PROMISING RESILIENCE PRACTICES

PEACE, PROSPERITY AND REGIONAL INTEGRATION

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Rehabilitation of Irrigation Infrastructure in Middle Shabelle Region of Hirshabelle State of Somalia

Improved water availability benefitted 55 villages, who depend primarily on agriculture. New crops such as vegetables were introduced as cash crops, hence contributing to livelihood diversification and improved income for small-scale farmers

Introduction

Irrigated agricultural development started in Somalia in 1920 with the implementation of the Jowhar Sugar Estate. The scale of irrigation development increased rapidly thereafter and by 1980 some 60,000 ha had been developed in Jowhar and Balad districts, located in the Middle Shabelle region.

Between 1980 and 1990, irrigated areas benefited from a well-established network of canals and drains, allowing a consistent supply of water that supplemented the scarce and unreliable rains, with abundant surface and underground waters from the Shabelle and Juba Rivers.

For many years, the fertile soils and favourable climate had sustained good performance of cash and food crops under irrigated conditions, while extra water was used for leaching practices that kept salinity build-up under control. Irrigation systems were originally based on a limited number of gated gravity-fed river sluice gates, feeding main canals designed in such a way as to have enough head to command the fields through secondary canals and, further down, smaller tertiary canals to individual farms' sluice gates. However, over 20 years of civil war, the majority of these schemes have collapsed.

River embankments eroded, and barrages, pump sluice gates and canal systems had some degree of sedimentation and vegetation growth which reduced the canals' hydraulic sections. Silting up of the drainage system was accelerated by the lack of terminal outlets and the flat topography of the irrigation area, which restricted drainage water from returning into the rivers by gravity.

The existing irrigation infrastructures were rehabilitated and improved through expansion of irrigated areas for improved accessibility.

INTERVENTION AREA
Water resources development and management

LOCATION
Jowhar district, Middle Shabelle

STAKEHOLDERS AND PARTNERS

Irrigation infrastructure/schemes were rehabilitated by the three contracting companies namely, Horn Afric, Asma and Danwadaag based in Jowhar town, Middle Shabelle, the capital of the Hirshabelle State of Somalia. The project was funded by the Department for International Development and executed by DAI in collaboration and partnership with the Ministry of Agriculture and Irrigation

BENEFICIARIES
55 villages

Methodological approach

Private sector engagement was used to support the functioning of markets in key sectors by addressing weaknesses in small-scale productive infrastructure, a chronic lack of market information, and limited access to finance. Sector selection workshops were done, with engagement from a broad range of Somali stakeholders.

Training workshops were conducted and stakeholders engaged in detailed value chain analysis in selected sub-sectors. A participatory approach was used to identify the priorities of canals, sluice gates and culvers to be rehabilitated.

Results

- Fifty-five villages benefited from the intervention. The villages' livelihood depends primarily on agriculture; the rehabilitation of infrastructure improved water availability for increased production. New crops such as vegetables were introduced as cash crops in many villages, hence contributing to livelihood diversification and improved income for small-scale farmers.
- About 150 canal committees were trained in water management, irrigation operation and maintenance etc. The purpose was to build the skills of the communities for better management and ownership of the interventions.
- Access to the village had been difficult due to lack of bridges and canals. The rehabilitation improved access between villages, to markets, and to social services like health.
- The rehabilitation generated over 130,000 paid work days for people selected from the beneficiary villages. Permanent employment was also created through the productive use of new lands brought under irrigation and the intensification of crop production due to improved facilities.

Constraints

- In spite of the efforts made so far, the farmers' needs and priorities could not be covered fully, as there are many canals that are still silted up and require rehabilitation. There is also an urgent need for constructing or repairing canals, sluice gates and culverts in many villages.
- The effectiveness of the canal constriction and rehabilitation was affected by rains and the season for cultivation and irrigation.

Sustainability

- The beneficiary communities were trained and they pledged to undertake all future repairs, maintenance and rehabilitation of the irrigation infrastructure.
- The canal committees continuously monitor the canal status and update farmers. They allocate water and set time according to the farmers' needs. According to the canal committee, the traditional customary law stipulates that each farmer should be assigned to repair a portion of the canal when it silts up depending on his/her farm size. This also applies to the maintenance of the culverts, head works and sluice gates.
- The work was fully compatible with the community's schedules, while at the same time providing additional benefits in terms of cash-for-work and skill development.

Replicability and upscaling

The Ministry of Agriculture and Irrigation at national and state level recommended replication to other regions of Somalia. Successful replicability and upscaling depends on a number of factors:

- Implementation requires collaboration between the private sector companies to achieve a common goal.
- The canal committees and farming communities should be involved in identifying their priorities, and in the planning and design stages. This enables the implementing companies to get a clear understanding of the local context. After the repair and construction of irrigation infrastructure, their participation guarantees communities' ownership.
- The Ministry of Agriculture and Irrigation has to technically support implementation to ensure that all standards are met.

Additional Information

International Bank for Reconstruction and Development/The World Bank and the Food and Agriculture Organization of the United Nations (2018). Rebuilding Resilient and Sustainable Agriculture in Somalia Volume I. FAO.

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