# Efficient and Innovative Small Scale Irrigation (EISSI)

***An Action Group for assessing, prioritizing and advocating efficient and innovative small scale irrigation technologies for African smallholders***

## *Participating institutions*

- Ethiopian Institute of Water Resources (EIWR), Addis Ababa University, Ethiopia
- Rwanda Agriculture Board, Rwanda
- Sokoine University of Agriculture, Tanzania
- Meta Meta Research, the Netherlands

## *Members*

- Zeleke Agide (PhD): Action group Leader
- Mr. Bernard Musana
- Henry Mahoo (PhD)
- Frank van Steenbergen (PhD)

# *Introduction*

- Agriculture in Africa is less developed, dominated by poor farming practices and is largely rainfed.
- Climate shocks mainly characterized by insufficient rainfall, droughts and dry spells have been critical challenges to food security and socio-economic development of African farming communities.
- Irrigation is a strategic solution well addressed and prioritized by many African nations towards building resilience to climate variability and shocks.
- To this end, innovative and efficient small scale irrigation technologies for smallholders are of priority.
- This Action Group will study the performance, select, demonstrate and pilot efficient and innovative small scale irrigation technologies adaptable to smallholders.
- The group will document successes of these irrigation technologies in various aspects such as household food security, socio-economic growth, national economy, etc.

# *Objectives*

- To assess and compile SSI technologies in the countries of the activities of the Action group.
- To field test the performance of these irrigation technologies under different physical conditions
- To identify and prioritize efficient and innovative small scale irrigation (EISSI) technologies adaptable to smallholders
- Piloting and up scaling EISSI technologies by soliciting support from various stakeholders
- To create awareness to farmers and stakeholders at various levels on EISSI technologies and related business models

# *Planned activities*

- Making an assessment of existing small scale irrigation technologies in the countries and regions under consideration.
- Assessing farmers' needs, preferences and priorities in view of irrigation water supply and irrigation technologies.
- Selecting and prioritizing appropriate, efficient and innovative irrigation technologies based on various criteria and on the needs and priorities.
- Piloting and field testing selected irrigation technologies to evaluate their performance in terms of water saving, productivity, and adaptability.
- Holding workshops for communicating the irrigation technologies to wide range of stakeholders and soliciting ideas for business models.
- Giving trainings to farmers on the uses, benefits, operation and maintenance of the irrigation technologies.

# Countries for the Activities of the Action Group

- Primary countries for the activities
  - Ethiopia
  - Rwanda
  - Tanzania

- Other African countries with similar contexts as required

# Expected outputs

- Output 1: List of existing irrigation technologies in the countries and regions of consideration along with the extent of adoption, efficiency, productivity, operation and maintenance issues, etc;
- Output 2: Farmers' needs and priorities will be well identified in view of irrigation technologies;
- Output 3: Appropriate and innovative irrigation technologies will be identified and prioritized;
- Output 4: Identified irrigation technologies will be piloted to evaluate their suitability and adaptability;
- Output 5: The identified and piloted more efficient irrigation technologies will be communicated to all concerned stakeholders through workshops/conferences and business models developed;
- Output 6: Farmers got acquainted with all aspects of the prioritized irrigation technologies for adoption.