

This briefing note synthesizes the presentations made by the AgWater Solutions Project team and discussions that followed with the workshop participants.

Introduction

The AgWater Solutions Project is helping to unlock the potential of smallholder farming through agricultural water management (AWM) solutions. This includes formal and informal technologies and approaches, such as soil moisture management, drip irrigation and water harvesting solutions at the farm, community and watershed level, as well as the supporting policies, institutions and business models. Partnerships are key to the success of the project. As such, the project promotes collaboration at international, national and regional levels with and between a range of stakeholder groups including researchers, policymakers, investors, farmers and implementers.

The National Consultation Workshop held on 1st March 2010 was an opportunity for such engagement and for participants to share their opinions on AWM solutions that would be appropriate for Tanzania and could be out-scaled. This briefing note provides a short summary of the discussion held during the Workshop and the AWM solutions that were prioritized. For more information on all the AWM solutions currently being used in Tanzania the reader is referred to the Situation Analysis Briefing Note, which is available on the website.

Review of the Situation Analysis

The Situation Analysis that was conducted for Tanzania considered climate, demographics, water resources, the economy and agricultural development. It also reviewed the current policy and institutional setting for AWM and the existing technologies that were being used in various places around the country (Table 1).

Participants were asked to discuss the findings and to give inputs and suggestions. The outcome was that they felt the report had covered all the main AWM solutions in Tanzania. Some participants, mostly farmers and NGOs, could identify themselves directly with specific practices reported, which made the discussion extremely valuable. Some suggestions given regarding the report included:

- Some additions to specific AWM solutions like rope and washer as a water lifting technology, a number of new Conservation Agriculture practices, etc.
- Better sub groupings on some AWM solutions presented, especially Conservation Agriculture.

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Table 1: Existing AWM technologies

AWM Solutions	Specifics	Where Currently Practiced
Water lifting devices	1. Small motor pumps 2. Treadle pumps 3. Buckets/ watering cans	All over the country, seasonal in rural areas
Small reservoirs	4. Ndiva 5. Charco-dams 6. Sand dams 7. Tanks-Polytanks, underground	Semiarid central zone, Dodoma, Singida, Tabora and Shinyanga
Conservation agriculture (in situ and external water harvesting)	8. Matengo pits, Ntuba/vinyungu 9. Majaluba 10. Terracing (stone/fanya juu) 11. Tie ridging 12. Minimum tillage 13. Cover cropping and mucuching	Semiarid regions; anyara, Dodoma, Singida, Tabora and Shinyanga
Communal gravity-fed canal irrigation	14. Improved offtakes 15. Traditional	Highlands, mostly in Arusha and Kilimanjaro
Formal irrigation schemes (large/small)	16. Large dams and reservoirs 17. River diversions	All over; Kilimanjaro, Iringa, Morogoro, Mbeya, Arusha
Power tillers	18. Power tillers	All over the country

Prioritizing AWM Solutions

After validating the Situation Analysis report, the next key task was to select priority AWM solutions for the country. After considerable plenary discussions, four broad AWM solutions were prioritized.

1. Conservation Agriculture
2. Water lifting and application technologies
3. Communal irrigation schemes
4. Water harvesting and storage systems (small reservoirs)

Thereafter, participants were grouped to discuss each of the identified priority AWM strategies. Discussions focused on specifics about the AWM solution, locations in the country where they are most practiced, their potential for scaling-up and out, equity issues, further research required, and considerations for implementation of the case studies. The findings from each group were presented to other participants for more inputs. Key issues from the discussions and recommendations by the stakeholders included the following:

Conservation Agriculture

Farmers usually use a combination of Conservation Agriculture practices which are agroecological zone specific. Suggestions on where case studies could be done were:

- In Tanga Region, which represents highlands, the practices include terracing, contour farming and composting; and
- In Dodoma Region, which represents semiarid areas, the practices include deep tillage, ripping and pit cultivation.

Water lifting and application technologies

For water lifting, studies should focus on treadle pumps, motor pumps and hydrum; and for water application, they should focus on drip and sprinkler irrigation. No specific locations were suggested for treadle pumps or motor pump analysis, but a review of Kickstart Tanzania's treadle pumps was considered useful. For "Hydrum" and drip and sprinkler irrigation, Mbeya was considered a good location to initiate a study, and/or companies which are distributing the technology could be consulted about locations where they are being used.

Communal irrigation schemes

The focus here should not be on technology but rather on management and institutions. It would be advisable to select two case studies that represent successful and unsuccessful situations. Mkindo (Morogoro) or Mombo (Tanga) could be used for the successful case studies.

Water harvesting and storage systems (small reservoirs)

Small-scale, focused studies may be most appropriate. The research should also consider communal irrigation systems. The districts could be the same as those studied for Conservation Agriculture.

Next steps

After the National Consultation Workshop, the next step was to conduct in-depth case studies on the AWM solutions prioritized by stakeholders. These studies are now ongoing and will be published as briefs on the project website as soon as they are completed, and stakeholder consultations will be continued to share findings and receive comments.

This brief is based on a report from the National Consultation Workshop prepared by Bernard Keraita, International Water Management Institute (IWMI) and Henry Mahoo, Sokoine University of Agriculture (SUA) for the AWM Solutions Project. Contributions were made to the discussion by:

Farmers: Farmers and farmers' representatives from various parts of the country

Government agencies: Ministry of Water & Irrigation;

NGOs - Technoserve-Tanzania; SAIPRO; INADES-Tanzania; Kickstart International and Lutheran World Relief

National researchers: SUA, University of Dar es Salaam, TEA Research Institute of Tanzania and University of Zimbabwe Entrepreneurs; Agro-Rain LTD. Project team: Stockholm Environment Institute (SEI), IWMI, and the Food and Agriculture Organization of the United Nations (FAO).

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