



TAGMI:

An Interdisciplinary Decisions Support Tool in Agricultural Water Management Outscaling for the Volta and Limpopo River Basins

Background

From field to basin scales, there are many appropriate interventions used to manage rainfall for agriculture efficiently and productively in smallholder farming systems in parts of Sub Sahara Africa. For example:

- soil and water conservation measures
- boreholes and wells for supplemental irrigation
- small reservoirs for community-level irrigation schemes and dry-season cultivation

Yet, successful targeting and scaling-out of these interventions remains a challenge. Will an intervention successfully applied in one location have a reasonable chance of success at other locations?

<http://iwmi-tagmi.cloudapp.net/>

Methods

Targeting AGwater Management Interventions (TAGMI) is a decision-support tool that addresses this challenge in the Volta and Limpopo river basins (<http://iwmi-tagmi.cloudapp.net/>). The web tool pilots the use of Bayesian network modelling to integrate:

- key multi-disciplinary contextual factors (social, human, physical, financial, and natural)
- multiple sources of expert knowledge on the relationship between context and success (from farmers to local government)

The model calculates the likelihood of an AWM intervention being successful in a given district. The tool allows the user to change the settings of the model and view results via a map.

Impact

TAGMI can help local and regional planners who want to know which parts of the river basins have conditions suitable for successful implementation of a planned AWM intervention. The model takes into account not only bio-physical conditions, but also social and human resources available in districts, such as market access, skills and labour availability, which may enable or hinder adoption of introduced technologies. While developed in the Volta Region, TAGMI can be re-configured to any technology, location or spatial scale.

TAGMI is an output from 5 years of research-for-development as part of the CGIAR Challenge Program's Basin Development Challenges (CWPF-BDC) and the CGIAR Water, Land & Ecosystem Programme.



RESEARCH PROGRAM ON Water, Land and Ecosystems



For further information contact:

Jennie Barron
International Water Management Institute

j.barron@cgiar.org
+94 (0)77 663 1632