



## Dams

# Dam Engineering and Management

WEMA expertise in dams include aspects such as Design, investigation, and Management. In the past, WEMA has mostly dealt with dams for:

- Irrigation systems
- Water Supply
- Storm management
- Flood regulation

WEMA professional team who has worked in a range of different size and complexity dam include:

- Senior Hydrologist
- Surveyor & GIS specialist
- Environmentalist
- Sociologists
- Civil Engineers
- Architects & CAD specialist
- Water Resources Specialist

And in order to fulfil the full staff need for most dam assignment, WEMA does associate with our local and international partners

Our partners comes in several forms including:

- Joint Venture
- Association
- Expert Reviewers
- Advisers
- Backstoppers

Also, in several occasions our staff have been outsourced by our partners to work in several dam projects world-wide.

In view of this approach to our staff and our projects, our experience and the experience of our staff on the science of dams has increased tremendously in the few years.

Due to the increase in our experience and our group our client now extend across the public and private sectors including government authorities NGO, Private companies and individuals, contractors, international agencies, and local communities.

And with the increased number of our clients our involvement in the dam projects now covers the followings areas:

### **Dam site investigations**

- Hydrological studies

### **Feasibility Studies**

- Preliminary Design
- Project cost Estimates

### **Design and Documentation**

- Engineering Design
- Engineering Drawings
- Tender Preparation

### **Construction Supervision**

- Contract administration
- Construction Supervision
- Project Management

### **Environmental & Social Aspect**

- Impact Assessment
- Management Plan

### **Dam Assessment**

- Design Review
- Risk Assessment

### **Dam Rehabilitation**

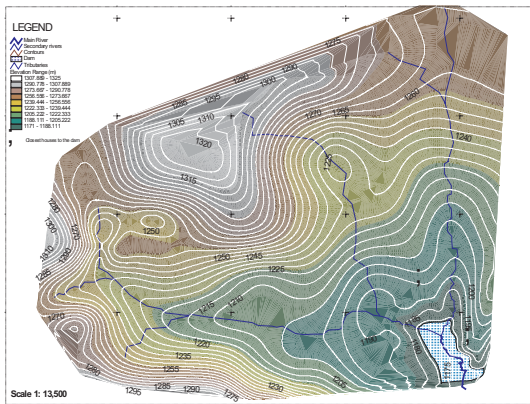
- Sedimentation analysis
- Spillway augmentation
- Embankment raising



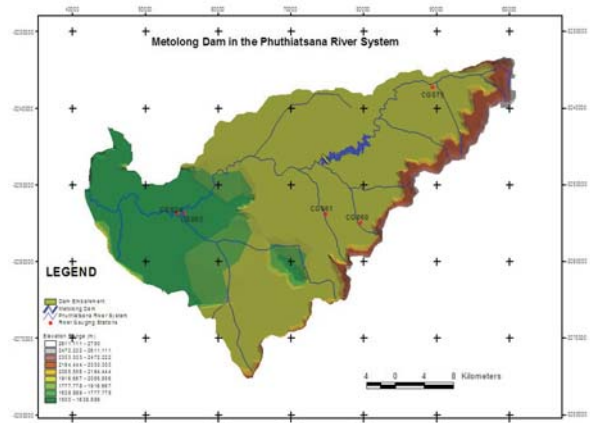


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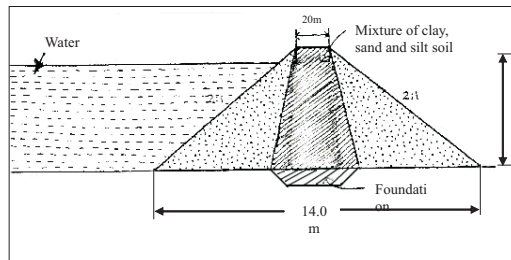
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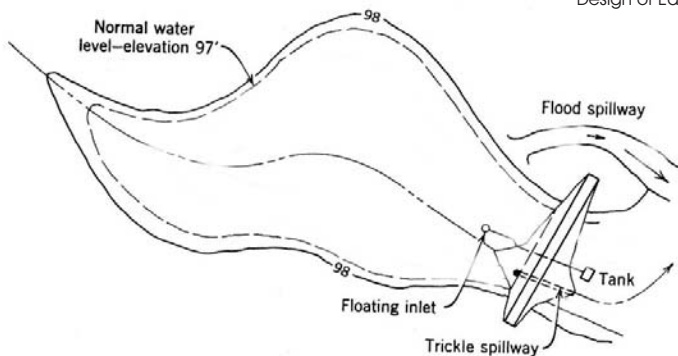
The Bisarwi Dam and its catchments in Mara River Basin, Tanzania



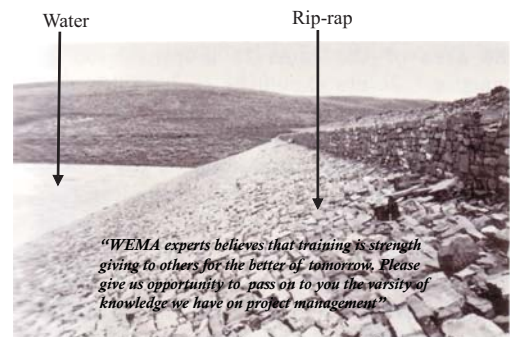
The Metolong Dam and its catchments in Phuthiatsana River Basin, Lesotho



Design of Earth Embankment



Design of the Dam Flow Control system



Earth Dam Embankment protection