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 through out 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.

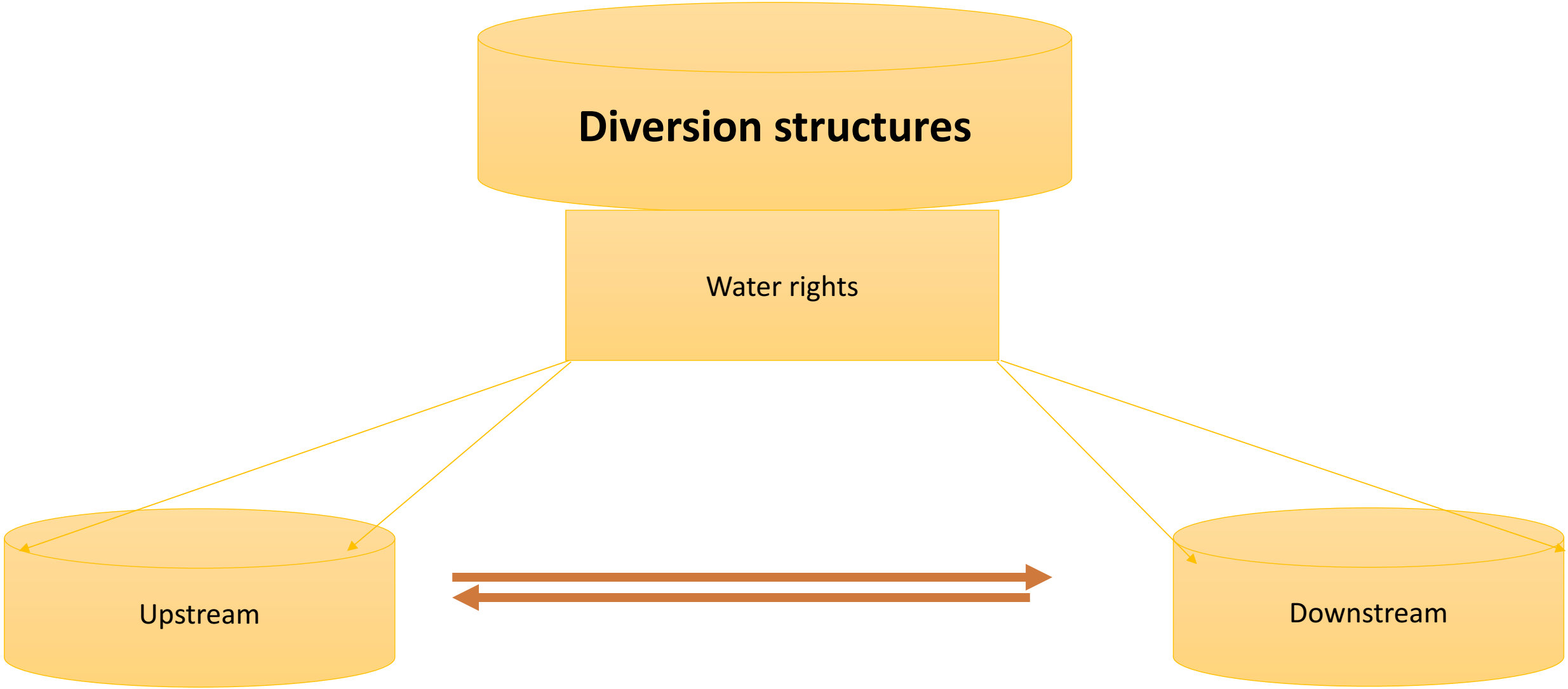
- We have to insert a new crops that has a good ability to adapt with flood behavior, higher prices, enrich by nutrients and demanded it in the markets based on water productivity status.

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;

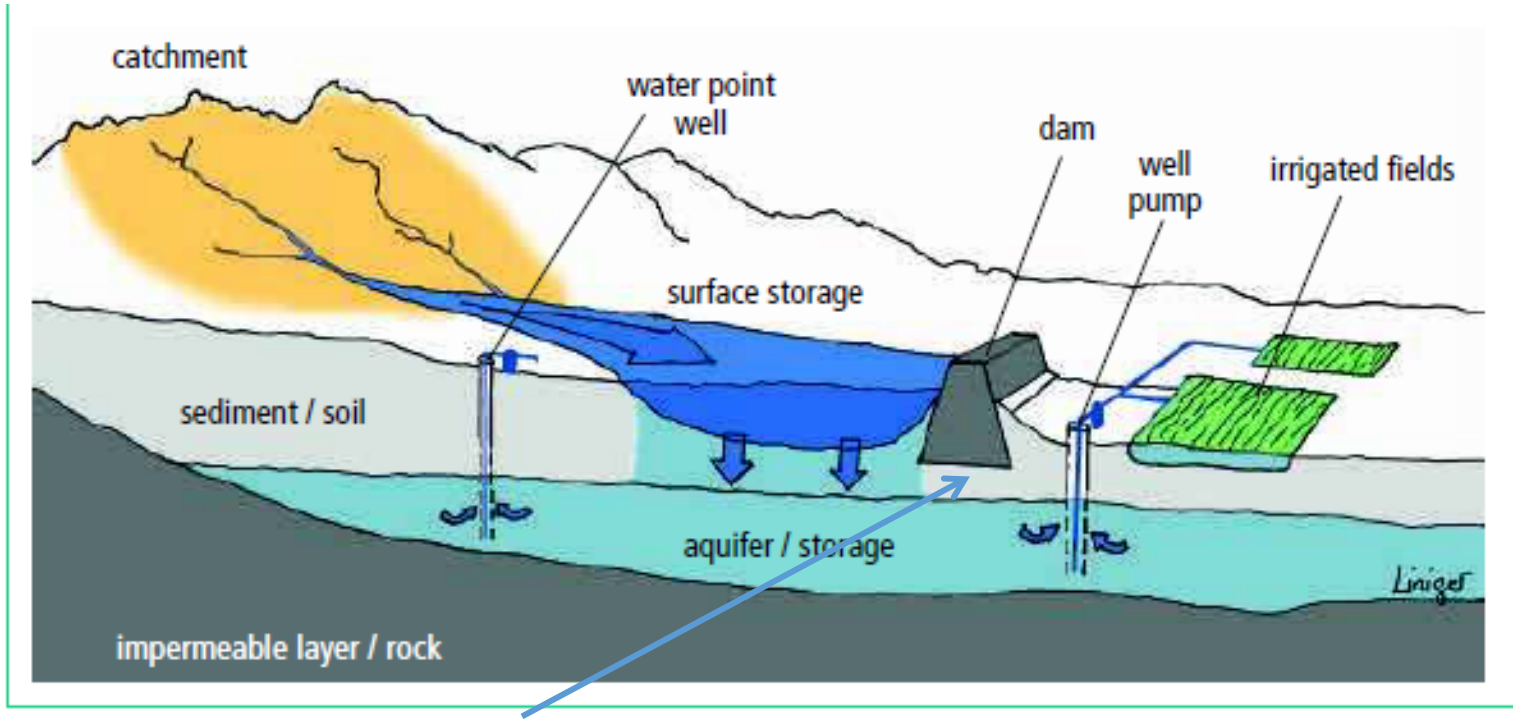
i. The integration between upstream and downstream

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


Diversion structures
Water rights
Upstream
Downstream

Establishing the diversion structures

Check dams



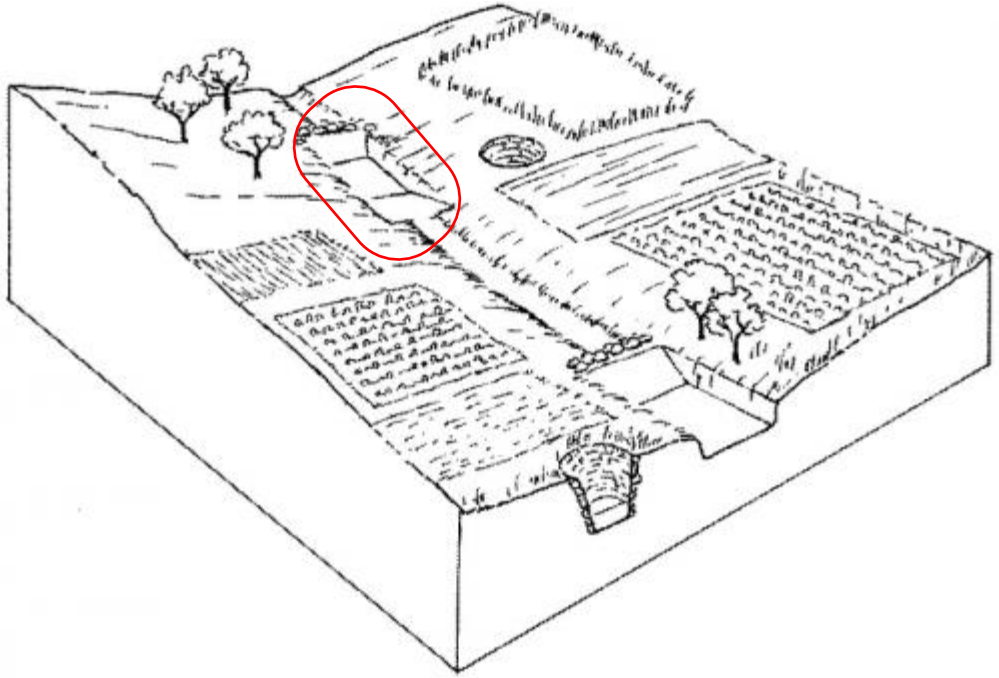
Percolation dams (Gabion or Concrete)

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