

Innovations to adapt to seasonal changes in water resources in south-eastern Kenya drylands

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- Fieldwork Phase1: Scoping surveys and on-site observation**
- Mapped and profiled surface water resource formations & assessed water availability
- Comprises of spatially dispersed ephemeral & perennial water resources: small earth dams and water pans, ground water wells, open shallow wells and sand dams in seasonal rivers, and springs emerging at the bottom of hills (small mountains)
 - Water resources in drylands are highly dynamic due to intra and extra annual variations in precipitation patterns and water availability
 - Small earth dams and water pans last 2-3 months after rains, 70% households make changes in water source across seasons
 - Multiple users and uses encountered, over 80% domestic and local agro-pastoral activities
 - Reservoir water availability/reliability vary depending on consumption by communities, rainfall seasonality evaporation losses and underground seepage.
 - Range of innovative structural and institutional adaptation strategies, locally generated as well as introduced by external agencies

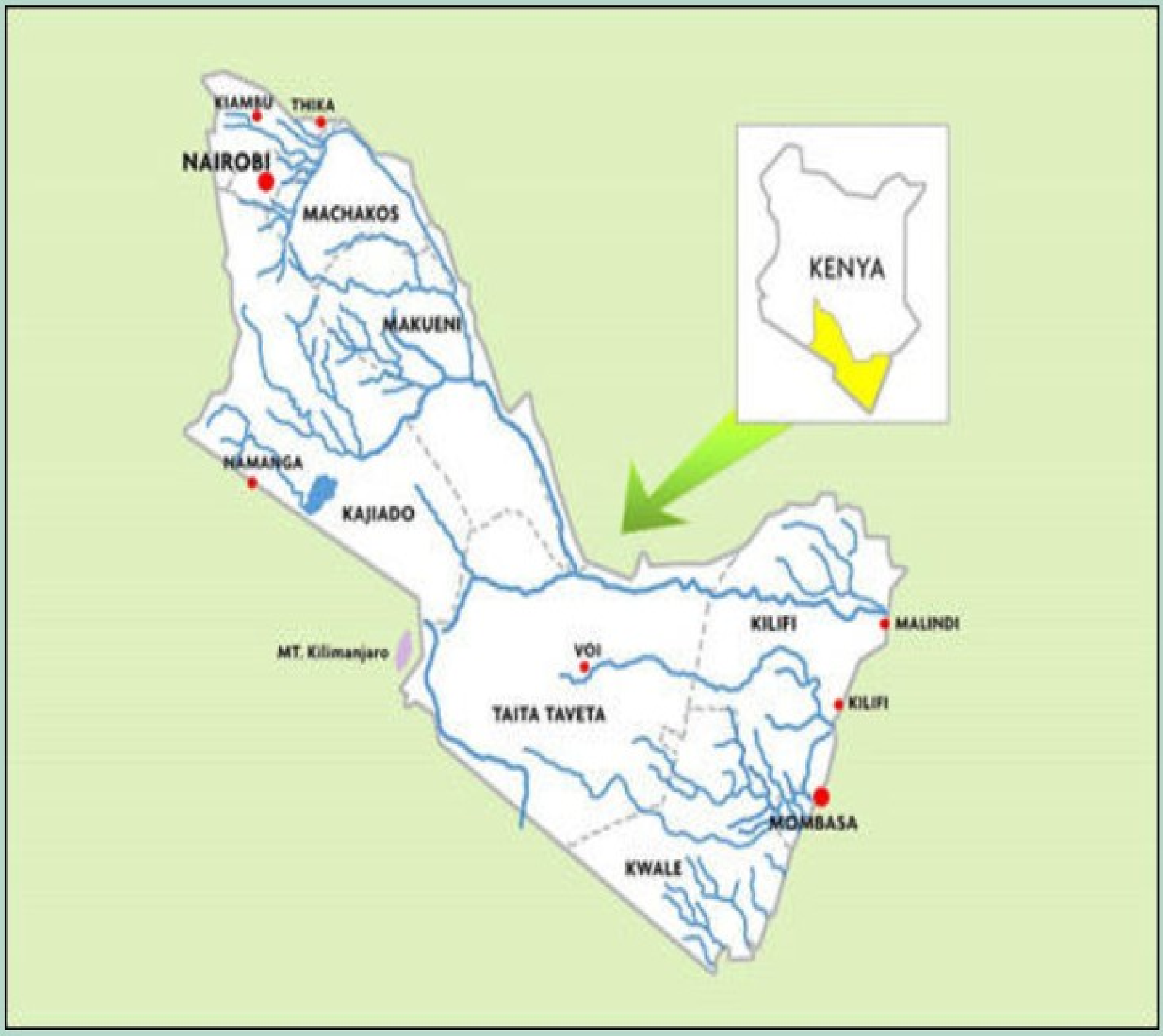
Small earth dams and water pans



Water from pan flows to access point for people and a livestock drinking trough



Athi Basin in Kenya



Rocky hill water catchment

Embankment with V-notch fitted with pipe



Water directed to a 250 cubic metre tank a short distance from the rocky hill



Tank drains – through gravity - to 150 cubic metre tanks from which locals access the water



Water from ephemeral riverbeds

Moving from shallow open wells in dry riverbeds



To construction of sand dam across seasonal rivers for more resilient, increased quantities and better-quality water



Supervised by: Prof John Rowan & Dr Irena Connon



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