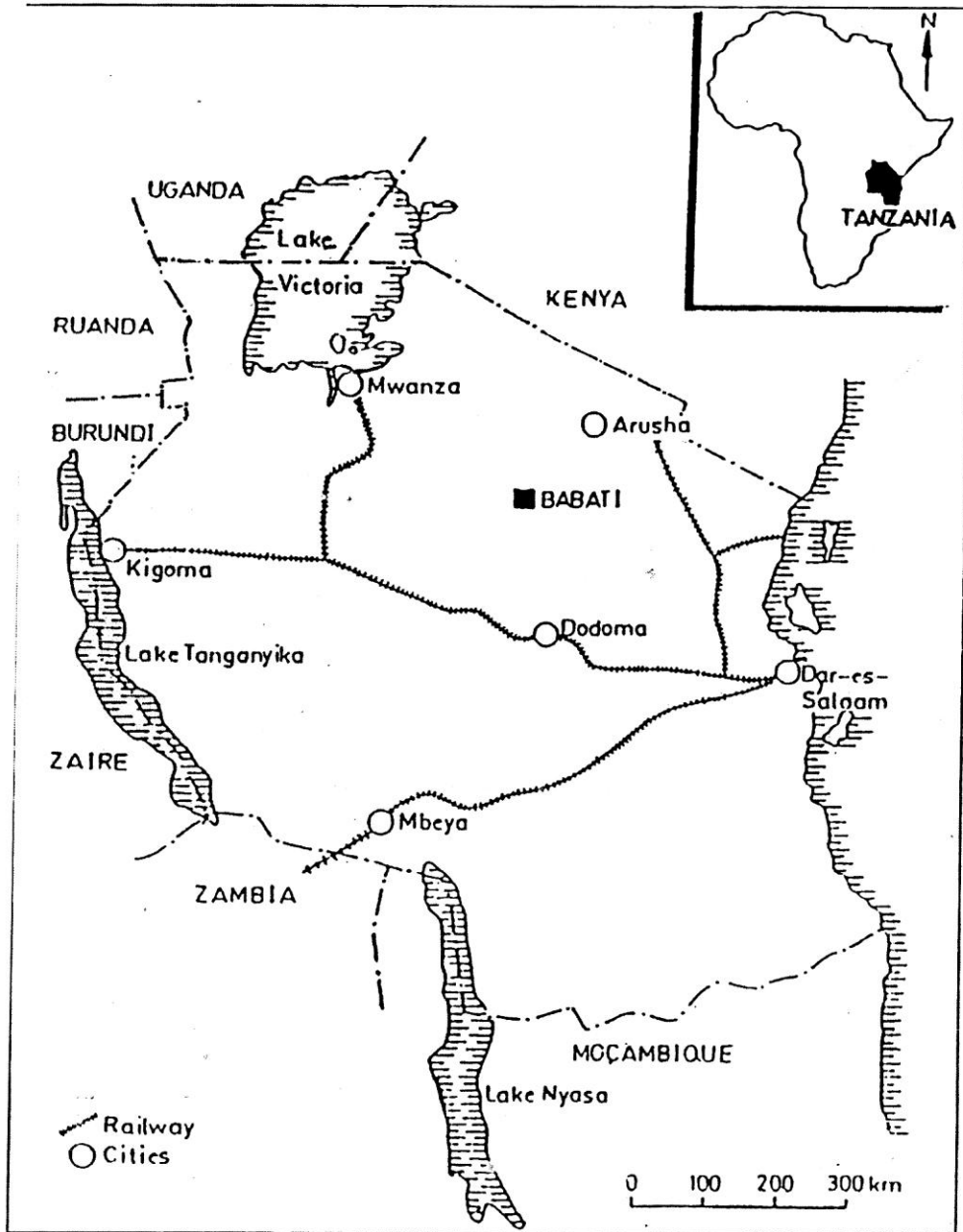
# **FLOODS IN BABATI**

**A Performance Audit of the Management of Prevention  
and Mitigation of Floods at Central, Regional and Local  
Levels of the Government of Tanzania**

**A REPORT FROM THE CONTROLLER AND  
AUDITOR GENERAL OF TANZANIA**

## ACRONYMS

BAWASA	– Babati Water and Sewerage Authority
BDC	– Babati District Council
CBO	– Community Based Organization
DC	– District Council
DED	– District Executive Director
DMD	– Disaster Management Department
GoT	- Government of Tanzania
LAMP	– Land Management Programme
MDA	– Ministries Departments and Agencies
MRS	– Manyara Regional Secretariat
NAO	– National Audit Office
NGO	– Non-Governmental Organization
NOG	– National Operational Guidelines for Disaster Management
PMO	– Prime Minister’s Office
PORALG	– President’s Office Regional and Local Government Authorities
RC	– Regional Commissioner
TANDREC	– Tanzania Disaster Relief Committee (Inter-Ministerial Committee)
TANROADS	– Tanzania National Roads Agency



■ Location of Babati in Tanzania

Figure 1.1: Location of Babati in Tanzania

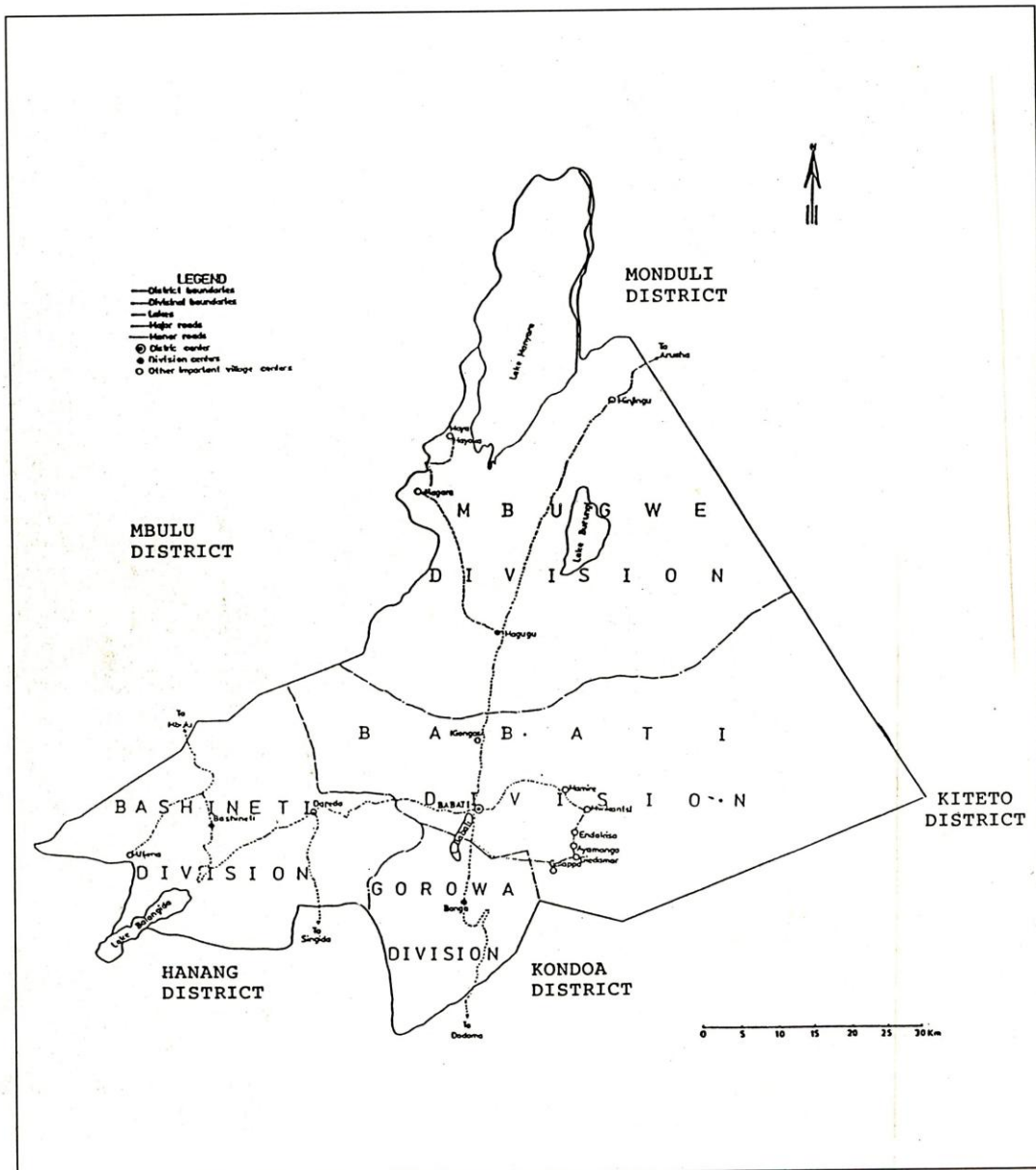


Figure 1.2 Map of Babati District showing administrative boundaries



**Figure 1.3: Lake Babati flooding through Babati town in April, 1990.**

*“Usipoziba ufa, utajenga ukuta”  
“A stitch in time saves nine”*

## **EXECUTIVE SUMMARY**

### **The challenge**

Babati District in Manyara Region has experienced devastating floods many times. The floods meant homes washed away, people drowning and displaced, impassable roads, water supply cut off, and many economic and social activities disrupted.

The floods that are covered in this report occurred in 1990, 1997/98. In 2006/7 there was another flood. For the 1990 flood alone, the estimated losses at the time in Babati Town amounted to TSh 65.3 million, without counting the unquantifiable social problems associated with the catastrophe. Not only did the district suffer, but also the region, the whole nation and even some neighbouring countries since Babati is a junction and crucial centre through which roads to Burundi, Rwanda, Zaire and even Uganda pass.

Forecast changes in climate and rainfall patterns are expected to lead to an increased risk of flooding. The challenge to the concerned authorities is to prepare flood defences to protect life, property and economic and social activities. This performance audit report aims at contributing to solutions for such a challenge.

### **Responsibility for Disaster Management**

The mission of the Prime Minister’s Office-Disaster Management Department (PMO – DMD) and Manyara Regional Secretariat (MRS) through Manyara Regional Disaster Management Committee is to promote good preparedness and management of disasters. The essence of this is to perform competent planning in order to protect citizens of Tanzania against any kind of disaster which is looming in the country.

In 1990, Parliament passed an act known as Disaster Relief Coordination Act No. 9 of 1990, which addresses all four elements of disaster management; these are preparedness mitigation/prevention, responses and recovery/rehabilitation.

In 2003, a National Operational Guidelines for disaster management was formulated. The guidelines address all four mentioned elements of the disaster cycle.

### **Purpose**

The purpose of this audit is to examine how the PMO-DMD and MRS have implemented the above national strategic guidance.

During the audit, we aimed at forming a conclusion regarding the current performance of the DMD and the MRS in dealing with disasters particularly regarding prevention/mitigation of floods.

## **Findings<sup>1</sup>**

The major findings of the audit were as follows:

### **Continued risks for further preventable damage from floods in Babati**

We found that, the risk is very high for possible future floods to cause further damage. This is due to the overall absence of strategic disaster management planning and actions. This is inter alia manifested by:

- lack of preventive and maintenance actions to address deteriorating flood prevention and mitigating structures
- inappropriate location of residential areas

### **Regional and Local without Fundamental Preparedness**

The Manyara Regional Secretariat, Babati town and district councils do not have fundamental preparedness in handling disasters:

- There was no Regional Disaster Committee<sup>2</sup> and strategic plan on how they can mobilize or solicit funds necessary for flood prevention or disasters management in general.
- There is insufficient coordination by focal officers. The focal officers have not produced the required pre-disaster plan.

### **Insufficient support from the PMO-DMD**

The insufficient activities of the local government did not receive the attention of the PMO – DMD, which is by law supposed to perform an oversight function.

- The Manyara Regional Secretariat and Babati councils did not form disaster management committees in accordance with the guidelines of the PMO-DMD.
- A necessary budget for DMD monitoring flood related activities has never been put into place.

### **Inadequate town planning**

- The town planning is not forward looking with regards to floods. Some of the residence and business activities have been located at low lying areas.
- Plots have been located in areas, which were supposed to be reserved for water passage

### **Inadequate maintenance of existing road structures and possible room for improvement**

- The Ministry of Works (MoW) and TANROADS have for 15 years not taken actions to increase the capacity of water discharge by building bigger culverts at

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<sup>1</sup> Sites mentioned can be found in the orientation maps in Annexes 3 and 4.

<sup>2</sup> The Regional Disaster Committee was established in early 2007.

the Kigongoni river embankment, hence there is a risk that the embankment acts like a dam and the Lake water floods through the town.

- TANROADS has not attended sufficiently to the preventive structures at Kiongozi Bridge along the Minjingu – Dodoma trunk road. The trunk road was cut off during the floods of 1998 and the gabions were severely damaged. The rehabilitation of the gabions was not undertaken until 2005. Seven years lapsed before TANROADS and the Ministry of Works took any action. That is a long time considering the (inter)national importance of the trunk road.

## **Main conclusions**

According to the government policy, the regional secretariat should be a link between national and district levels. One main conclusion in my study is that this has not been effective. The regional secretariat and the district and town councils in Babati have not taken sufficient proactive actions regarding the physical structures<sup>3</sup> of flood prevention and mitigation.

Disaster Management Department lacks proactive approach regarding floods.

In spite of experiences from previous floods, the Disaster Management Department, regional and local authorities rather react after floods have occurred. There are no continuous risk assessments.

In the light of the present legislation: Babati District Council, Manyara region, and PMO – DMD have so far not lived up to the requirements/expectations expressed in the laws, regulations and policies. There is ample room for improvements, as regards preventive investments and maintenance of existing structures, which would give high value for money, reduce human suffering, and be of great importance for the economy of the Babati and Manyara region and, in respect of transport, to neighbouring countries.

My general conclusion on the role of PMO-DMD is that this department has not performed its obligations of executing a proactive national role in follow-up, record-keeping and facilitation as regards flood prevention in relation to regional and local authorities as prescribed in the country's laws and policies.

Performance Audit aims at establishing Economy, Efficiency and Effectiveness of government operations in reaching objectives set by Parliament. My general conclusion is that the actions, and lack of actions, of the concerned authorities at local, regional, and

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<sup>3</sup> It is acknowledged that the region and the local authorities have tried to decrease siltation of the lake and thereby lower the risk of floods through soil conservation measures around the lake. The more siltation, the more reduction of the lake depth and consequently the higher the risk of water flooding through Babati town. However, the scope of this audit concerns primarily the preventive actions through physical structures to avoid the lake Babati flooding through the town and road planning to minimise damage after heavy rainfall. Obviously, the combined efforts of reducing concentration time of rainfall in relation to the lake and its siltation as well as physical structure of water diversion and minimising soil erosion are needed to prevent and mitigate floods in an optimum way.

national level regarding flood preparedness do not score well in terms of these classic indicators of good governance. The lack of actions for many years portrays negligence by the accountable authorities. My conclusion should be seen against the fact that the desired preventive actions do not require any heavy investments. Lack of resources cannot in this case be used as an excuse or reason for not taking appropriate action to maintain, rehabilitate and improve flood defences. The changes in rainfall pattern call for urgent improvements in flood preparedness by concerned MDAs.

## **RECOMMENDATIONS**

### **The grass barrier**

#### ***To Babati District and Town Council***

Babati Town and District Councils should monitor and control growth of the grass barrier without allowing cattle grazing in the prohibited area around the Lake in order to avoid a grass barrier preventing flow of water into the Kigongoni outlet.

### **The Kigongoni embankment**

#### ***To TANROADS HQ***

TANROADS should ensure that the on-going engineering design will result into a discharge capacity of culverts at the Kigongoni embankment that will adequately accommodate enough water flow to avoid Lake water flooding through Babati town. The estimated discharge capacity should take into account the fact that the flood risk may increase with time due to siltation of the Lake.

#### ***To TANROADS Manyara***

To decrease the risk of floods through Babati town, TANROADS Manyara should as a short term measure replace the small culverts in the Kigongoni embankment with bigger ones. Such action would significantly reduce the risk of the embankment acting as a dam.

### **The Earth Embankment and the Artificial Waterfalls**

#### ***To the Manyara Region and Babati Councils***

Considering the investments made, the huge gully formed, the lowering of the channel bed at the embankment, and the need to avoid further excavation of easily erodible soil, we would like to recommend the concerned authorities to consult soil conservation experts on alternative ways forward. We can see the following as possible further actions:

- Establish a canal with strong embankment from the place of the former earth embankment to the new huge gully and construct a waterfall at the gully head to prevent further increase of the gully as well as structures to promote siltation of the gully.
- Declare the area from the Kingongoni embankment to the end of the gullies with waterfalls a prohibited area from cultivation, grazing, brick making etc and plant a large number of trees and other forms of soil retaining vegetation to prevent erosion.

## **Kiongozi bridge**

### ***To TANROADS Manyara***

TANROADS should ensure that rehabilitation works on flood mitigation structures is done much earlier to prevent roads from probable closure due to further potential damage by future floods.

TANROADS Manyara should consult experienced Bridge Engineers/Soil Engineers when considering the further designing of the retaining wall to give it optimum structure and the necessary dimensions for preventing road bank from damage in the most favourable way.

## **Design of the rehabilitation of the Arusha – Dodoma trunk road**

### ***To TANROADS HQs***

The experiences from previous floods should be communicated sufficiently to the consultancy firm that is doing the design for the rehabilitation of the Dodoma – Babati road and the Singida – Babati – Minjingu road. The aim should be ascertain that hydrological calculations regarding the run-off from the watershed areas surrounding the sensitive discharge points of Kigongoni Outlet and Kiongozi Bridge take past flood events into account. In this context, realignment of the bridge to a less erosion-prone future site should be considered.

## **Residential and Business Location of Babati Town**

### ***To Babati Town Council***

Town planners in Babati Town Council should take into account the flood risks when allocating land. In addition efforts should be made to ensure that preventive structures/measures are installed in flood prone areas which have been allocated for various purposes.

## **Pre-disaster planning and funds for flood management**

### ***To Manyara Region and Babati Councils***

The regional and district authorities should include disaster/flood management expenditure projections in their annual budgets.

The regional and district authorities should ensure that civil society and focal officers at respective levels play their roles in anti-flood programmes.

### *To PMO-DMD*

PMO-DMD should execute its oversight role to ensure that the regional and district authorities play their roles in pre-disaster planning.

### **Training, action plans and the role of PMO-Disaster Management Department**

#### *To PMO-DMD*

- The PMO-DMD should play its monitoring role to ensure that training given to Local Authorities give a relevant impact on flood prevention and mitigation activities.
- PMO-DMD should carry out or coordinate research relevant to floods, formulate flood prevention plans, review regularly and coordinate flood prevention measures.
- The PMO-DMD should soonest develop a register of floods in Tanzania, where floods are systematically recorded and conduct proactive analyses of flood risks for flood prone and economically important areas. Such a register would be the base for developing a strategic preventive approach regarding floods. Disaster Management Department should get its preparedness priorities for floods for the nation as a whole in place.

### **Scrutiny of Facts in This Report**

The MDAs directly concerned with this report have been given the opportunity to correct factual errors in the draft report. We wish to put on record that the meetings with Manyara Regional Secretariat, Babati Town and District Councils, TANROADS Manyara and TANROADS HQs and the Disaster Management Department in the Prime Minister's Office have been constructive. Some of the auditees, notably Manyara Region and Babati Councils, have already started to take action along the lines of our recommendations.