USAID Lowland WASH Activity and USAID Sustainable WASH Systems Learning Partnership Briefing Note

COSTS AND GAPS IN THE FINANCING OF WATER SERVICES IN THE ETHIOPIAN LOWLANDS

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This note provides a current briefing on financing of rural water services in lowland Ethiopia based on case studies from Mile in Afar and South Ari in SNNPR. These used Life Cycle Costs Analysis (LCCA) tools to identify critical gaps in current financing. The briefing is intended to help policy- and decision-makers at national and regional levels reflect on the growing challenge of financing sustainable services.

Background: investing in the lowlands

The government's flagship Climate Resilient Water, Sanitation and Hygiene (CR-WASH) initiative focuses on lowland investments in 'resilient' technologies such as deep boreholes and more resilient piped water infrastructure. These seek to displace emergency humanitarian interventions in drought-prone regions such as Afar and Somali through sustained development and improved water security. Mile in Afar is an example of a woreda (district) that may benefit substantially from such 'big' investments. Water supplies in Mile rely upon a mix of technologies but groundwater is fairly deep and motorized pumping, largely dependent on diesel power generators, is common.

South Ari in SNNPR is arguably more typical of the Ethiopia highlands than the lowlands. Water supply systems tap relatively shallow aquifers utilizing simpler technologies such as hand dug or shallow drilled wells and hand pumps. These lower cost technologies are typical of many of the investments made to date under the One WASH National Program.

The 'high' and 'low' cost models of rural water supply are currently under the spotlight with a general shift towards more resilient investments and more piped schemes underway. While the two case study woredas will not be typical of many other contexts, they provide a good lens to examine the issue in financing rural water services. In both woredas the services largely depend on voluntary village-based Water, Sanitation and Hygiene Committees (WASHCOs) managing facilities under a community management model.

How are past infrastructure investments performing?

The estimated value of water supply infrastructure, based on current replacement costs, was found to be 4.3 million USD (or 15 USD per capita) in South Ari and 3.5 million USD (or 30 USD per capita) in Mile. These estimates reflect the combined investment in water supply assets over recent years by government and development partners.

However, some of the existing infrastructure is not functional which represents a substantial loss of benefit from previous capital investments. In South Ari, 31% water supply schemes were found to non-functional and a further 16% only partially functional. In Mile 13% schemes were non-functional and 6% partially functional.

Extrapolating from these results it is estimated that approximately 2 and 0.7 million USD in infrastructure capital lies idle or is underutilized in South Ari and Mile respectively. This is a substantial proportion and amount of investment. Rehabilitation, and even more critically, improved operations and maintenance, are required to minimize such underperformance and ensure that capital investments do lead to ongoing services.

Where are the gaps in financing sustained water services?

The current cost of providing rural water services is covered by a combination of government budgets at the woreda and regional level, Non-Governmental Organizations (NGOs) and development partner contributions, and by users through tariffs. The total annual budget in South Ari was estimated at approximately 2.36 million ETB (87,400 USD) in 2006-2008 Ethiopian Financial Year (EFY) (2013/14 - 2015/16). The annual budget in Mile is several times greater, at 14.58 million ETB (539,000 USD per year) in 2009 EFY (2016/17) and dominated by NGOs (64%).

In South Ari, no maintenance funding could be identified in budgets at woreda and zonal levels for 2006-2008 Ethiopian Financial Year (EFY) (2013/14 – 2015/16). In Mile, where data were more limited there was some limited expenditure on ‘medium’ and ‘major’ maintenance and for spare parts purchase in 2008-2009 EFY (2015/16 – 2016/17) even though much maintenance is done from the regional level.

Combined financing (including all government, NGO and other donor contributions) was found to be dominated by capital investment in new water schemes and extensions. Maintenance expenditure proved hard to identify as it often does not come from budgets that are explicitly for maintenance, and data is hard to find and compile. However, it seems clear that financing for maintenance is insufficient to ensure sustainable water services.

Limited financing of maintenance and repairs is indicative of the low priority placed on sustaining services over recent years and the limited capacities of systems to provide maintenance and repairs of all types from preventative to minor and major corrective repairs. Based on this study and other assessments by USAID Lowland WASH Activity in Afar, Somali, and SSNP regions, WASHCOs generally only

operate water facilities and do not maintain them. In regards to the motorized boreholes, the WASHCOs typically only fuel the diesel generators and seldom perform routine maintenance.

Can users pay more and fill the gap?

Tariff collection by WASHCOs and Water User Associations (WUAs) is also revealed to be limited. In South Ari there is no tariff payment at 55% of the schemes and in Mile at between 35-54% schemes. A cash flow analysis indicates that in theory, where tariffs are collected, the rates should be high enough to cover minor maintenance costs. Based on WASHCOs and WUAs that were collecting tariffs, they represented about 10-13% of household income which is high and above recommended levels. While there are opportunities to make improvements, such as supporting WASHCOs/WUAs more in improved tariff setting, collection, and management the analysis casts doubt on the viability of requiring communities to cover all operations and maintenance costs (and perform the maintenance). In practice they generally choose not do this, focusing only on operations and neglecting maintenance.

There is little incentive for communities to raise tariffs and pay more for preventative and corrective maintenance when they can wait for the problem to get worse and let government step in with its support and financing. It is recommended that the policy of not subsiding maintenance explicitly (it happens in practice when government supports) is revisited, along with examination of opportunities to re-orientate incentives in doing maintenance. It is projected that significant improvements could be made in water service delivery with an increased maintenance and repair budgets and more focus on sustaining existing water facilities.

As a step towards further addressing funding gaps in maintenance, data on budgets and expenditure for maintenance needs to be improved. This is currently difficult and costly to identify which contributes to a key problem (lack of maintenance) remaining hidden.

Box 1 Politicians showing commitment in South Ari and South Omo

South Ari has already started to address some of the identified financial gaps in its 2010 EFY (2017/18) budget but the changes are limited. The water department budget is almost 1.7 million ETB or 65,000 USD higher compared to the 2006-2008 EFY expenditure including 30,000 USD allocated for maintenance, while there was no maintenance costs budgeted in 2006-2008 EFY. This happened following the presentation of the draft findings of the asset inventory and discussion on budgets for water with political leaders at woreda and zonal level. This is viewed as a positive development but only a relatively small change. The biggest budget line is still new water schemes and extensions (50% down from 65%). The current utilisation of maintenance budget is in practice only expected to support major rehabilitation, and not to be used for preventative or corrective maintenance.

Investing in support to communities

In both woredas there is a critical gap in funding support by service authorities to service providers. Under the community management model, this includes the support from government institutions that ensures that communities are able to maintain and repair their water schemes. McIntyre and Smits (2015) find from cases in Africa, Latin America, and Asia that between 2 – 3 USD per person per year for direct support can result in reasonable levels of institutional support to keep service delivery at low levels of non-functionality.

Direct support (the costs of supporting service providers directly) in both South Ari and Mile is much lower than this benchmark. It is less than 50,000 USD in each woreda whereas the benchmark would suggest 560,000-840,000 USD be spent in South Ari, and 240,000-350,000 USD per year in Mile according to population levels. These low levels of funding for the institutions supporting service delivery would likely contribute to the low levels of system functionality that is being observed in these two woredas.

Expenditure on direct support (ExpDS) includes pre- and post-construction support activities (e.g., monitoring performance, operation and maintenance support to service providers, handling complaints and building local government's capacity). Expenditure on indirect support (ExpIDS) is macro-level support not tied to a specific program or project. Local categories and terminology may differ, but indirect support might encompass general capacity building, policy making, planning, regulation and contributing to sector working capacity

There are substantial existing capacities in government to support communities further. Mobilizing available government staff needs better operational costs support to include transportation and per diem for the technical staff as well as increased motivation and leadership. A scenario analysis for South Ari indicates how a small increase in the district maintenance budgets (per diems and transport costs) could improve water services. An increase of little more than 10% in the combined budget and investment in maintenance, suggests that sustainability of the water facilities could be strongly improved.

Recommendations

Without further and more substantial shifts to not only address the maintenance backlog through rehabilitation but actually to improve maintenance regimes going forwards, the current capital investment of government and development partners in new water systems and extensions is considered unsustainable. High capital spending may also not be sustained or increased if adequate and appropriately proportional funding is not allocated to preventative maintenance and repairs. Both woredas (and their zones and regions) need to find ways to regularly do more maintenance and repairs, and to finance these costs. The study recommended:

- Advocacy towards local politicians at woreda, zonal and regional levels based on this assessment and follow-up supported by USAID Lowland WASH Activity, USAID SWS Learning Partnership, to seek improved rural water supply budgets and a better balance in funding towards sustained services.
- Advocacy towards national level decision makers focused on 1) ensuring improved data is available on cost components related to water supply, especially explicit budgeting and data collection on maintenance expenditures and 2) review of national policies and their assumption that all

maintenance be financed by communities while there is plenty of evidence that this is not possible beyond minor maintenance. At both the national and regional levels, realistic expectations and roles need to be set regarding the ability of rural WASHCOs and WUA to properly maintain their water facilities and the increased role of both woreda and regional water agencies to perform maintenance support of rural water infrastructure.

- WASHCOs and WUAs to be formed (if not already in existence), and tariff collection systems strengthened.
- Piloting of improvements in the systems for maintenance and wider post-construction support that are led by government to address substantial gaps in capacity and performance.

Acknowledgements

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About the USAID Lowland Water, Sanitation and Hygiene (Lowland WASH) Activity: USAID's flagship WASH activity in the rural lowland areas of Ethiopia delivers technical assistance, develops small-scale infrastructure, and builds the capacity of national and regional governments and stakeholders in the Somali, Afar and Southern Nations, Nationalities and Peoples (SNNP) regions. In support of the Government of Ethiopia's Growth and Transformation Plan and ONE WASH National Program, it aims at (1) increasing access to improved drinking water supply sources on a sustainable basis, (2) increasing adoption of key hygiene behaviors and increased access to improved, sustainable sanitation,(3) improving efficiency and sustainability of food production from irrigated and rain-fed agricultural systems, and (4) improving water governance and data management. For more information, contact Petros Birhane, Chief of Party, at pbirhane@lowash.com.

About the USAID Sustainable WASH Systems Learning Partnership: SWS is working to identify and test locally-driven solutions to the challenge of developing robust local systems capable of sustaining Water Sanitation and Hygiene (WASH) service delivery. Ethiopia is one of four countries involved, with activities carried out in collaboration with the USAID Lowland WASH Activity. For more information, contact the coordinator of Concept One Ethiopia activities, John Butterworth, at butterworth@ircwash.org.

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[1] Veenkant, M., Fonseca, C., Kebede, A., Dimtse, D. and Butterworth, J (2018) Sustaining rural water services in Ethiopia: A Life-Cycle Costs Analysis. USAID Sustainable WASH Systems Learning Partnership Concept One (Ethiopia)/ USAID Lowland WASH Activity report. IRC WASH.