Rethinking rural water supply maintenance in Ethiopia: from fix-on-failure to comprehensive maintenance services


Photo: Petterik Wiggers

There are more than 220,000 rural water supply schemes across Ethiopia, from simple spring developments and dug wells with hand pumps, to piped networks of all sizes. These may be supplied by deeper boreholes and pumps powered by the electric grid, generators, and increasingly solar. Most water supply is from groundwater.

The officially reported non-functionality rate of rural water supply schemes is 15% nationally, but this varies from region to region and district to district, reaching up to 40%. Poor functionality is linked to poor design and low quality construction, lack of spare parts and supply chains and weak operation and maintenance (O&M) practices.

Under the Water Resources Management Policy (1999), which is being revised, the cost of O&M is to be covered by communities through their voluntary rural water supply service providers (the WASHCOs). In practice, there is a huge maintenance debt. WASHCOs invest little in maintenance and on failure, and government and NGOs step in to cover the cost and provision of maintenance.

There is much stronger political pressure to build new infrastructure and increase coverage than there is to maintain services. There is more attention to infrastructure management at national level after the establishment of a new directorate under the Water Development Commission, but actual powers and budgets are in the hands of regions and districts. The Federal Ministry of Water, Irrigation and Energy has limited influence.

Backstop government-led maintenance services from the district, zone and regional level are under-resourced and often inefficient. The system does not incentivise preventative maintenance (which could reduce overall costs). Help to communities is therefore more often provided the bigger a problem gets. Revolving funds in some regions enable spare parts to be accessed more cheaply but supplies are not always available. Government is challenged to scale up its support to maintenance as the number of water schemes has increased dramatically. At the same time, the government system is rigid with many unfilled staff positions and a huge lack of equipment and transport.

Both the legalisation of WASHCOs, which strengthens their position to raise and manage resources and hire services, and the development of local private businesses are acknowledged by government and development partners as necessary to improve maintenance. But the environment for private sector development growth in this context is relatively weak.

There are initiatives to improve rural water supply maintenance, but they remain uncoordinated and limited and scaling potential is questionable. Most are only short-term interventions. Local micro- and small enterprises (MSEs) have been established, trained and supported with an initial capital injection, tools, and motorbike etc. But most of them slide backwards before the business matures.

Key observations around local private businesses include:

- Low demand for maintenance services by communities, and limited trust of businesses
- Competition and resistance to change from local government maintenance technicians (district staff and Kebele (smallest administrative unit of Ethiopia) water extension workers where these exist) and NGOs that provide maintenance services and spare parts
- Very scattered and a low-density of clients and high seasonality of demand for services
- Weaknesses in a model where local government wants to engage college graduates to reduce unemployment rather than those who could run the business (e.g. local community members such as caretakers or entrepreneurs)
- Limited follow-up support from government (after the initial set-up).

The government is reviewing options to improve and sustain rural water supply maintenance services nationwide. This is especially critical in the lowlands where climate-resilient infrastructure is the vision.

We challenged ourselves to envision how that might look and started our thinking with three main points in mind: **1)** there should be a much bigger private sector role in providing professional maintenance to support a smaller and different enabling public sector role; **2)** subsidies will be vital to cover maintenance costs in the long term, with financing from multiple sources including users, even if subsidies are likely to be reduced over time, and **3)** there is a need for some sort of pay-for-performance incentives.

Recognising that this must by government-led but with enough flexibility. We believe that a new form of public enterprise is needed, perhaps a Regional Rural Water Maintenance Enterprise. This has been done before. Public enterprises were set up for water works construction to hasten procurement. A Regional Rural Water Maintenance Enterprise, accountable to a board, would provide access to spares and services to ensure rural schemes are working and perform well.

It would form a public-private partnership with private enterprises, seeking to incubate MSEs. It would give them long-term contracts which are more reliable than work from individual WASHCOs and support. It would be financed through a combination of government funds (mainly regional), development partner investments (grants) and WASHCO fees. Initially these fees could be for services provided, but over time, it would be preferable for all WASHCOs to pay on an insurance-like basis to spread risks over time and schemes. Critically, the enterprise could provide a vehicle for subsidy, which probably needs to be substantial and long-term. Performance would be monitored and verified independently.

Such an initiative could strengthen several existing efforts and build on the existing idea of revolving funds for spare parts and incorporate that function. However, this requires the development of private sector long-term supply chains. This initiative improves current efforts to promote MSEs and helps them develop viable markets. It also could support the existing efforts to develop public rural water supply utilities for piped schemes and potentially provide services to these utilities. It could also build on existing emergency support through mobile maintenance teams by supporting the contracting and longer term financing of those teams.


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For more discussion on maintenance models see **http://bit.ly/CommunitySchemes**

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