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Enhancing benefits from water, sanitation and hygiene interventions

Case study from Kalu, northern Ethiopia

With support from the RAIN initiative, Water Action and Millennium Water Alliance, with technical support from Catholic Relief Services (CRS) Ethiopia, extended projects to supply water for productive as well as domestic uses in Kalu woreda. This case study examines how the Multiple Use water Services (MUS) approach was applied in Kalu to develop joint domestic water supply and irrigation schemes.

At a glance

Background on Kalu

186,000 people (2007 census), mainly Muslim and mainly Amharic speaking

55% estimated to have access to improved water supplies in 2013/2014

420 water supply schemes, with 11 counted non-functional

RAIN project activities

Seven springs protected and developed to provide for domestic and productive uses

Water and sanitation facilities constructed at schools and health clinics

Savings and Internal Lending Community (or SILC) groups established

Kalu is a mainly rural woreda in the South Wollo zone of Amhara Region. It is located 400 km north of Addis Ababa and 20 km from the city of Dessie.

Although prone to droughts, the area is relatively well-endowed with water resources, in particular springs along the many hills and valleys. However, high population densities, land degradation and multiple demands put water resources under constant pressure.



The Kalu landscape

Water development in Kalu

In mid-2014, coverage with improved water supplies¹ was 55% in Kalu according to the Woreda Water and Energy Office². Most of the 420 communal water supply facilities in the woreda (of which 409 are functional) are springs. There are currently some 334 developed springs, 66 working hand-dug wells with hand pumps, and 9 deep wells mainly serving the urban areas³.

The woreda has a substantial ongoing domestic water supply programme. It allocated over 2.5 million Ethiopian Birr (ETB) (US\$ 130,000) in the Ethiopian year 2006 (2013/2014 in the Gregorian calendar) towards the development of 57 community water supply schemes. About 30,000 people were reached with improved water supplies during that year. Most of this investment was capital expenditure on new schemes. The woreda invests about 17% of its water budget in recurrent expenditures (salaries and office costs etc.).

In trying to provide access to all residents, the main water supply challenges the woreda faces are reduced spring flows and low water availability during the dry season; lack of budget for maintenance; limited follow-up to schemes and WASH committee (WASHCo) training; and a weak sense of ownership by communities.

Irrigation is also a major focus. The woreda government's intention was to develop 6,646 hectares of irrigated land in the Ethiopian year 2006. 94% was reportedly achieved. There are now over 600 different irrigators with pumps in the woreda. Most pumps were distributed by NGOs, the government or bought by individual farmers. The woreda's Agriculture Office is currently supplying diesel-driven engine pumps imported from China to farmers.

As Box 1 shows, when people have the opportunity and choice they will find ways to use water for multiple uses, including income generation.



¹ A protected source within 1.5 km

² Coverage was 43% in 2010/2011 according to the national WASH inventory

³ Kalu woreda has 30 rural and 4 urban kebeles. A woreda is equivalent to a district and a kebele is a ward or sub-district.

BOX 1 FROM SPRING TO PLATE

Mr. Mohammad Seyid Kemal lives with his wife and children in Adame kebele. They live off the land. Mr. Mohammad is in the fortunate position of having a small spring on his property which he has developed for multiple uses.

On his own initiative and with his labour, he spent eight days capping the spring. He also bought a hose costing ETB 1,600 (US\$ 78) to convey water from the spring to his fields for irrigating crops like onions, cabbages, potatoes, and apple seedlings. The family now makes ETB 6,000 (US\$ 290) per year just from the sale of potatoes and onions. Water conveyed to the house is used for domestic purposes such as drinking, cooking, and washing.

Integrated interventions

Integrated water interventions are critical in Kalu given the woreda's twin objectives of improving community water supply and water for agricultural production. Springs and the streams flowing from them are widely used for multiple purposes including for domestic, irrigation and livestock.

Catholic Relief Services (CRS), with local partner Water Action, works in Kalu to improve health and livelihoods. These partners have worked together on adapting an integrated water resources management approach that gives attention to multiple uses⁴.

CRS and Water Action applied the RAIN support mainly in Adame kebele, where they developed seven spring schemes and trained WASHCos to manage them. Other interventions included improving water and sanitation facilities at schools and health clinics and setting up Savings and Internal Lending Community (or SILC) groups.



Mr. Mohammad and his spring

Damote: supporting negotiations

In Adame kebele, the productive Damote Karsa spring with a design discharge of 6 l/s was under development through the RAIN project at the time of the IRC visit. The original plan here was to use the capped spring water for domestic use through a piped scheme and public water points. However, farmers who were using the spring for irrigation resisted the project, fearing it would reduce their share of the water. The project adjusted its approach to support negotiations to develop the water scheme for multiple uses, emphasizing the creation of mutual understanding between the different user groups.



Fetching water at Damote Karsa spring

⁴ A short film profiling this approach has been produced see further information

Adame and Mukale: winners and losers in water development

The challenges in developing limited water resources for multiple uses and different user groups are illustrated by experiences from the neighbouring kebeles of Mukale and Adame. In 2004, a spring in Mukale was developed by the NGO Concern International to supply water to a health clinic in Fultolo in Adame. The spring, which discharged about 1.5 l/s, was developed to supply water through a water point with two taps, a washing basin, a cattle trough and to pipe water to the Fultolo Health Clinic.



The use of irrigation near the spring by 10 households had been halted during the initial construction of the system as water was diverted downstream for domestic use. This created a conflict between the irrigators from Mukale and the mostly domestic water users from Fultolo.

Under the RAIN project, the system, which had deteriorated over time, was rehabilitated and extended in 2013. An additional three water points were constructed in Fultolo to serve 275 households in addition to the 40 households already served by the existing water point. A WASHCo was established to manage these three new water points.

During a field visit in July 2014, the three new water points were found to be clean, functional and providing good water service to the 275 households in Fultolo. The old water point had not yet been fitted with a proper tap and water was flowing freely from it. The running water was being used for washing clothes and fetching water.

The example illustrates the need for taking into account the population's multiple uses of water in the design of water schemes and understanding impacts at a catchment scale. Unless consensus is reached among the water users of the two kebeles (Adame and Mukale kebeles), particularly those who had been using the spring for irrigation before it was capped, conflicts between water users may affect the sustainability of the project.



Fultolo water supply scheme

Conclusions and recommendations

- IRC found that water was often used for multiple uses in the Millennium Water Alliance-Ethiopia Programme (MWA-EP) areas in Kalu. Multiple uses were common in both household and community water schemes. Planned government and donor supported community projects have to step into a complex reality in which water resources are scarce, seasonally variable, and contested between different uses and user groups.
- Under the RAIN initiative, special attention was given to MUS and negotiating solutions between different user groups. The experience underscored the need to invest in collecting good information on water supply and demand, supporting negotiations between different communities and balancing the trade-offs between larger schemes designed for a single use covering greater areas (i.e. mainly domestic use) versus smaller schemes serving multiple uses⁵.
- There is a policy gap on how to best plan local water developments for multiple uses. While national policy is clear in providing priority to domestic water supply over livestock and irrigation water, implementation of this policy is hampered by limited local information available on water supply and demands and guidelines on the question of scale. Taking the example of springs in Kalu, over what distance should the priority of domestic water uses extend? Where such springs are used for single use they might serve more people further away (as is the case in Futolo) than if they are developed locally for multiple uses including irrigation. Such issues need to be resolved through local negotiations which require considerable facilitation and support.
- Within the domestic water supply sector, national level stakeholders have generally become more aware of MUS and it is starting to enter the sector lexicon. While much work remains at the local level, the Kalu cases indicate that the pioneering initiatives of CRS and Water Action under the RAIN project have contributed to advancing MUS understanding and practice.

⁵ Future interventions might consider using practical water accounting and auditing approaches such as those developed by FAO [forthcoming]



Hills and valleys in rural Kalu

CONTACTS

- Mr. Bekele Abaire, WASH Programme Manager, CRS [responsible during activity implementation]
- Mr. Melkamu Jaleta, Coordinator, Millennium Water Alliance–Ethiopia Programme.
melkamu.jaleta@mwawater.org
- Lemessa Mekonta, IRC Associate.
mekonta@ircwash.org
- Marieke Adank, Programme Officer, IRC.
adank@ircwash.org

About RAIN

The Coca-Cola Africa Foundation (TCCAF) has provided support under the Replenish Africa Initiative (RAIN) for Millennium Water Alliance Ethiopia Programme (MWA-EP) partners to ‘deepen’ their water and sanitation interventions. The extra support was used to enhance the benefits of water and sanitation systems in existing programme intervention areas of three leading international NGOs: Catholic Relief Services, WaterAid Ethiopia and World Vision.

One way this was accomplished was extending projects to supply water for productive as well as domestic uses. The approach is called Multiple Use water Services (or MUS).

Project implementation in Kalu woreda was undertaken by Water Action with technical support from CRS Ethiopia.

FURTHER INFORMATION

- Two short films on how CRS and Water Action have been piloting a MUS approach in the Ancharo watershed in Kalu
<http://mwawater.org/programs/ethiopia-news/>
- The Multiple Use water Services (MUS) group website includes guidelines and further case studies on the approach www.musgroup.net
- Millennium Water Alliance – Ethiopia Programme on the IRC website
<http://www.ircwash.org/projects/millennium-water-alliance-ethiopia-programme>

About this case study

This case study examines how the MUS approach was applied in Kalu to develop joint domestic water supply and irrigation schemes. It was prepared by Lemessa Mekonta and Marieke Adank from the IRC Ethiopia team. The case study is based on field visits and interviews conducted in July 2014.

IRC is a Millennium Water Alliance member and supports the Millennium Water Alliance Ethiopia Programme in its documentation and knowledge management activities.

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