



Ali Ibrahim works on an onion farm that he also supervises. He uses irrigation method by bringing water from the nearby Mojo River.
Credit: Maheder Haileselassie/IWMI.

Community-Based Irrigation Scheme in Pastoralist Communities: Fentale Irrigation-Based Integrated Development

Introduction

Dependence of pastoralism as a source of livelihood is constrained by various factors. The movement of pastoralists in search of feed and water is becoming impossible due to expansion of towns, commercial farms etc. The Kereyu community, which is predominantly engaged in pastoralism, is one of the pastoralist communities in the Oromia region affected by recurrent drought. As a result, pastoralism as a source of livelihood has become challenging.

A project that aimed at introducing irrigated farming to the Kereyu community was implemented by various stakeholders. The project mobilised the Kereyu community to start a sedentary form of livelihood by introducing a community managed irrigation scheme. Pastoralists started to produce and sell various crops such as onion, tomato, maize and other pulse crops such as haricot bean which has never been produced before in this community.



INTERVENTION AREA

Enhanced production and livelihood diversification



LOCATION

Gidara, Turo, Dire Seden, Tututi and Ilala kebeles of Fentale woreda



STAKEHOLDERS AND PARTNERS

Oromia Region Water Works Construction Enterprise (OWWCE), Fentale Woredas Water, Mine and Energy Office, Fentale woreda Pastoralist Development Office (FPDO), Fentale Woreda Cooperative Office, Worer Agricultural Research Centre, Melkassa Agricultural Research Centre, Oromia Bureau of Agriculture, Oromia Pastoral Development Bureau.



BENEFICIARIES

The project is currently benefiting 3,020 male and 989 female agro-pastoralists as direct beneficiaries of the irrigation project

Methodological Approach

The Kereyu pastoralists were mobile and had no previous experience in sedentary life and crop farming. They were always on the move in the rift valley areas of the country. Their mobility was affected by the expansion of commercial and state farms among other developments.

The Oromia regional government mobilised and organised a series of discussions with all members of the Kereyu communities in Fentale woreda to make them settle and start crop production as alternative source of livelihood. For this purpose, using the River Awash, an irrigation structure was constructed by the Oromia regional government.

The management and administration of the scheme from the head work to the tertiary canal to operate, manage, rehabilitate and collect water fee was to be carried out by OWWCE, whereas the field level management including some small tertiary canals was given to the beneficiaries.

A 49.3 km main canal with two primary canals (49.14 km), 11 secondary canals (109.3 km) and 69 tertiary canals (58.1 km) were to be constructed delivering water in two different systems, gravity and pump currently irrigating 4000 ha. It conveys water for the whole scheme with a discharging capacity of 18m³/sec. It is planned to irrigate 18,000 ha and currently supplying irrigation water for 4000 ha.

Results

- Targeted agro-pastoralists started to irrigation-based production of crops for both their household consumption and for markets using the irrigation;
- Introduction of cash crop irrigation such as onion, tomato, and maize;
- Increase in food crop production and diversification of crops;
- Livelihood status improved;
- Livelihood assets build up (financial, physical, social);
- Construction of new houses;
- New village and market established, and electrification;
- Self-sufficiency in terms of feed for livestock. They do not need to ask for sugarcane straw from the Metahara sugar factory as they did before the implementation of the project;
- Irrigation technology used is cheaper. Instead of using cement and steel pipe geo-membrane plastic and PVC are used;

Validation

Field days were organised at both national level and regional level. This was done in the presence of high ranking regional and federal government officials, community leaders and members of the community in order to evaluate the enormous benefit members of the communities had gotten

from the project. During the field day beneficiary households presented their stories, indicating how the irrigation project helped improve their livelihood, build assets and produce multiple crops both for home consumption and market.

Success Factors

- Main structures in the scheme are operated by the scheme management office which is equipped with educated manpower and gatekeepers.
- Water saving structures which could minimise evaporation and seepage after water is abstracted.
- Primary canals are also geo-membrane covered trapezoidal canals which can minimise the seepage.
- Role sharing among different actors to effectively operationalise the irrigation scheme: As a result, pastoralist obtained access to improved crop varieties, they received extension services, they were provided with market access etc.
- Water users' cooperatives are established at each secondary canal. They are responsible for managing distribution of water for users have written bylaw, collected membership fee and are legally registered.
- Irrigation fees in addition to the ownership issue encourages farmers' efficient use of water and better scheme management which contribute to better environmental conditions.

Sustainability

For the practice to become socially sustainable, the involvement of the community members at all stages of the project design and implementation is mandatory. For the practice to be environmentally sustainable, the introduction of water efficient irrigation techniques such as drip and sprinkler irrigation techniques is necessary. In addition, establishing a system for the maintenance service provision for the community is an essential element for sustainability of the good practice.

Replicability and Up-scaling

The practice has a high potential for replicability in areas where irrigation water is available. There are two essential conditions to widely replicate and adapt the practice in another context: Establishing service delivery system for maintenance of the irrigation facility and introducing irrigation technique such as drip and sprinkler which reduce possibility of occurrence of salinity problem.

Additional Information

<https://agriknowledge.org/downloads/j38606956>

<https://ethiopia.savethechildren.net/sites/ethiopia.savethechildren.net/files/library/pastoralism%20report%20final%2006-08-12%20v2.pdf>

<https://link.springer.com/article/10.1007%2Fs40899-017-0208-2>

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