



AT A GLANCE



An improved traditional spate irrigation system in Yanda river, Konso, Ethiopia



A household pond in Alaba Woreda, Galto Kebele, Ethiopia

WHATER

WP10: COUNTRY CASE STUDY ETHIOPIA

THE CHALLENGE

In Ethiopia small-scale rainfed household production systems are predominant, covering over 90% of the total cropland and producing over 90% of the total agricultural output. Farmers are aware that shortage of water is the most formidable challenge to sustainable use of land resources in general and to crop and livestock production in particular. The erratic nature of rainfall is a major source of risk in rainfed agriculture. In this regard harnessing drops of water using appropriate Water Harvesting Technologies (WHTs) is essential. But experience shows that the water harvesting practises in Ethiopia lack adequate planning, design and implementation.

OBJECTIVES

This work package will contribute to WHaTeR's overall project objectives by:

- Delivering understanding of the effects of WHTs on water supply to communities for crop production and of their impact on disaster risk reduction (in cooperation with the work package dealing with Environmental sustainability, WP4 and Technological improvement, WP6).
- Analyzing the effects of water harvesting systems on livelihood improvement and food security and assessing the potential of WHT for small-scale irrigation (in cooperation with the work package dealing with Livelihood improvement, WP5).



- Providing insights on uptake and upscaling of WHTs (in cooperation with the work package dealing with uptake and upscaling of WHT, WP7 and Global and regional impacts, WP8).

METHODOLOGY

The existence, current use and evolution of WHT in Ethiopia have been investigated through a literature study and analysis. The project sites are located in the Alaba and Konso areas of Southern Ethiopia, where household and community ponds and spate irrigation are among the most common WHT structures. Prominent WHT barriers and constraints were identified through a baseline survey with SWOT analysis carried out with different local stakeholders at the project sites. Investigations are in progress addressing the suitability of a suite of interventions related to water harvesting in particular areas. Together with WHaTeR's work package on technological improvement (WP6), the possibilities for improvement of the different technologies are being assessed and tested. Issues on uptake and upscaling will be analysed together with the work package on the uptake and upscaling of WHT (WP7) through household surveys coupled with choice experiments.

RESULTS SO FAR

The baseline surveys on status of household and community ponds in Alaba indicate that a large number of household ponds were dug through a government program based on a so-called quota system. Some of the ponds were funded by government, NGOs or partly by GOs and partly by family members. The quota system entails essentially a top-down approach in which a predetermined maximum number of ponds are to be constructed without proper involvement of local communities in the various phases of the program, i.e., from planning to implementation of the ponds. As a result of this, most of the ponds

show failures from improper site selection, design, construction and maintenance.

In Konso, the assessment of the spate irrigation system shows that there is a general lack of data on the yield performance of spate-irrigated crops and on the system's contribution to resilience of household livelihood. The extent of sedimentation associated with spate irrigation in cropped fields is also unknown and needs further investigation. Another question that needs attention is how to deal with equity-efficiency trade-offs in traditional WHT systems like spate irrigation. Potential upstream-downstream conflicts related to system operation and management need to be assessed.

EXPECTED OUTCOME

The results of this project will be translated into WHT guidelines and policy strategies, facilitating a wider adoption of appropriate WHTs. The project is expected to identify the major constraints and gaps in WHT adoption and specify remedial measures. It will also generate strategies for WHT upscaling in consultation with local communities.



PROJECT PARTNERS IN WORK PACKAGE 10

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