Irrigation improves livelihoods
of agro-pastoralist community

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The maiden planting at about 40 hectares of Halobusa Irrigation Scheme in DireDawa Administration, Eastern Ethiopia has improved the livelihoods of about 150 agro-pastoralist households, bringing the ambitious plan to reduce food shortage in the project areas closer to reality. Today, irrigation has also increased the local community's agriculture-based income generating activities.

Previously, environmental degradation resulted in frequent and prolonged droughts, increasing the Halobusa community's vulnerability to hazards and disrupting their livelihoods. In 2013, through Partners for Resilience (PfR) program, Ethiopian Catholic Church Social and Development Commission (ECC-SDCO) implemented the Halobusa Community Managed Disaster Risk Reduction (CMDRR). The CMDRR planning process was

Community Managed Disaster Risk Reduction (CMDRR)

Four minimum requirements:

1. Conduct Participatory Disaster Risk Reduction Assessment (PDRA)
   and document findings

2. Develop Community Action Plans with information from the PDRA results
   and handover the plans to the CMDRR Committee for implementation

3. Establish the CMDRR Committee as a local Community Organization to implement
   the Community Action Plan through community mobilization

4. Conduct Participatory Monitoring and Evaluation and learning with the facilitation
   of the CMDRR Committee and other stakeholders using a participatory risk review
   and reflection process to generate information. Thereafter, disseminate the learning
   to the beneficiary communities

conducted based on a Participatory Disaster Risk Assessment on Hazards, Vulnerability and Capacity. Thereafter the beneficiaries developed Community Action Plans and participatory monitoring and evaluation plans. The communities organized themselves into the Halobusa CMDRR committees.

Using the CMDRR planning process, the local community identified drought and resulting chronic food insecurity as major local hazards. In response, the community prioritized irrigation, watershed management, and introduced modern agricultural practices to improve production.

Through community consensus, the agro-pastoralists introduced surface irrigation by excavating primary and secondary canals as a key strategy for increasing food production. The community also used their indigenous knowledge of watershed management to restore two existing high discharge spring water sources in order to replenish water supplies into the irrigation scheme.

In recognition of the Halobusa community's achievements in soil and water conservation activities, the local government through the Productive Safety Net Program (PSNP) donated a water pump to them. The PSNP, PfR and the local community conducted joint planning sessions. The local community also participated in different soil and water conservation activities such as physical and biological measures in the PSNP program. These included construction of hillside terraces, bunds, check dams, enclosure, spring development and tree planting.

Through irrigation, the Halobusa community adopted new food crops such as potatoes, onions and tomatoes into the DireDawa area. The crops were produced twice a year under irrigation, using improved agricultural technologies. In addition the DireDawa Farmers' Co-operative Union facilitated the distribution of improved vegetable seeds for the next planting seasons to improve sustainability.

Increased Vegetable production through irrigation and Income earned by Halobusa community
(Year 2014-2015)

S/N	Type of Vegetables	Area planted Hectares	Average production Tons/ Hectares	Total Production Tons	10% Household Tons Consumption	90% Market sales Tons	Total Market Sales Ethiopian Birr
1	Potatoes	12	8	96	9.6	86.4	2,592,000.00
2	Onions	13	7.5	97.5	9.8	87.7	350,800.00
3	Tomatoes	13	6.5	84.5	8.5	76	304,000.00
	Total	38					4,160,800.00
Average income earned by each household out of 150							27,738.60

Yassin Mohamed, 65, a local opinion leader says,

"I have been living in Halobusa village for about 45 years. For years, the mountain vegetation was lush green and the springs flowed throughout the year for livestock and wildlife. With time, rain became erratic, the springs dried up and forage for livestock was scarce. Droughts were frequent and prolonged, leading to declining agricultural production and chronic food shortages within the community. Through the Partners for Resilience (PfR), program jointly with community participation, we have constructed terraces around the mountain. The conserved area has also been protected from encroachment. Over a period of three years, using indigenous knowledge, re-forestation efforts for 96 hectares have been achieved. This has resulted in the restoration of two springs for irrigation."

The implementation of improved watershed management and the restoration of springs for irrigation confirmed the strength of applying indigenous and conventional knowledge in order to diversify and improve the livelihoods of vulnerable communities.

The community in the watershed appreciated that following the restoration of the ecosystem, the existing springs had increased their discharge and gradually rejuvenated.

The optimal management of watersheds for agricultural productivity required the local community to spearhead the interventions. For community ownership and sustainability of the Halobusa Irrigation Scheme, a Water User Association (WUA) was established to manage its operations. The Association had 10 management committee members and supervised the technical and financial management of the irrigation scheme.

The risk reduction measures that were identified and prioritized by the local beneficiary community through the CMDRR process were based on indigenous knowledge practiced and handed over from one generation to the next. Thus, building upon existing coping mechanisms and indigenous knowledge increased the understanding of the existing disaster risks and empowered the beneficiary community to provide pragmatic coping mechanisms.