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An end to open defecation: process, cost, motivation and sustainability

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An assessment of past RWSS services in Lao PDR

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In 2002, a nationally-led assessment of past installed Rural Water Supply and Sanitation (RWSS) services was carried out to look into the use and sustainability aspects of interventions in 38 villages of 8 provinces in Lao PDR. The study used the Methodology for Participatory Assessments (MPA) for facilitating communities to identify strengths and weaknesses of their water supply and sanitation services. Access to improved RWSS services does not necessarily mean that the systems will be effectively used. The findings from the assessment revealed many important issues. Only about 60 percent of studied villages judged factors of sustainability of their improved water supply services as moderate to high. The study showed that more than 3 out of every 10 households do not take full advantage of the improved water supply and sanitation services. Learning from this study is being integrated into on-going and future implementation of RWSS projects in Lao PDR.

Background

In the Lao People's Democratic Republic (Lao PDR), there are 17 Provinces, 1 Special Region, 1 Capital City, 142 Districts and about 11,000 villages. The current coverage of rural water supply is about 60% and rural sanitation is about 36%. The aim of the Government of Lao PDR (GOL) is to quit once and for all the status of a least developed country by the year 2020. Achieving this goal is synonymous with eradication of mass poverty by ensuring economic growth with equity, while safeguarding the social, cultural, economic and political identity of the country. The goal of the government is to have 90% coverage of water supply and 80% coverage of sanitation by 2020, in line with the National Growth and Poverty Eradication Strategy.

The National Centre for Environmental Health and Water Supply (commonly known as Nam Saat) under the Ministry of Health (MoH) is responsible for providing improved rural water supply and sanitation (RWSS) services. In 1997, a sector strategy for RWSS was developed, which was refined in 2004 based on learning from field application of the strategy. The Strategy stresses use, sustainability and impact of improved services. Therefore, Nam Saat was interested to know what are the conditions of past installed facilities from earlier investment.

With this background, the study was carried out to answer a number of questions, some of which included:

- are improved facilities still in working condition?
- are the poorest of the poor, women and children being properly served by these improved services?
- are villagers using improved water supplies for drinking and cooking?
- why do some systems fall into disrepair quickly and

Box 1: What is MPA?

Methodology for Participatory Assessments (MPA) is a comprehensive method for social assessment;

It recognizes the importance of gender and poverty sensitive approaches;

It monitors key indicators of project or programme sustainability and demand-responsiveness;

It is a learning process for all stakeholders;

It uses participatory tools at all levels;

It allows for a holistic analysis, relating institutional and organizational factors to outcomes at the community level;

It is multi-faceted, and can be applied in different settings and with different technologies, locally as

- others last for a long time?
- are all the efforts cost effective?
- do people really use latrines?
- are people changing their hygiene behaviour after accessing to improved latrines?

What process was followed?

The study used the Methodology for Participatory Assessments (MPA) (please refer to Box 1) for facilitating communities to identify strengths and weaknesses of their water supply and sanitation services.

This assessment was the first attempt in Lao PDR to assess the use and sustainability of RWSS services through a nationally-led participatory process. Led by Nam Saat

and assisted by sector partners, the assessment took place between March 2001 and March 2002. The lessons learned are being developed for integration into on-going and future projects.

The twelve month process included the following activities:

- Consultation Workshop for reaching consensus on methodology and to proceed the assessment.
- Developing, tailoring and translating the assessment tools.
- Training workshop and field testing of the methodology in selected villages.
- Establishing field teams to carry out the assessment.
- Field assessment in 38 villages in 8 provinces.
- National consultation workshop to share findings and lessons learned.
- Integrating learning to on-going and future RWSS Projects.

Where was the assessment conducted?

Criteria were prepared and applied for the selection of provinces and villages to be studied. These criteria were applied to provinces that had the following:

- Past installed RWSS interventions,
- Various technology options for water supply,
- Various levels of remoteness of villages,
- Predominance of ethnic minorities,
- Different geographical distributions, and
- Support received from different donors.

Based on these criteria, 38 villages in eight provinces across the country were selected for this study.

- Northern Region: Luang Namtha and Bokeo Provinces
- Central Region: Sayaboury, Xiang Khouang, Vientiane and Bolikhamxai Provinces
- Southern Region: Attapeu and Champasak Provinces.

What steps were carried out?

The field team comprised district, provincial and central Nam Saat staff, line agencies and representatives from NGOs and External Support Agencies. The assessment was done by community members through a participatory process, facilitated by the field team. In each community, the following steps were carried out:

- Community Social Inventory
- Review of Service Management of User's Committee
- Observation Walk by Villagers and Field Team
- Focus Group Meetings by Class and Gender
- Community Review Assembly

Main Findings from the assessment

The MPA studies conducted in other countries have shown that the sustainability of water supply and sanitation systems depends largely on four factors:

- quality of system;
- effective functioning;
- effective management; and
- effective financing.

Depending upon villagers' responses, each community could gain a maximum score of 100 on each factor. Thus, the maximum score for overall sustainability is 400 (sum of scores for all four factors). Based on these factors, the sustainability of water supply services in 38 communities was revealed in Lao PDR.

Water supply systems

For water supply, more than 60 percent of the villages judged their four factors of sustainability to be acceptable. Twenty communities had moderate to high scores.

Only three communities (8 percent of the sample) judged themselves to have solidly sustainable systems (scores more than 300). In these cases, communities gave high marks in all four factors. Twenty communities (53 percent) considered the four factors of sustainability of their water supply as moderate to good (scores between 200 and 300). The remaining 15 communities (39 percent) had low ratings, suggesting low levels of sustainability.

By breaking down the four factors, the strengths and weaknesses become visible:

1. Most communities (36 out of 38) believed that the quality of their systems was generally good. Only 2 communities classified the technical design was unsatisfactory.
2. Effective functioning (represented by the quality and quantity of water supply) was also acceptable to most communities. Only 21 percent of the communities mentioned that the effective functioning was poor.
3. Scores on effective management were found to be low. About 55 percent of the communities rated this factor of sustainability as unsatisfactory due to various reasons, such as:
 - a. no formal management committees (none had been set up for 28 out of 38 communities);
 - b. where formal committees exist, there were too few members who lacked of clear roles and responsibilities; and most were lacking knowledge on addressing issues related to operation and maintenance.
4. Overall scores for effective financing were also found to be low. Sixty percent of communities judged this factor as unsatisfactory. There were many reasons underlining this poor performance. The most dominant were:
 - a. lack of user's fee system (26 out of 38);
 - b. where the payment systems exist, the amount was

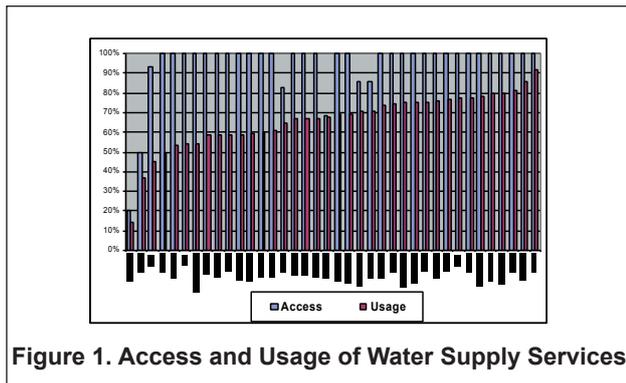


Figure 1. Access and Usage of Water Supply Services

too low to cover operation and maintenance costs; and

- c. lack of remuneration or incentives for the management committees.

Access to improved water supply systems does not necessarily mean that the systems will be effectively used.

The findings from this assessment showed that the effective use rate was substantially lower than the access rate. On average, more than 3 out of every 10 households do not take full advantage of the protected water sources for drinking and food preparation. Overall, average effective use throughout 38 communities was only at 67 percent (refer to Figure 1). Therefore, simply counting the numbers of households having access to protected water supplies may not give a true representation of how these water supplies are being used.

Sanitation and hygiene behaviour

For the assessment of latrines, households were economically stratified through a mapping exercise. In this way, higher-, middle- and lower-income households could be identified. The findings showed:

- Household income is a major factor behind the level of access to latrines. Poor households in each of the 37 villages clearly have less access to latrines than their wealthier neighbours. That leads to two issues: process of selection of technology and transportation costs for construction materials. The latrines observed were mainly pour-flush latrines with concrete ring lining, which makes it difficult for poorer households to afford. The problem of transporting materials for construction of concrete rings is also another factor. Therefore, offering various types of lining and construction options as per local conditions may improve the situation.
- Subsequently, the study tried to compare access and effective use of the constructed latrine facilities. Here the study examined family use by age and gender groups, before and after they built their latrines. The vast majority (83 percent) of households with latrines in the 37 villages claim to be using them regularly. It is also crucial to observe whether latrines are being kept clean. To check

the hygienic environment of latrines, the assessment team examined randomly 8 – 10 latrines in each community. The team assisted the family members to assess their own latrines with a common set of indicators. The assessment found that about one-third of the visited latrines are being effectively used.

- The findings revealed that before installation of latrines, the majority of villagers chose unhealthy disposal of faeces such as bush, riverside, paddy field or home compound. After installation of improved latrines, the frequency of unhealthy disposal of excreta went down by more than 50%. Conversely, the use of sanitary latrines goes up significantly after installation. However, no significant behaviour change has occurred on the disposal of baby's faeces. Regardless of latrine facilities, families seem to think baby faeces are harmless and therefore continue poor disposal habits.
- Overall, the assessment found that behaviour change on the use of latrines depends on:
 - the access to latrines;
 - a person's own willingness to use the facility;
 - personal perception about excreta and its links to disease; and
 - technical aspects such as the availability of water (in case of pour-flush latrine).

Community's perceptions on benefits of RWSS services

In separate women's and men's groups, the participants in 38 villages expressed their perceptions about the benefits of water supply and latrines.

The benefits highlighted for water supply were as follows:

- Convenient (close to home, easy access to water while using latrine, easy access to water for pregnant women),
- Improve health and reduce disease,
- Provide economic benefits,
- Reduce labour and time to collect water .

The benefits highlighted for latrines were as follows:

- Comfort and convenience (protect from rain and sun, save time),
- Improve health and protect from diseases,
- Clean and hygienic,
- Safe and protect from danger (animals and insects),
- Privacy (avoid people to see).

What leads to low or high sustainability? - Two examples

Learning

As a result of the study, Nam Saat and its partners reached the following agreement, with the need to:

Externally decided interventions lead to low sustainability

Nonsaat is a village located about 60 Km from Champasak District of Champasak Province. It has a population of 882 people in 173 households. The village had four boreholes using Tara hand pumps provided by UNICEF. The four boreholes had been working quite well and were providing enough water for drinking and cooking purposes to the whole village. In 1998, Nonsaat was selected by a NGO to provide a rural piped water distribution system that was supplied from a new borehole using an electric pump. The scheme was constructed and supervised by the project staff. The community had very little involvement in the construction of the system, yet they contributed through labour and local materials. Operation (including billing and collection of user fees) and maintenance were taken care of by 2 male villagers (who had been chosen by the project). The system went smoothly for the first year. However, from the second year, a part of the pipeline broke down during the construction of a road. No-one knows who is responsible for getting the system repaired. The villagers have returned to using water from the old Tara hand pumps and a natural swamp.

Community voice and choice lead to high sustainability

Morphu is a village located in Pathumphone District, Champasak Province. It has a population of about 1,000 people in 174 households. In the early 1990s, Morphu received support from an External Support Agency for 17 boreholes with Tara hand pumps. By the late 1990s, the wealth of the village had improved and they proposed to construct a new piped water scheme with household connections. In 2000, the villagers in collaboration with a private company constructed a new piped water system with electrical pump. The private company had set the initial cost for construction for each household at KIP 700,000 (approx. US\$ 80) plus household connection fees. The private company constructed the system, while the community supervised the works. The company covered 30% of the capital costs and planned to reclaim this investment through the user fees. After construction, the scheme was leased to the same private company to manage the system for 5 years. The company has set the user fees and hires villagers who have been trained on billing and repairs. The operation and maintenance costs were the company's responsibility. There has been no complaint on the services provided by the company and there was no default on the payment of bills due to the decision for involving the private company being made by the community themselves.

- develop indicators for measuring sustainability;
- re-stress on management and financial sustainability issues during pre- and post-investment of RWSS services,
- develop management options to be offered with various technology options; and
- scale-up a structured learning process in order to integrate the methodologies in all projects of the Programme.

Box 2 highlights some of the findings from the participatory assessment regarding past RWSS services.

The spin-off effect of this study is helping some non-government organizations to carry out similar exercises. In addition, the learning from the study is being progressively utilized and integrated by Nam Saat into on-going and new RWSS projects, financed by various NGOs and ESAs.

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Box 2: A Snapshot on the Findings

Are improved facilities still in working condition?
 Eight percent of the schemes are fully sustainable while 39% are in moderate condition. The remaining 53% of the schemes have low sustainability – requiring immediate attention.

Are the poorest of the poor, women and children being properly served by these improved services?
 In general improved services covered 90-100% of the whole community. But the average effective use of the improved services was found to be around 67%.

Are villagers using the improved water supplies for drinking as well as cooking and other domestic chores?
 Three out of ten households did not use available protected water all the time for drinking. This is mainly due to availability of other water sources nearer to their residence/ place of work (rice field, agricultural land etc.).

Why do water systems fall into disrepair and other, last for longer?
 The study found that lack of effective management and effective financing are the main reasons for the failure of many improved services.

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