Groundwater use in floodplains



Berry van den Pol – PRACTICA Foundation









Floodplains: High potential.. Marginal use



Conventional wells collapse

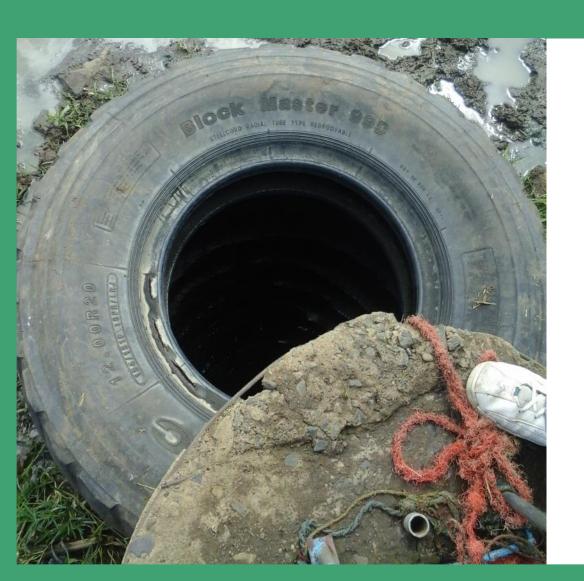


Need for yearly renewal or rehabilitation

Time and space consuming



Reinforcement is costly



Stones, tyres, wooden structures

Difficult for large depths: limiting yield



The tested alternative: Flood wells



Manually drilled tube well

Capped during inundation

Mobile pump-set to irrigate in dry season





The tested alternative: Flood wells

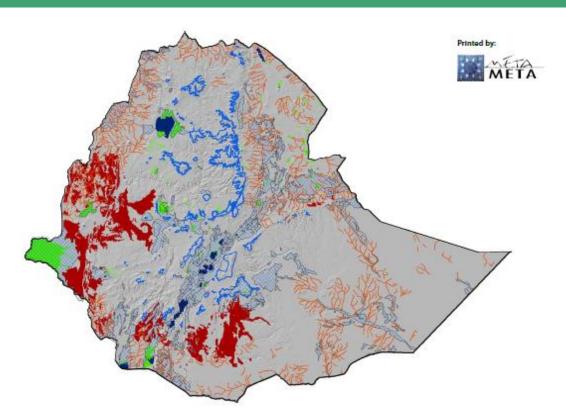


Private water access

To increase productivity



The project approach



Means of access or buffering shallow groundwater

Gravity schemes from springs

Water buffering in catchment; sand dams, subsurface dams Preferably hand dug wells and/or mechanically drilled shallow

Depending on sediment type either shallow tube wells or hand dug wells

Preferably shallow tube wells or concrete lined dug wells

Mapping shallow groundwater for Multiple Use Systems

Zones of frequent discharge cold springs

Seasonal Wadis and their catchment; total length > 30,000 km; gw storage 3 billion m³

Extensive shallow regoliths (laterites and saprocks), covers > 150,000 km²

Extensive alluvial and lacustrine deposits, cover > 170,000 km²

Extensive riverine and lake fringe flood plains; covers at least 30,000 km²;

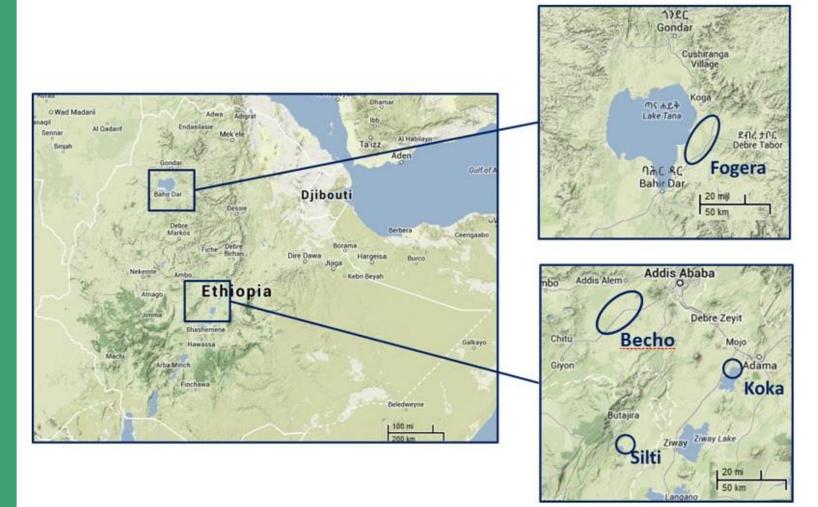
NB: small ubiquitos depressions not included

Lake

1. Mapping

- 2. Farmer consultation
- 3. Pilot drilling





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Potential and lessons learnt



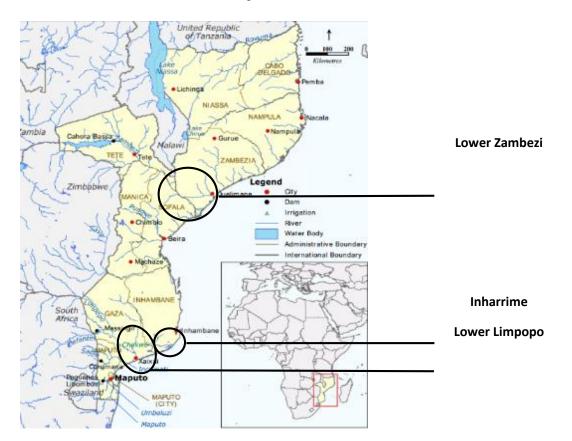
High potential if:

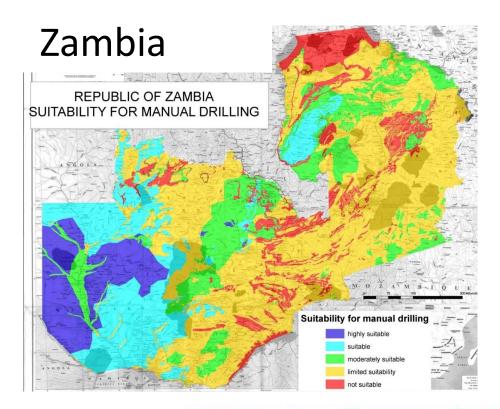
- Riverine floodplains
- Smallholder irrigation
- Market access



Large scope identified in...

Mozambique







Upscaling flood wells



Train local drilling teams and workshops

Strengthen pump supply and maintenance networks

Promotion and micro-finance



But: floodplains are patchworks



Need to introduce a range of solutions to deal with highly variable nature:

wet/ dry / grazing land / irrigation / fisheries / clay / sand / rice / vegetables / private /communal land / etc. etc.

