Tanzania
Country Dialogue Brief
2009 - 2012

Introduction
This brief presents the outcomes of the stakeholder engagement activities, known as "The Dialogue," in the AgWater Solutions Project. A schematic of all the meetings and events is given on page 2 and the key findings are presented.

Project overview
The **AgWater Solutions Project** aims to improve the livelihoods of poor and marginalized smallholder farmers in sub-Saharan Africa and South Asia through **agricultural water management (AWM) solutions**. The project is assessing where and how agricultural water management (AWM) can improve rural livelihoods and reduce poverty. Work focuses on five African countries (Ghana, Burkina Faso, Zambia, Tanzania and Ethiopia) and two states in India (West Bengal and Madhya Pradesh).

In each country the AgWater Solutions Project has followed a consistent methodology: initial research to understand the status of AWM (***situation analysis)*** followed by a ***national consultation*** to discuss findings and distil priorities for field-level research and piloting. In parallel, FAO and IFPRI have been ***mapping*** the potential for AWM to contribute to poverty alleviation at national and subcontinental levels. A series of workshops (the ***AWM Dialogue*** led by FAO with National Dialogue Facilitators) have been held at national and subnational levels, to ground truth research findings and identify gaps and priorities for influencing AWM through policy, and links with private sector and farmer groups. The project is now finalized (September 2012) and project findings are packaged into investment recommendations for target stakeholder groups.

AWM Dialogue process
This Dialogue aims to consult, discuss, and validate possible AWM solution options and to suggest priorities for investment at the national level on the basis of scientific references and a good understanding of local knowledge and actors' needs and preferences. Discussions in the events aimed to understand the causes of adoption or abandonment of some of the AWM interventions, and enlarge the range of the "possible." They help us identify practical means to link between water, poverty and livelihood in rural areas, in particular, by showing how the access to agricultural water determines livelihoods and survival in rural areas.

In Tanzania, most of the irrigated areas are under surface irrigation, mainly used by smallholders. The **AgWater Solutions Situation Analysis** in 2009 found there are already a variety of techniques used that seem to be working. Water lifting techniques and formal and informal irrigation are also used throughout the country with varying degrees of efficiency. Farmers usually use a combination of Conservation Agriculture practices specific to their agroecological zones. For example, terracing, contour farming and composting in the highlands of the Tanga Region; and deep tillage, ripping and pit cultivation in the semiarid areas such as the Dodoma Region.

AWM options for further analysis identified during the State Consultation focused on improving water access via the use of motor pumps and better management of communal irrigation schemes (focusing on institutions rather than on technology) and on expanding water harvesting and storage systems (small reservoirs) in specific areas. Options for improving water application were also requested, and participants wanted more information on the availability and efficiency of drip and sprinkler techniques. To discuss these research findings and inform the AWM mapping work, a series of meetings have been held since 2010; this brief summarizes this process and its findings.

Tanzania AgWater Solutions Dialogue team

The National Focal Point is Eng. Futakamba Mbogo, the Deputy Permanent Secretary in the Ministry of Agriculture, Cooperatives & Food Security. He has been a key person in the Dialogue process, organizing strategic national meetings and linking the dialogue process to national initiatives including KILIMO KWANZA and SAGCOT.

The National Dialogue Facilitator is Dr**.** Victor Kongo, researcher at the Africa Centre of the Stockholm Environment Institute (SEI), University of Dar es Salaam. He works in close collaboration with Prof. Henry Mahoo and Prof. Siza Tumbo of Sokoine University of Agriculture in Morogoro who have been resource persons in the dialogue process.

Project research, supporting the Dialogue has been carried out by a team of researchers from IWMI, SEI, Sokoine University of Agriculture and University of Dar es Salaam.

The AgWater Solutions Ambassadors are Prof. Bancy Mati from Jomo Kenyatta University in Kenya and Prof. Nuhu Hatibu – the Chief Executive Officer of Kilimo Trust (Uganda) and the founding regional coordinator of the Soil and Water Management Network for East, Central, and Southern Africa.

The project is implemented by IWMI, FAO, IFPRI, SEI and IDE, with a number of partners in each country - see http://awm-solutions.iwmi.org/partnerts.aspx for more

FAO coordinates a multi-stakeholder dialogue process on AWM in close collaboration with national partners. Each country has a National Dialogue Facilitator who supports the appointed National Focal Point within the relevant government agency. Together, they ensure the events are prepared in line with country needs and preferences, receive the relevant inputs from country partners, and are effectively followed up.

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This Dialogue update is prepared by Bernardete de Neves & Domitille Vallée (FAO) on the basis of the various Dialogue events reports.

AGWATER SOLUTIONS

TANZANIA

Country Dialogue Brief

2009 - 2012

10 Meetings

400 Stakeholders + Many more

Interviewed or reached out

Phase 1: AWS Assessment

2009

Situation Analysis

2010

March , National Consultation

Livelihood Zone Mapping

Dar es Salaam

Phase 2: Dialogue

August 2010 , Technical Brainstorming Worksho

On opportunities for AWM

in Mkindo Watershed, Mkindo

November2010 , 2nd National AWM Consultati

Dar es Salaam

August 2011, 3rd National AWM Consultation

Dar es Salaam

September 2011, Technical Brainstorming

Workshops on AWM and suitability Mapping

Dar es Salaam

December 2011

Technical brainstorming workshop

(Conservation agriculture, small reservoirs,

communal irrigation schemes, lifting devices

Regional AWM Consultations

September 2011, **Morogoro**

November 2011, **Arusha**

February 2012, **Dodoma**

(Parliament Committee)

April 2012, **Dodoma** (private sector)

Phase 3 Information for Action

June 16-17,

National policy level consultation

Strengthening partnerships

Participate in the SAGCOT process: From June 2012, a link was established in an existing think-tank platform to continue the discussion and promotion of AWM in Tanzania (Ongoing). Link to SAGCOT and IMAWESA.

Meeting with the donor partner group to encourage them to prioritize community-based irrigation. This activity is followed with individual meetings with interested donors (May 2012).

Outreach & Awareness activities

INTERNALTIONAL

2009

Cross-country launching meting of the Ag water solution project team, Ethiopia, field visit

2010

January

Cross-country review meeting of the Ag water solution project team, Lusaka. Visit of the Kafue Plains and out grower schemes.

September

Cross country synthesis meeting of the Ag Water solutions project Team,. & Participation in the Nile Basin Focal Project stakeholders meeting. Addis Abeba, ethiopia.

2011

April

Training, Field visit and Local meetings of the seven national facilitators to Ghana

June

Field visit and Local meetings of the AWS project Steering Committee, Ambassadors and National Focal Points to Keita, Ghana

November

Waternet conference, Mozambique (Presentation on the potential impacts from AWM development at a watershed level)

2012

January

Learning route of the national facilitators & national focal points (Burkina, Ghana, Ethiopia, Zambia, Tanzania, India-MP, India-WB) to Madhya Pradesh to visit promising agriculture water management solutions.

May

Land and water days @ FAO (presentation on the Dialogue process in India MP)

Aug

World Water Week, Stockholm, Sweden (Presentation on small scale irrigation)

NATIONAL

November 2011, Dar es Salaam

February 2012, Dodoma

Southern Agriculture Corridor of Tanzania
Parliament Committee on Agriculture, Water & Livestock

April, 2012

AWM for the Media

awareness raising workshop

Mapping for dialogue and decision making

Maps, being very effective communication tools in soliciting feedback, have supported the dialogue process in various events. Maps can help stimulate discussion and visualize where to invest. The basis for the mapping is the livelihood context (biophysical and socioeconomic determinants), captured in the Livelihood Zones (Map 1) through an iterative consultation and desktop analysis process. The livelihoods context allows then to identify the "AWM Potential": areas where water constraints are a major factor affecting smallholder livelihoods and where AWM can be the entry point to boost the livelihoods of farmers (Map 2).

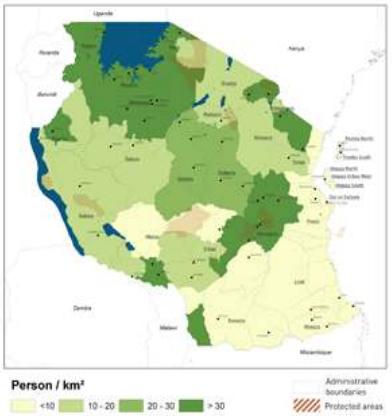
The following step is identifying AWM practices which are most suitable in each livelihood zone. First, considering their biophysical suitability, like rainfall, hydrological network, and soil type (Map 3 to 6) and then linking these with the demand for a given practice by livelihood zone (based on farmers' typology and their ability to invest in improved AWM practices).

The mapping process has gathered stakeholders feedback through two major workshops, a series of regional consultations followed by individual exchange with experts: 1) March 2010: Livelihoods Mapping Workshop ; National and Regional consultations discussed the draft maps ; 3) September 2011: Technical Brainstorming Workshop on AWM Potential and Suitability Mapping.

More information available online :

- Report livelihood zones (http://www.fao.org/nr/water/docs/TZA_LZ_analysis.pdf)
- Country investment brief (http://www.fao.org/nr/water/docs/Country_Investment_Brief_Tanzania.pdf)

Map 1

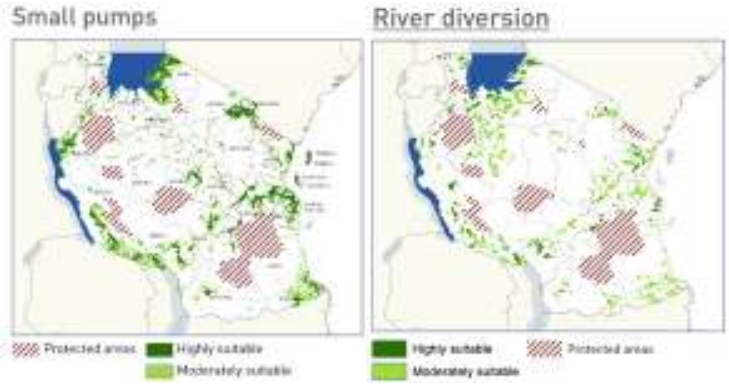


Map 2

AWM Potential and Suitability Mapping

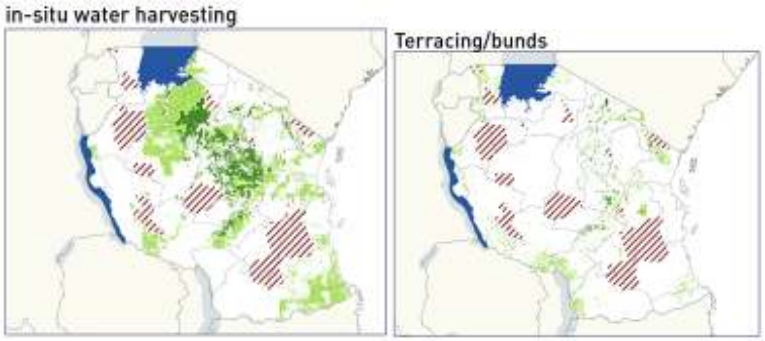
- Livelihood Zones in Tanzania (Map 1)
- Potential for Poverty Alleviation through AgWater Management (Map 2)
- Suitability of AWM Technologies:
  - Low-cost pumps (Map 3)
  - River diversion (Map 4)
  - Soil and water conservation (Maps 5,6)

For more information: Tanzania Mapping Brief on the Project's Website



Map 3 Map 4

Physical suitability for 3) small pumps and 4) river diversion has been assessed on the basis of: travel time to market (defined as centers of 20,000 inhabitants or more), with areas at 4 hours or less considered highly suitable and areas at more than 8 hours excluded, proximity to surface water, occurrence of soils with shallow groundwater potential (only for small pumps).
Livelihoods context is assumed to be more favorable in zones with relatively higher prevalence of market-oriented smallholder farmers and high population density (only for small pumps).



Map 5 Map 6

Physical suitability for Soil and Water Conservation practices has been assessed on the basis of climate and terrain slope. 5) In-situ water harvesting (increased soil moisture retention) is assumed to be suitable in semiarid (higher suitability) to dry-subhumid areas (moderate suitability), and in nearly all slope classes, but preferably lower than 16%. 6) Terracing and field bundings are assumed to be suitable in slope classes higher than 5% and in all climatic conditions, but with preference given to semiarid areas. Livelihoods context is considered favorable with relatively higher prevalence of traditional smallholder farmers and limited market access.

Main findings from the dialogue events

This section summarizes the feedback received from participants during the various dialogue events on the suitability and feasibility of the AWM options analyzed, as well as on financing needs and options to explore, together with investments required for information and training needs.

Soil and Water conservation – Conservation agriculture concerns a range of techniques for capturing and storing water. The government has introduced power tillers to farmer groups and the campaign is still ongoing . However , uptake is slow as farmers are most interested by techniques that increase soil fertility, and enable water conservation; but finance is a key constraints to maintain the practice if it does not pay back (NC2 Dar).

Water storage - developing water storage systems or communal groundwater for the dry Dodoma Region will be important. More information is required for this (NC 3 Dar).

Community-Based River Diversion was discussed in the second national consultation in Dar es Salaam **(NC 2 Dar);** to improve their performance the main needs identified are:

- Investment in river irrigation system and in infrastructure (inventory, repair and investment).
- Strengthening water users organizations (management team, credit skills and institutional capacity).
- Better design of the scheme (availability of water and area of command).
- Integration of other water storage (rainwater harvesting and construction of dams and charco-dams) for multiple uses.

Water Lifting Devices - Appropriate and affordable technologies should be identified and promoted.

- Farmers should be trained in appropriate selection, use and maintenance of pumps.
- Pump dealers should be supported to offer advice to farmers in their choice. A registry of information on
- different models should be available.
- Service providers should be involved in the project for maximum impact and adoption. The project should (NC 3 Dar) show them that there is demand for these services. (RC 1M).

Water pump rental markets are emerging but limited (NC2 Dar) options to improve this service need to be explored .

Water application - Increase knowledge of more efficient water application technologies such as drip systems.

Improve access to rural finance for AWM - Improving farmers' business capacity will also increase confidence from financial institutions. The government should provide tax exemptions for irrigation equipment and offer credit assurance to existing savings and credit cooperative organizations (SACCOs) so they can offer more flexible loans (NC 2 Dar).

Build farmer's agribusiness development capacity -- Training to improve production, marketing and market access. Refrigerated storage and transportation should be considered (NC 3Dar).

Dialogue Outcomes

Through the National Dialogue Facilitator the project is successfully engaging in certain national processes with the following major achievements:

- a meeting was held with the CEO of Southern Agricultural Corridor of Tanzania (SAGCOT). It was agreed that SAGCOT and the AgWater Solutions project could benefit from *a joint collaborative framework and offered the project a platform, within SAGCOT, to discuss issues related to water use efficiency and to entrench the dialogue process on AWM solutions.* The investment models being developed by the project were considered useful to SAGCOT and it was encouraged to share them with other stakeholders.

- project findings were presented at a seminar with the Parliamentary Committee on Agriculture, Water and Livestock with objective to raise the profile of AWM in the parliament with a possibility to increase budgetary support for the Ministry of Agriculture 4th Feb).

The Parliamentary Committee requested the Ministry of Agriculture to prepare a clear budget, including the recommendations made by the AgWater Solutions team, so that the Committee could support a budgetary increase in the next national budget for 2012/13. This, in turn, has prompted several members of the Parliamentary Committee on Water, Agriculture and Livestock to call the project team re-stating their support for a *budgetary increase in the Ministry of Agriculture, Food Security & Cooperatives around the proposed AWM solutions.*

The meeting also resulted in substantial media interest and a follow-on media workshop was held on 2 April 2012. As a result, the AWM project and proposed solutions have now been highlighted on prime time TV, radio and print media.

Informal AWM forum was set up as a way to provide opportunities for continuous exchange on AWM for all stakeholders in the country including researchers, private sector, NGOs, policy makers, donors etc. A first activity is a series of dialogue meetings facilitated by Sokoine University of Agriculture and Ministry of Agriculture. The aim is to build a community of practice around AWM issues and technologies. The **Final policy level workshop organized on 16 June 2012** was the starting point for that community of practices and confirmed the strong commitment of the Ministry of agriculture to develop small-scale AWM.

Multi-stakeholder consultations

National Consultations
-(NC1 Dar) March 2010
-(NC2 Dar) 25 November 2010, Dar es Salaam -
- (NC3 Dar)4 August 2011, Dar es Salaam - (

Regional Consultations
- (RC1 M) 30 September, Morogoro -
-(RC2 A) 18 November, Arusha

AW Solutions Research briefs

Visit AWM Solutions website: http://awm-solutions.iwmi.org/publications-and-outputs.aspx

- AWM Situation Analysis Brief
- AWM National Consultation Brief

- Opportunities for improving AWM in the Mkindo watershed in Tanzania
- Investment opportunities for Water Lifting and Application in Tanzania
- Community-managed irrigation river diversion systems (*forthcoming*)
- Soil and Water Conservation- review of results in Tanzania.

(photos: Guido Santini)