Integrated Rainwater Management Strategies: Hydrology and Hydrological Modeling

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Rationale

For Integrated Rainwater Management Strategies (RMS) want to know: what works, where and why?

This requires basic biophysical understanding:

- how much rain falls & where does the water go?
- how much water is “used” in different components of the landscape?
- what changes will different interventions make?
- what are the on-site and downstream impacts of scaling-up the interventions?

Project Activities

Hydro-Meteorological instruments installed in three watersheds to:

- measure rainfall, flow, climate variables, soil moisture & water table
- provide insights into hydrological fluxes, processes and water budget

Hydrological modeling to determine:

- Rainfall – Runoff relationships
- Soil/Vegetation/Livestock water interactions
- Water balance and catchment yield
- Understanding of flow regime necessary for design of RWH structures
- Possible biophysical impacts of scaling-up interventions
- Possible biophysical implications of climate change

Outputs

- Guidance on suitable RMS for the Ethiopian Highlands
- Systems for increasing agricultural production using RMS, including a range of water storage options
- RMS that maximizes water productivity and ecosystem services

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CPWF Nile Project 2:
Integrated rainwater management strategies – technologies, institutions and policies
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