



# What are the challenges for the sustainability of smallholder irrigation schemes in Ethiopia?

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Breached main canal from Geray (Amhara Region)



Tebi micro earth dam stored the water at the beginning of the irrigation season (Amhara Region)



Main gate of Walga irrigation scheme blocked by sedimentation (Oromia Region)

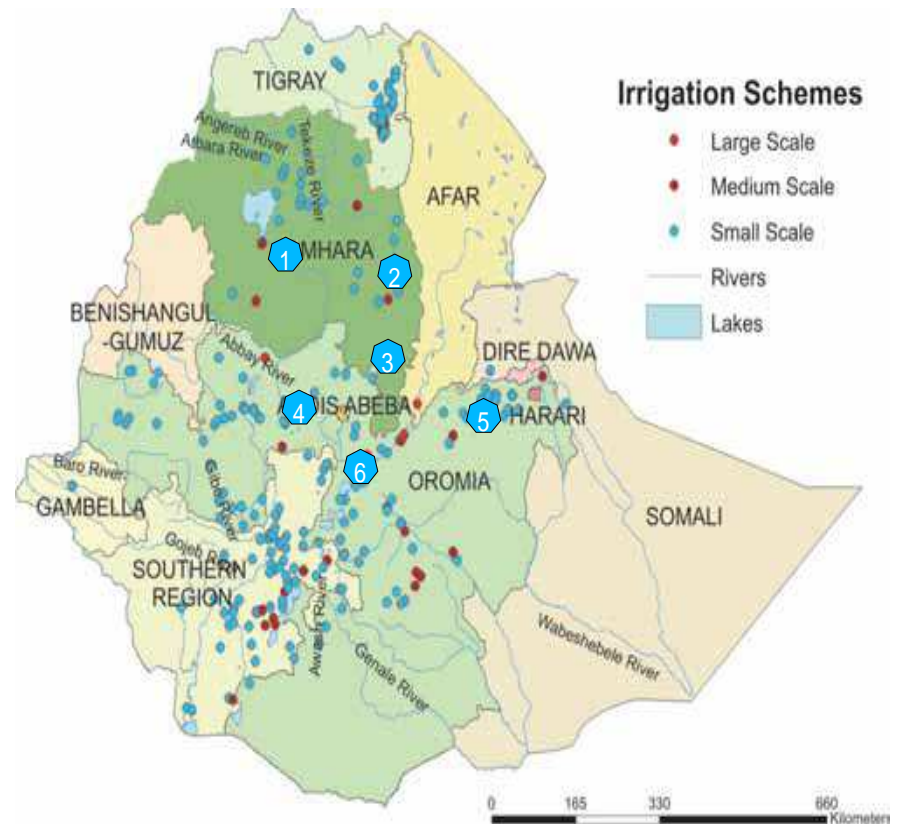


Farmers irrigating during the plantation of onion in Wayo-Siriti irrigation scheme (Oromia Region)



## Context and issues:

- Ethiopia situated in North-Eastern part of Africa.
- Irrigation is necessary in Ethiopia to achieve better economy return and food security at household level.
- With this objective 5.8% of the 4.3 million potential irrigation land is currently exploited.
- These smallholder irrigation schemes are in poor status technically, institutionally and economically
- Assessing the technical and economic viability of these existing schemes helps to know the challenges for the upcoming new schemes.
- The smallholder schemes featured low intensification level and loose communication between farmers, the management entity and external role players.



Existing small, medium and large scale irrigation schemes in Ethiopia (Source: Awulachew et al. 2007)

## Method of investigation:

- Literature review
- Farmers interview from six different schemes
- Field visit and discussion with local and regional experts
- Secondary sources from different offices

## Results:

- The average family size ranges from 4.76 to 7.78 members per household
- Average plot size of farmer ranges from 0.20 to 0.68 hectare
- The fertilizer application is very variable and below to the standards
- The average cropping intensity ranges from 94.92 to 226.99 %
- Low cost recovery related to operation and maintenance of the irrigation schemes (E.g. maximum observed 10.88 Euros per year).

## Conclusions

- The population pressure has impact on the size of irrigation land
- Access to inputs have impact on fertilizer application (intensification)
- Access for credit related to the strength of management entity in place and closely linked to access to inputs
- The management entity in place has to establish standards to collect the cost recovery for the sustainability of the irrigation schemes.



