

Improving Flood Diversion Soil bunds

From Africa to Asia and Back Again



Soil bunds

- Earthen flood diversion bunds have been used for long time to divert flood water to cultivated crop fields.
- Traditional Bunds frequently breached and are very difficult to maintain in good condition.
- As a consequence Farmers get a reduced crop yield.

Some Solutions

The situation can be improved by using:

- Porous stone spillways
- Machinery



Example Pakistan: Use of Porous stone spillways with earthen bunds (1)

- Pioneered in 10 000 ha FBFS in Dera Ismail Khan Command area of Daraban in Pakistan (building on a long tradition of earthen guide bunds)
- The porous stone spillway allows slow, continuous seepage preventing upstream floodwater pressure build-up thus protecting the earthen bund from destruction
- In Pakistan and Yemen have successfully reduced the frequency of failure of earthen diversion bunds.



Example Pakistan: Use of Porous stone spillways with earthen bunds (2)

- Increased the opportunity for irrigation, minimized the damage to irrigable land and ultimately contributed to higher agricultural production.
- The initial investment is estimated at 100 USD per ha, which is about 4% that of the modern headworks



Use of Machinery

- Increase availability of earth moving equipment
- Better services through trained bull dozer operators
- Overall investments in durability of the soil bund systems

