

Community entry and sensitization workshop report

Water management practices in Botanga district, Northern Ghana

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The [Sustainable Intensification of Mixed Farming Systems Initiative](#) aims to provide equitable, transformative pathways for improved livelihoods of actors in mixed farming systems through sustainable intensification within target agroecologies and socio-economic settings.

Through action research and development partnerships, the Initiative will improve smallholder farmers' resilience to weather-induced shocks, provide a more stable income and significant benefits in welfare, and enhance social justice and inclusion for 13 million people by 2030.

Activities will be implemented in six focus countries globally representing diverse mixed farming systems as follows: Ghana (cereal–root crop mixed), Ethiopia (highland mixed), Malawi: (maize mixed), Bangladesh (rice mixed), Nepal (highland mixed), and Lao People's Democratic Republic (upland intensive mixed/ highland extensive mixed).

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Background

A community sensitization workshop was conducted from 19-22, June 2023 in Botanga (northern region) and Ahafo Ano (Ashanti region) to engage stakeholders and establish partnership with relevant government organizations and farmer groups (Appendix-1). A team of researchers from IWMI and CSRI-CRI led the process of partnership. At the Botanga Irrigation Scheme in Kumbungu district, project sensitization was led by Dr. Patricia Yeboa an agronomist from the CSRI-CRI.

Prior to the meeting with farmers and stakeholders, initial SI-MFS meeting took place at the Department of Agriculture office in Kumbungu, with attendees from various organizations, including the Department of Agriculture, Ghana Irrigation Development Authority, Farmers' Based Organizations, and Extension workers. SI-MFS team members from the International Water Management Institute (IWMI) provided an overview of the SI-MFS and expectations of the IWMI led activities (Plate a). During the meeting, the team emphasized the importance of efficient water management in rice-based systems and explained the SI-MFS targets, particularly the demonstration of the Alternating Wetting and Drying (AWD) technology for water management in rice cultivation.

The discussion with farmers and invited technical personnel centered on the following two key points:

- Identifying and sensitizing relevant stakeholders in the proposed project areas for the SI-MFS Initiative.
- Co-designing demonstration plans and activities with farmers and stakeholders.

The team explained that the approach involves using a participatory method to promote AWD technology and the Tailwater Harvesting system. This way, farmers will actively engage in co-designing and co-implementing the field demonstration, with the team's support for replication in their own fields. This strategy aims to facilitate mutual learning and demonstrate the effectiveness of AWD compared to traditional farming practices. The Manager of the Botanga Irrigation Scheme, the Farmers, and other stakeholders showed enthusiasm for the initiative, recognizing the significance of water management, especially given the challenges posed by climate change on crop production.

The IWMI/CRI Team outlined the support needed from the farmers, including providing land area for Mother Trials, participating in Baby Trial fields, assisting technicians in data collection, granting access to their fields, and participating in farmer-field schools. At the end of the meeting, nine farmers volunteered to take part in the participatory demonstration, and it was agreed to implement the AWD with three different rice varieties. Following the discussions, the team had a tour of the Botanga irrigation scheme, visiting the primary canal, field canals, rice fields, and

interacting with farmers who were harvesting rice using a mechanical harvester (Plates b & c).

The SI-MFS team from IWMI and CRI met with Dr. Nurudeen Abudul Rahman (IITA, Tamale), and discussed about the purpose of the visit to Botanga, and the progress made in engaging farmers. Dr. Nurudeen expressed satisfaction with the choice of Botanga, as it had prior engagement with Africa RISING project and had been selected for SI-MFS activities. He suggested selecting beneficiary farmers from the existing SI-MFS baseline survey conducted in the community and provided the list of farmers via email. Dr. Nurudeen advised the team to prioritize committed farmers for the trial, focusing on quality over quantity in farmer engagement. After the meeting, the team travelled to Aha Afo Ano and visited the Potrikrom Inland Valley Irrigation Scheme. The scheme had an Earth Dam with a reservoir, main canal, control gate, and spillway (Plates d-f). Though still operational, signs of poor maintenance were evident. The team interacted with a few of the 25 farmers engaged in irrigated crop production, mainly rice and vegetables, and they expressed willingness to collaborate with IWMI-CRI to improve production practices in the scheme.

The team visited the Adugyama Irrigation Scheme, which was similar in structure to the Potrikrom Dam but appeared larger. Approximately 50 farmers operated in the scheme, facing similar challenges as observed in the Potrikrom Scheme. These farmers also expressed their willingness to partner with IWMI-CRI. The team then visited Mr. Nana (Plate g), a private farmer operating an integrated farm with irrigated rice, vegetables, aquaculture, and small ruminants (Plate h). Mr. Nana had been involved in various research for development activities and was open to partnering with IWMI-CRI for the AWD demonstration, offering to host other farmers during field school days and other events. Further meetings were held with the District Coordination Director and the District Director of Agriculture for Ahafo Ano South, and Aha Afo Ano Southwest. Both officials welcomed the SI-MFS initiative and offered support within the capacity of the district.

Plates



Appendix 1: Activity Description

Period: 19th – 22nd June 2023

IWMI		Contacts
Monday 19 th June 2023	Arrival in Tamale Move to Botanga	Rice Farmers at the Botanga Scheme Scheme Manager
Tuesday 20 th June 2023	Met with Dr. Nurudeen at the IITA Tamale Travel to AhaAfo Ano Visited Potrikom inland valley scheme	Dr Nurudeen IITA, Tamale Field Irrigation farmers – Potrikom Irrigation Scheme
Wednesday 21 st June 2023	Visited Adugyama inland valley scheme Engagement with Director SE Engagement with Director SW Return to Kumasi	Irrigation farmers – Adugyama Irrigation Scheme District Director AhaAfo Ano SE District Director AhaAfo Ano SW
Thursday 22 nd June 2023	Depart Kumasi to Accra	



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