



Sustainable small-scale water storage in remote sub-Saharan regions

Mario Franca (1), Bernadette Kawera (2), Amanda Yahaya (2), Roshan Paudel (2), Ângelo Matsinhe (3), Gretchen Gettel (2), Tibor Stigter (2), Berry Gersonius (2), Clemêncio Nhantumbo (3), and Miroslav Marenc (2)
(1) IHE Delft Institute for Water Education and Delft University of Technology, Delft, Netherlands, m.franca@un-ihe.org, (2) IHE Delft Institute for Water Education, Delft, Netherlands, (3) Universidade de Eduardo Mondlane, Maputo, Mozambique

In contrast with large-scale/large-impact water storage structures, we analyse local solutions for storage and seasonal regulation of water supply for local populations in the region of Tete, in the Northwest region of Mozambique. Typically two solutions are being implemented in the region: concrete small weirs which form a small reservoir and sand dams. Both aim at water abstraction for human consumption, animal consumption and irrigation of small farms. The adequacy and sustainability of both types of storage structures is investigated in an integrative fashion. Intensive field and desk work allowed to measure or infer local consumption needs and to evaluate hydrometeorology, soil characteristics, sediment fluxes, water quality and stream connectivity. Based on a simplified model, using simple conservation principles, the resilience of these solutions to climate change is analysed. A comparative discussion between the two types of storage structures will be presented. This touches upon their working principles and proposals for improvement.