

Sustainability of rural water supply in Timor Leste:

How big is the challenge and how are we going to tackle it?

This paper has been prepared as one of discussion paper for WaterAid Australia.

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1. Introduction

Recent surveys in certain districts in Timor Leste have found that only one third of water supply systems function one-year after their construction. The situation demands a new way of working. Past practices have not resulted in sustainable services for communities.

What can be done? This short paper looks at a number of innovations WaterAid and its partners have introduced to begin to tackle the sustainability challenge. The intention on this paper is to generate a debate leading to adoption of new ways of working.

2. The situation in Timor Leste

Functionality: Functionality of drinking water systems in Timor Leste is reported to be between 10 to 70% depending on the data source. Recent baseline surveys of Aileu and Lautem districts found only 30% of water supply systems to be fully functioning one-year after their construction (Hamel, 2009).

The current model for O&M: The government's rural water supply and sanitation policy framework mandates communities to take responsibility for the Operations and Maintenance (O&M) of water supply systems in their community through water and sanitation committees (GMFs). It is estimated that around five hundred (information based on unpublished documentation) user groups have been established in Timor Leste in the last 8 years. These groups are responsible for operating the water supply system, undertaking regular maintenance and occasional repairs, and raising the finance to undertake these tasks. Various studies have indicated that around 10% of user groups are operational (AusAID, 2009). As the recent evaluation of AusAID WASH work states, "without a functioning water user group, community management is highly likely to fail and eventually this will cause the water supply systems to fail" (AusAID, 2009:17).

WaterAid's mission is to overcome poverty by enabling the world's poorest people to gain access to safe water, sanitation and hygiene education.

Implementing agencies in Timor Leste provide between 0 and 24 months of post construction support to communities. At the end of this period communities are left to manage their water supply systems alone. Should a community be able to make a request to DNSAS or local government for support, in almost all cases these organisations lack the human and financial resources to respond.

Current status of WaterAid supported water points: In 2007 and 2008 WaterAid has supported construction of 130 water points in Liquica in 15 communities. A recent census of all water points indicates that 129 are still fully functioning and one has been abandoned as the users have relocated.

3. How WaterAid and partners are addressing the sustainability challenge

3.1 The Community Centred Approach

Communities are no more a recipient, they are the owners of the projects. GMFs have a central role in the long-term sustainability of water supply services. Therefore, it is vital to involve communities in decision making throughout the Community Action Plan (CAP) process, such as planning, implementation and O&M to generate ownership of the water supply systems and build capacity to undertake O&M. There are three distinct phases in WaterAid's projects:

Planning phase: This phase involves a series of discussions with communities. Community consultations are carried out to plan their water system using a participatory rural appraisal (PRA) approach. Community members, including women, children and disabled people, are involved in this process. Communities begin by preparing a map of their village showing houses and natural resources. The communities then begin to plan their water supply system on the map, indicating the location of taps and tanks. By playing a lead role in the planning process, all members of the community are well informed of the project and involved in the decision making process. This generates ownership by the community and a sense of accountability for implementing action plans.

Implementation phase: After the planning phase is complete a group to represent the community is formed. This group is called Groupu Manage Facilidade (GMF). The role of this group is to coordinate between the community and NGO staff during the project implementation process and to manage the O&M of the water supply system in the long term. GMFs comprise five to seven members, a president, a treasurer, a secretary, two maintenance technicians and one to two hygiene promoters. All these people are selected from the community.

- The president provides leadership for the GMF, chairs meetings and ensures the active involvement of the GMF during implementation.
- The secretary runs the administrative function of GMF such as writing minutes, convening meetings and setting up filing systems.

- The treasurer ensures the collection of the maintenance fund from each household on a regular basis and keeps clear financial records.
- Maintenance technicians undertake regular maintenance of the water supply system
- Hygiene promoters impart safe hygiene behaviour to the communities.

WaterAid and its local NGO partners jointly work with GMFs and provide training and mentoring support throughout the implementation phase.

Each GMF group is provided training for two days at the beginning of the project. Training for GMF includes the roles and responsibilities of GMF members, conducting meetings and record keeping for the maintenance fund. During implementation, WaterAid and NGO partner staff help GMFs to prepare an action plan for water, sanitation and hygiene promotion activities. GMFs are provided information on the detailed engineering design and materials and labour requirements.

Two *maintenance technicians* are trained on plumbing works to enable them to carry out regular maintenance works. They are selected at the beginning of project implementation and are involved in pipe laying and joining throughout the project implementation phase. They work with NGO technical staff as technicians and acquire knowledge of fixing pipes and fittings. At the end of the project, they are given a set of tools required for conducting regular O&M of the water system.

Two hygiene volunteers are selected from the community and are trained on a number of safe hygiene practices. The role of these volunteers is to conduct hygiene sessions on regular basis.

Post completion phase

Support to GMFs to enable them to perform Operation and Maintenance should be a long-term process. WaterAid provides follow-up support to GMFs for two years after project is completed. The follow up support includes training and mentoring on regular collection of the maintenance fund, technical training for fixing the breakdowns and technical knowledge for improvement of latrines. International experience shows that type of support is critical to the long-term sustainability of services.

Box – 1 Assessment of the functioning of GMFs

WaterAid commissioned a rapid study of 14 GMF groups from recently completed water and sanitation projects. This study focused on four different aspects of sustainability and the results are reported below.

1. Regular meeting of GMFs

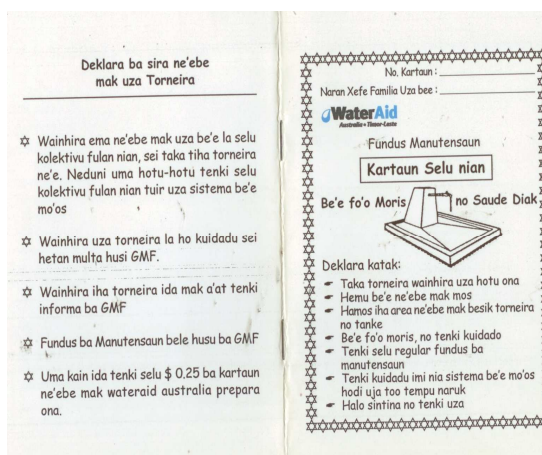
Only three GMFs were found to be holding regular meetings and the remaining 11 GMFs do not hold regular meetings. They cited three reasons for having meetings: to collect the maintenance fund; when there is a breakdown and maintenance is required and when there is a visitor from outside.

The study found that most of the GMF members still do not know the process of holding a meeting (such as setting agendas, taking minutes and recording action points) and this was cited as one of the main reasons for not meeting regularly. It was found that although record books were provided they are not maintained and updated.

These findings highlight the challenges of building the capacity of GMFs and therefore the importance of ongoing support to GMFs and improving the training provided to GMFs.

2. Regular collection of maintenance fund

It was found that all GMF groups are contributing their regular deposits to their maintenance fund. Each household is required to contribute US\$0.25 per month to the fund. Among the five projects that were completed in 2007, the maintenance fund collected ranged from US\$15 to 90. Similarly the fund collection in projects completed in 2008 ranged from US\$ 12- 73. The wide variation in size of funds is due to the different sizes of the communities. The most common use for the fund to date has been to purchase replacement taps which cost US\$5 in the village market.



Most of the GMFs collect money from users once every three months or once every six months, timed to coincide with when the community have some disposable income from selling agriculture products such as coffee and rice. None of the GMFs were found to be collecting money every month.

The GMF groups revealed that the use of tariff cards facilitates the easy collection of fund. The community members feel more comfortable to pay on a regular basis when they can see the record of their payment on the tariff card.

3. Maintenance technician (caretaker) performing role

In all communities there is a caretaker and he resides permanently in the village. Caretakers were found to be performing their duties on a regular basis, for example regulating flow in different tap-stands and managing valves control every morning and evening.

4. Availability of maintenance tools with spare parts with the GMF groups

Every GMF was found to have a complete tool kit in the community. None of the GMF groups were found to have a stock of spare parts for the water supply system.

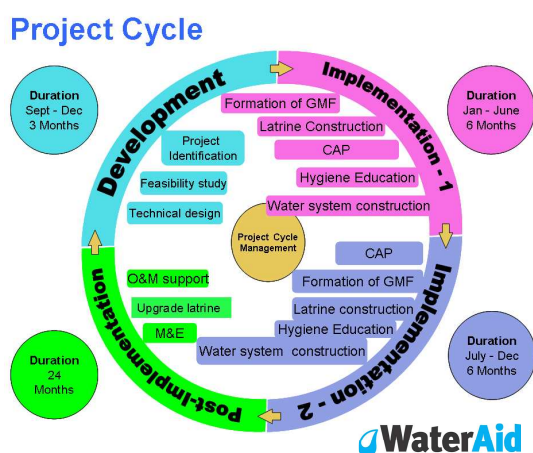
3.2 The Federation of GMFs in Liquica

The box above highlight the critical role of GMFs in the sustainability of rural water supply and the existing gap between responsibilities and practice. As the findings of the rapid assessment have shown, most GMFs are struggling to organise and undertake all their responsibilities. The reality is that most of the GMF members are not literate, most have little exposure outside of their village, and access to information is limited. Furthermore, there are no linkages between the GMFs in Liquica that would allow them to organise, meet one another and discuss issues of mutual interest and share common problems and solutions.

WaterAid is facilitating the formation of a federation of GMF groups in Liquica to address these issues and strengthen GMFs in the district. The Federation is an informal forum of GMF groups in water and sanitation projects supported by WaterAid. The immediate objective of this initiative is to facilitate the GMF Federation to meet and discuss issues of mutual interest on a regular basis. However, the longer term objective is to support the Federation to develop into an organisation that can amplify the voice of GMFs in the region and represent their interests in discussion with government.

Twelve GMF representatives have formed a federation and choosen their executive committee of eleven members. This committee has decided to meet every two months and discuss issues of mutual interest and to act as a representative group of GMFs and establish coordination with district SAS and local government.

3.3 Project Cycle: Follow-up support



Most community groups in Timor Leste have no previous experience of organizing, mobilizing, record keeping and raising funds for the maintenance of their water system. WaterAid embraces a system of providing follow-up support for two years after project completion. It's experience elsewhere has shown that one time training support to GMFs during project implementation is not sufficient for them to undertake their role effectively.

Community development staff visits completed project sites every six months for two years. The objective of the visits is to provide ongoing support to the GMF groups. Follow-up support is provided to ensure the GMF is performing their duties in the areas of:

- holding regular meetings and recording actions
- regular deposit of maintenance fund by each households

- ensuring the maintenance technician (caretaker) continues to perform her/his role and has the skills to do so
- tools and spare parts for maintenance are available in the community and the GMF knows where they can be purchased

3.4 Link up with local government and district level line agencies

WaterAid regularly coordinates with local government and district line agencies during planning, implementation and post-completion phases. This ensures that GoTL are fully informed of all activities and are prepared to perform their responsibilities with regards to O&M. The recruitment of additional staff at sub-district level will enable authorities to more effectively play their critical role in supporting communities in the O&M of their water systems.

3.5 Promoting appropriate technologies

As O&M responsibility for rural water supply is bestowed on to the community, WaterAid promotes simple technologies and small water supply systems that are easy for communities to manage and maintain. Simple technology and small systems are found to be more sustainable than the complex multi-village systems (AusAID, 2009)

3.6 Making spare parts available at the community level

➤. *Plumbing Parts and Materials Available:*

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Water Mur



PE Tee



Cap



Torneira



Socket PE ba GIP



GIP Tee



Plug



Socket GIP ba PE



Elbow



Reducing Socket



Stop Grant



Double Nipple



Socket



PE Socket



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Availability of spare parts is crucial to the long term sustainability of a water supply system. WaterAid is facilitating local entrepreneurs at Suco level to sell the spare parts required for maintaining water supply systems. WaterAid is providing a small loan to the potential entrepreneurs and supports them with marketing by using different publicity mechanisms such as local radio and canvassing in village markets.

3.7 Linking with other income generation activities

One of the key challenges in sustaining an active GMF can be finding a reason to meet and continue the momentum of the group once construction activities have comepleted. Typically in the initial years after a project is completed, the water supply



system functions well and there is less of a need for the GMF. After a number of years of use, maintenance tasks arise and the GMF becomes critical. There is a risk that the GMF will have become inactive by this time.

Linking up communities with other income

generation activities plays an instrumental role in the long term functioning of GMFs. WaterAid is linking up communities with other organizations that are supporting income generation activities. As a result, in most villages where a water and sanitation program is completed, the community forms groups (usually womens group) to start kitchen gardening. It has been found that the income generation program generates enough interest for the communities to meet on regular basis. Regular meetings provide an opportunity for the GMFs to discuss issues related to their water and sanitation issues as well.

The income generation program not only provides an environment for meeting but also provides much needed income for GMFs to contribute to their maintenance fund. Data collected form 13 kitchen garden groups shows that each group has earned USD 200 per season (in four months).

References

Hamel, S. (2009) *Baseline survey of Aileu and Lautem district rural water supply and sanitation coverage*, Plan, Timor Leste.

AusAID (2009) *Australian aid to water supply and sanitation services in East Timor and Indonesia: Evaluation report*

4. Questions to organisations in the WASH sector in Timor Leste

To generate a debate on this topic WaterAid would like to pose the following key questions:

- What is the current status of all the water supply projects your organisation has supported and what are the reasons behind this status?
- What approaches are you undertaking to ensure the long-term sustainability of water supply services?
- What one change would bring about the greatest improvement in the sustainability of rural water supply projects in Timor Leste?



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