FBFS in Africa

promising improvements
Introduction

• Floods are normally regarded as a threat for communities and a destructive force to the environment.

• For efficient flood management practices, the flood behavior in the area must be well understood. Based on the flood behavior, the traditional FBFS structures can be improved.

• Different countries have invested in the structures e.g. Ethiopia, Morocco and Sudan

• Others like Kenya depend on the natural depressions near riverbanks to divert flows
• The different diversion structures are;

**Water distribution structures**

• They help control the water and hence reduce erosion.

• This can be done by dividing the flood water into smaller portions and avoid steep slopes where water can pick up speed

• They include; drop structures, flood bed stabilizers and water spreading weirs.
Field water management

- The main structures that can be constructed in the field are;

- Dikes and soil bunds - protect fields from unexpected floods and allow farmers to drain and retain water

- Drainage ditches - channel away excess flood water

- Reuse agreements can be made to enable farmers take turns using water from same source hence reduce conflicts
Hydraulic Structures
Diversifications

• According to FBFS in Africa we need big effort to enhance our region capacities

• We can exchange knowledge with other FBFS throughout the world, particularly in Asia continent where they applied Spate irrigation system dating back thousand years

• One of these things that will improved our region how will be maximized the benefits of floods?
• FBFS has many aspects and profits, so we need not focus only on the developing spate irrigation system

• We have to buy attention for flood plains and fishering ponds as other opportunities to enhance livelihood in the FBFS areas.

• We have to insert a new crops that has a good ability to adapt with flood behavior, higher prices, enrich by nutrients and demanded it in the markets based on water productivity status.
Adopting IWRM approach in Africa FBFS

- FBFS in Africa is different according to the economic and social situation which required many interventions in following fields;

i. The integration between upstream and downstream
- Establishing the diversion structures should be acceptable with water rights between upstream and downstream areas.
- The structures should avoid prevent movement of baseflow underground.
Establishing the diversion structures

Check dams

Percolation dams (Gabion or Concrete)
ii. Integration between groundwater and surface water

• Conjunctive using between groundwater and floods

• Crop patterns and its water requirements

• Water balance between the groundwater discharge and recharge

• Saline and fresh water

• Coastal and mountainous areas
Artificial Recharge proposed to be used Africa

Pits or trenches
Reclamation of lands and canals