Ensuring rural water services that last: Lessons from a 13-country study

Approximately one in three rural water supply systems in developing countries does not function at all or is performing well below its expected level. Failure on this scale represents hundreds of millions of dollars in wasted investment and millions of people who have had to return to fetching dirty drinking water from distant sources - to the detriment of their health, education, and livelihoods.

While the problem of poor sustainability - and the threat it poses to achieving the MDGs - may be well recognised, concrete steps for addressing it are considerably less clear. Triple-S - an IRC initiative funded by the Bill and Melinda Gates Foundation - recently completed a 13-country study to identify factors that contribute to, or constrain, the delivery of sustainable rural water services at scale.

The study - which examined trends in rural water supply in Benin, Burkina Faso, Ethiopia, Ghana, Mozambique, South Africa, Uganda, India, Sri Lanka, Thailand, Colombia, Honduras, and the United States - showed that many countries are moving from a focus on infrastructure to a service delivery approach - one that would support the reliable and continuous delivery of rural water services. However, the study also revealed a number of common weak points.

Considering all the costs

One of the most critical gaps is the lack of life-cycle costing - costing that includes everything from capital investment to minor and major repairs, direct and indirect support costs and the costs of capital for asset replacement. Even in the USA, rural water service providers must tap various and unstructured sources of soft loans and grants from state and federal government to cover major repairs and replacement costs.

In many of the other countries studied, communities must wait for a major breakdown and then apply to local government, the NGO that implemented the original project, or donors for funds. These are often not readily available, leading to long, and sometimes permanent, disruptions in service. Burkina Faso provided one of the few examples of a structured approach to capital maintenance financing. Here 40 small towns and rural villages were able to pool together resources, contract a private operator to handle maintenance, and institute a revolving fund to cover major expenditures.

In addition, the study showed that financing for functions such as post-construction support, back-up for communities, support to local government and learning platforms is seldom accounted for, although these functions have proved to be key to the reliable provision of services. Clear financial frameworks at sector level that clarify the costs of such support and learning appears to be one of the missing links in sustainable rural service delivery.

Coordinating all the players

Harmonisation and coordination between different actors working in the sector was also an issue across the board, and not only in the more aid-dependent countries. Common agreement and adherence to sector policy, norms and guidelines is an essential building block for working at scale. Thailand, South Africa and Uganda were the standouts in terms of scalable approaches. In the case of Uganda, for example, there is a strong national policy framework supported by a SWAp (Sector Wide Approach).

One of the main lessons from the study is that attempting to make changes through isolated projects and programmes does not work. To achieve real change, the entire system needs to be addressed: policy, institutions, legislation and structures need to be clarified and modified as necessary to enable the delivery of a service, rather than simply the construction of infrastructure.

The study has identified ten key factors in improving sustainability of rural water supply services:

1. Professionalisation of community management, including appropriate legal status for water committees, support services and stronger monitoring and oversight functions.
2. Increased recognition and promotion of alternative service provider options including small-scale private operators and self supply.
3. Sustainability indicators and targets for services delivered and performance of service providers.
4. Standardisation of implementation approaches defining common national-level frameworks - or 'rules of the game' - with norms and standards, but with flexibility in implementation.
5. Post-construction support to service providers established and funded to back-up and monitor community management entities, or small private operators.
6. Capacity support to decentralised government (service authorities) covering all key functions in the life-cycle of rural water supply services.
7. Learning and sharing of experience supported at national and decentralised levels.
8. Planning for asset management carried out systematically with financial forecasting and inventory updates.
9. Adequate frameworks for financial planning to cover all life-cycle costs,

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particularly capital maintenance costs and direct and indirect costs of post-construction support.

10. Regulation of rural services and service providers through appropriate mechanisms/regulatory agents at the local level.

Fast facts on sustainability

- Percentage of hand pumps in sub-Saharan Africa that are not functioning: 36%
- Number of water supply systems in Tanzania that fail within two years of installation: 1 in 4
- Amount needed to address water supply and sanitation capital maintenance backlogs in the United States over the next 20 years: US$ 1.3 trillion
- Percentage of the estimated cost of meeting the MDG water and sanitation target that is needed for maintenance and replacement of existing infrastructure: 74%
- Percentage of drinking-water and sanitation funding from eight major donor agencies that goes to maintenance or replacement of existing infrastructure: 13%.

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