



Development Progress



Unsung progress in rural sanitation:

Building the foundations in Lao PDR

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List of abbreviations

ADB	Asian Development Bank
ADRA	Adventist Development Relief Agency
AIT	Asian Institute of Technology
AusAID	Australian Agency for International Development
CLTS	Community-Led Total Sanitation
Danida	Danish International Development Agency
DFID	UK Department for International Development
DRA	Demand-Responsive Approach
DRC	Democratic Republic of Congo
IEC	Information, Education and Communication
HASWAS	Hygiene Awareness, Sanitation and Water Supply (PIP Component)
INGO	International NGO
IRC	International Water and Sanitation Centre
ISF	Institute for Sustainable Futures
IWC	International Water Centre
JICA	Japan International Cooperation Agency
JMP	Joint Monitoring Programme (WHO/UNICEF)
LAK	Lao Kip
Lao PDR	Lao People's Democratic Republic
LPRP	Lao People's Revolutionary Party
LDC	Least-Developed Country
MDG	Millennium Development Goal
MICS	Multiple Indicator Cluster Survey
MoH	Ministry of Health
MPWT	Ministry of Public Works and Transport
Nam Saat	National Centre for Environmental Health and Water Supply (MoH)
NGO	Non-Governmental Organisation
ODA	Official Development Assistance
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
PIP	Provincial Infrastructure Project Credit Agreement (World Bank)
PHAST	Participatory Hygiene and Sanitation Transformation

PRA	Participatory Rural Appraisal
RWSS	Rural Water Supply and Sanitation
Sida	Swedish International Development Cooperation Agency
SNV	Netherlands Development Agency
UK	United Kingdom
UN	United Nations
UNDP	UN Development Programme
UNICEF	UN Children's Fund
VIP	Ventilated Improved Pit Latrine
WASH	Water, Sanitation and Hygiene
WATSAN	Water and Sanitation
WHO	World Health Organization
WSP	Water and Sanitation Program
WSP-EAP	Water and Sanitation Program for East Asia and the Pacific
WSS	Water Supply and Sanitation

1. Introduction

It is estimated that 2.5 billion people (approximately 38% of the global population) do not have access to basic sanitation. Globally, this contributes to an estimated 2.2 million deaths annually related to poor personal hygiene, lack of sanitation and insufficient water supply (Danida, 2010). Around 90% of these deaths are among children under five (Evans, 2005).

Over the past 20 years, global progress in increasing sanitation access has been slow (lagging behind efforts in water), and it has been difficult to keep pace with population growth. Some reasons for this slow progress include: limited resources for sanitation delivery, with water supply taking the lion's share; the need for significant efforts in education, sensitisation and mobilisation in order to change behaviour over the long term, which takes time and does not always yield linear results; and limited political commitment to sanitation (Danida, 2010; Evans, 2005). Lao People's Democratic Republic (PDR) is no stranger to such challenges, as described below.

This report discusses progress made in the delivery of rural sanitation services in Lao PDR as part of water, sanitation and hygiene (WASH) provision in the country, from the 1990s to the present day. It focuses on *rural* sanitation because: 1) Lao PDR is a predominantly rural society and more than 80% of Lao PDR's poor are rural inhabitants; 2) progress has been made from very low levels in providing access to basic sanitation in rural areas; and 3) rural areas differ from urban areas in terms of sanitation access and programmatic support (SNV/IRC, 2009c). Where relevant, the report also mentions advances in urban sanitation and water supply.

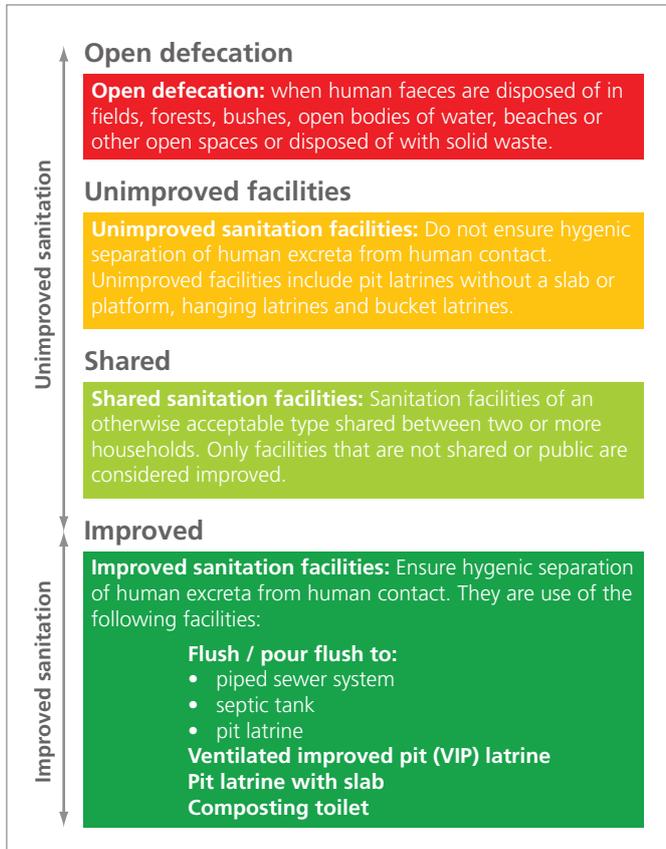
In relation to sanitation, the concept of the 'sanitation ladder' can be useful for thinking about progress (Figure 1). According to the definitions used by the World Health Organization/United Nations Children's Fund (WHO/UNICEF) Joint Monitoring Programme (JMP), this proceeds from:¹ 'open defecation' at the bottom of the ladder; to 'unimproved facilities' (that do not ensure hygienic separation of human excreta from human contact, such as pit latrines without a slab); to 'shared facilities' (between two or more households) and 'improved sanitation' (such as pour-flush latrines, pit latrines with a slab or ventilated improved pits). Moving up the ladder – and staying on a given rung – is challenging, as it often requires more than technological change, that is, cultural change adapted to local conditions. Significant investment in sensitisation and mobilisation is often needed to encourage necessary changes in behaviour, use and maintenance (Danida, 2010; Evans, 2005).

Given that the sanitation challenges in Lao PDR have been and remain significant, the literature tends to focus on existing obstacles to more effective sanitation service delivery in the country (e.g. Giltner et al., 2009; Hutton et al., 2009). This report, however, looks at the sector from a more 'untold' angle. It looks at accomplishments since 1990, unpacking the type of and reasons behind any progress made. Given the lack of rigorous research material on sanitation performance in Lao PDR (see Robinson, 2009),² in some cases it was not possible to substantiate interviewees' informed opinions – and plausible hypotheses – with systematic evidence. Where conclusions here are tentative (meriting further investigation), this is stated.

¹ WHO/UNICEF (2010b), hereinafter referred to as JMP (2010b).

² Colin, interview, 2010; Robinson, correspondence, 2010.

Figure 1: The 'sanitation ladder'



Source: JMP (2010a).

2. Context

Progress in rural sanitation in Lao PDR has been made against a backdrop of significant challenges. Lao PDR is located in Southeast Asia and is a relatively small, landlocked and subsistence-oriented nation. The 2008 population was estimated at 6.2 million, with approximately 70% in rural areas. Administratively, it is divided into 13 provinces, 142 districts and more than 11,000 villages.

Lao PDR has a rugged, mountainous terrain, with more than half the population living in districts classified as 'mostly steep.' The other half of the population lives in districts with few slopes and mostly flat areas; these are the plains along the Mekong and other rivers, with irrigable and fertile soils (Government of Lao PDR, 2008). There is a critical lack of infrastructure (roads, telecoms, water and electricity) in the upland areas, and the country has a thinly spread population in rural areas. This presents a major challenge to the provision of a sustainable and equitable water supply and sanitation. Adding to this, the rainy season lasts four to five months, making many villages inaccessible for long periods. Some villages are up to two days' walk from the nearest road, presenting major technical, social and physical challenges.³ As one government official put it, 'we really struggle to reach the remote communities.'⁴ A recent report estimates that, in spite of progress made, the total number of deaths attributed to poor sanitation and hygiene in Lao PDR exceeds 6,000 per year, of which 3,600 are accounted for by diarrhoea and 2,400 by indirect diseases related to malnutrition (Hutton et al., 2009).

Lao PDR is classified as a least-developed country (LDC) and is one of the poorest countries in East Asia. Poverty is largely a rural phenomenon: 84% of the country's poor are rural inhabitants, and depth and severity of poverty are much higher in rural areas. Almost 2 million rural inhabitants fall below the poverty line, and many of these are unable to meet even their basic food needs (Robinson, 2009). The country is ranked 133rd of 182 on the 2009 Human Development Index, in spite of rising slowly over the past decade (UNDP, 2009). Agriculture is the largest sector of the economy.

Lao PDR is a highly aid-dependent country, with one of the highest per capita levels of aid in the world. Capital investment in Lao PDR is financed almost entirely by foreign sources, predominantly official development assistance (ODA) (Giltner et al., 2010).

The country is one of the most ethnically diverse in the world, with 49 official ethnic groups comprising some 200 ethnic subgroups. The variety of languages that different ethnic groups speak makes including these groups in national development very complex (Robinson, 2009). Lao PDR's involvement in the Indochinese war ended in 1975. Since then, it has been a stable one-party state.

The government has suffered from a chronic lack of financial and human capacity for water supply and sanitation (WSS) provision. In the 1980s, there was very little in Lao PDR by way of sanitation service delivery and supporting policies and institutions. One longstanding sector public servant put it that, 'in the 1980s, there was no support, no service, no strategy – we had nothing.'⁵ In 1990, estimates suggest there was about 8% rural sanitation coverage, with 81% (quite possibly more) of the rural population practising open defecation (Robinson, 2009).⁶ As another expert noted, 'in the 1980s, there were very few latrines, even in the capital Vientiane.'⁷

³ McCaughan, interview, 2010.

⁴ Government of Lao PDR official, interview, 2010.

⁵ Government of Lao PDR official, interview 2010; also Maniphousay et al. (2000).

⁶ As far as the author is aware, no pre-1990 coverage statistics are available.

⁷ Kootatep, interview, 2010.

3. What has been achieved

3.1 Significant increases in access and coverage

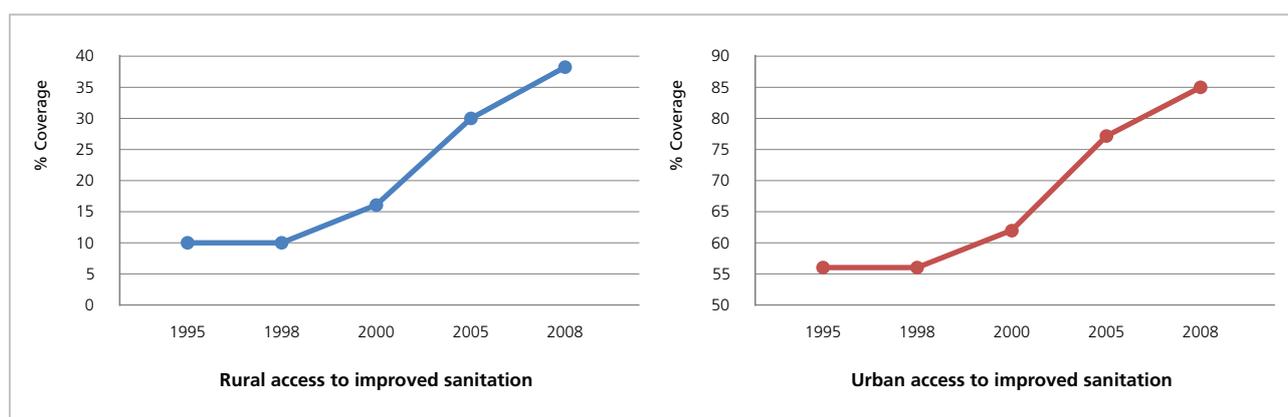
With this baseline in mind, best-available accounts suggest that significant progress in rural and urban sanitation coverage was achieved from 1995 to 2008, in spite of major ongoing challenges. Hutton et al. (2009: 1) note that Lao PDR's sanitation 'coverage gain [...] represents significant progress towards the MDG [Millennium Development Goal] target coverage [on sanitation].' Similarly, Robinson (2009: iii) observes that 'both rural and urban sanitation coverage in Lao PDR have risen rapidly in recent years'. There was common agreement among interviewees for this study that, compared with 1990 levels, there has been a marked expansion in coverage. Although the health benefits of this increased access to sanitation have not been documented, it can be assumed that – where latrines are used and are 'hygienic' – this would have improved human health.

3.1.1 The statistics

According to the most recent JMP estimates, rural coverage increased from 10% in 1995 to 38% in 2008. Urban coverage rose from 56% to 86% in the same period (Figure 2 and Annexes). Total urban and rural access to improved sanitation is thus estimated to have increased from 18% in 1995 to 53% in 2008. Although these statistics are approximations (see Section 3.1.3), they are considered to be the best data available.⁸

Although countries differ significantly in their political, economic, social and geographical characteristics, it is useful to compare Lao PDR's quantitative performance with that of other countries. According to an Overseas Development Institute (ODI) analysis of the JMP 2008 figures on improved access to sanitation (combined rural and urban), Lao PDR was the second highest country globally in terms of absolute yearly progress in access between 1995 and 2006 (second only to Burma). It was first on relative average yearly progress from 1995 to 2006 (Engel, 2010; Annex 4).

Figure 2: Rural and urban sanitation coverage in Lao PDR, 1995-2008



Source: JMP (2010b).

⁸ JMP (2010a); UNICEF (2010). Although the JMP statistics should be treated with some caution, they are generally recognised as the best statistics available on WASH coverage. Estimates are based on nationally representative survey and census data and can usually give a fairly reliable understanding of trends and whether people have access to a latrine/WASH services. However, they do not tell us whether latrines are used or maintained over time, or reveal a disaggregated picture (Evans, interview 2010).

It is also interesting to compare Lao PDR's progress in rural sanitation with that of other countries beginning from a similarly low base. In this regard, the progress Lao PDR made between 2000 and 2008 is striking (Table 1). Four of the five other countries appear to be stuck at levels of rural sanitation coverage below 10%, and Democratic Republic of Congo (DRC) has achieved only a 10% rise in access, as compared with the 22% reported for Lao PDR.⁹

Table 1: Access to improved sanitation rural areas in selected LDCs, 2000-2008

Country	2000 (%)	2008 (%)	Change (+/- %)
Lao PDR	16	38	+ 22
DRC	13	23	+10
Liberia	4	4	0
Madagascar	8	10	+2
Mozambique	4	4	0
Sierra Leone	5	6	+1

Source: JMP (2010a).

JMP estimates suggest, then, that total sanitation coverage in Lao PDR increased to around 53% by 2008. If, beyond 2008, coverage gains continued at recent rates, the MDG to increase improved sanitation coverage to 54% in Lao PDR may already have been reached by mid-2009 (Giltner et al., 2010; Robinson, 2009). However, a focus on this target may risk obscuring issues of equity and sustainability (see Sections 3.3 and 3.4).

3.1.2 Scale

According to JMP estimates, progress in Lao PDR has been 'at scale,' as the following calculations suggest. In terms of rural sanitation, according to JMP (2010a) and UN (UNICEF, 2010) population estimates (Annex 2), it is possible to calculate that, in 1995, 397,300 people had access to improved sanitation (i.e. 10% of the rural population). In 2008, 1,630,200 (38%) had access to improved sanitation. This means that, between 1995 and 2008, 1,232,900 people *gained* access to improved sanitation in rural areas.

In terms of the urban population, in 1995, 468,160 (56%) people had access to improved sanitation; by 2008, this is estimated to have risen to 1,646,900 (86%). This means that, in urban areas, an extra 1,178,740 people *gained* access to improved sanitation from 1995 to 2008.

Combining urban and rural gains, from 1995 to 2008, an estimated 2,411,640 people *gained* access to improved sanitation in Lao PDR. Note, however, that access to improved facilities does not guarantee they will be used, maintained, kept 'hygienic' or accessed equitably (see Section 3.4). Nonetheless, with a population estimate in 2008 of 6.2 million, this number (circa 2.4 million) represents a significant proportion, approximately 39%, of the Lao PDR population.

3.1.3 Caveats on coverage estimates

It is important to note that the very low estimated baseline, plus fast population growth in Lao PDR, means that, even if the original MDG target was achieved, close to half the population – over 3 million people – would lack access to basic sanitation. Open defecation rates in Lao PDR remain among some of the highest in the world (Robinson, 2009). Moreover, data on sanitation coverage in Lao PDR may be missing or unreliable, suggesting the possibility of an overestimation;¹⁰ different definitions of 'rural' and 'urban' in Lao PDR further complicate attempts to analyse progress in these areas accurately (Giltner et al., 2010); and it may be that a (small) percentage of 'improved' sanitation in urban and/or rural areas has been classified incorrectly (Hutton et al., 2009). Nonetheless, a recent Water and Sanitation Program (WSP) report argues that, 'by almost any measure, Lao PDR has made outstanding progress toward MDG sanitation targets' (ibid: 20).

⁹ This comparison is based on the latest JMP figures. Detailed comparative research would be required to understand why the countries have differed in their sanitation progress. This study focuses on Lao PDR's experiences only.

¹⁰ Some observers suggest it is not possible to estimate a 1990 figure accurately (owing to a lack of data) and that 38% (rural access) is potentially elevated e.g. ADB (2005); SNV/IRC, (2009c).

3.2 Progress on policies, institutional setup and methods for service delivery

Lao PDR also made progress in terms of: 1) building the capacity and quality (to a degree) of the institutions responsible for rural water supply and sanitation (RWSS) service delivery; 2) the development and revision of policies and strategies on RWSS; and 3) the elaboration of toolkits and methodologies designed to bring about effective implementation of rural sanitation service delivery. These 'process-based' reforms were arguably both an outcome of and contributor (to a degree) to the progress. Section 4.1 describes these elements in more detail.

3.3 Equity

Equity is a difficult concept to measure,¹¹ and there is very little disaggregated analysis in this regard in terms of WSS in Lao PDR (Robinson, 2009). Nonetheless, the following points can be made.

Rural sanitation service delivery in Lao PDR has a pro-poor element in the sense that sanitation and development initiatives in the past decade have focused on districts classified as the 'poorest' (of which many are rural areas). The government has identified 47 poorest districts and directs development partners to work in these (Giltner et al., 2010).¹² Also, the government has adopted a policy, and toolkits, to encourage government staff to better target and include the poorer and more marginalised groups (such as women) in project design and implementation (see Section 4.1.1). Further, various international non-governmental organisations (INGOs) active in Lao PDR do focus their work on the very poorest groups, even if their work is relatively limited in scale.¹³

There are, however, a number of question marks around equity issues in RWSS in Lao PDR. First, there are rural-urban disparities, in that total sanitation coverage in urban areas (83%) substantially exceeds coverage in rural areas (38%). As one report notes, 'sanitation issues [in Lao PDR] differ significantly between rural and urban areas' (SNV/IRC, 2009c: 1). Indeed, there are reports that certain policies appear biased against the interests of the rural poor, instead favouring urban areas (Bestari et al., 2006).

Second, the Multiple Indicator Cluster Survey (MICS) 2006 (household data survey) reveals much lower sanitation coverage in remote areas: it estimates 38.8% improved sanitation coverage in *rural areas with road access*, but only 15.8% improved sanitation coverage in *rural areas without road access*. There is also much lower sanitation coverage in the southern region: 28% sanitation coverage, compared with 43% in the northern region and 54% in the central region (see Annex 6 for a map of Lao PDR) (Robinson, 2009).¹⁴ Robinson notes that, despite government policy of giving priority to remote rural areas, it appears that practical constraints have (to date at least) limited most interventions to the more accessible rural villages. Criteria for village scheme selection are reported to include accessibility by either road or water, in order to make sure construction materials and staff can reach the village without long delays (ibid). Indeed, poverty levels vary *within* districts, so it is possible to be working in the 'poorest' rural districts but targeting the better-off segments of the population.¹⁵

Third, as Section 4.2 describes in more detail, it is estimated that a significant proportion of the increases in latrine coverage in rural areas was a result of non-poor households investing in latrines.

¹¹ Evans, interview, 2010.

¹² Also, Government of Lao PDR official, interview, 2010.

¹³ Colin, interview, 2010.

¹⁴ Also, Bajwa, interview, 2010.

¹⁵ McCaughan, interview, 2010.

3.4 Sustainability

Aggregate sanitation coverage has been increasing since 1995, implying that sanitation service delivery expansion has been sustained over an extended period of time. However, the current level of resources allocated to rural sanitation is seen as inadequate to maintain and reinforce this expansion (see Section 4.5).

In addition, the government and development partners have increasingly made efforts to promote hygiene and behaviour change in order to ensure the maintenance and hygienic use of sanitation facilities (see Section 4.1.2). However, there are doubts as to the sustainable operation, maintenance and 'hygienic' use of latrines. There is no country-wide analysis of these issues, or any attempt at overall quantification in Lao PDR.¹⁶ Nonetheless, available accounts suggest that some people are not using or maintaining their latrines over time, probably because of inadequate or ineffective implementation of hygiene promotion and behaviour change strategies ('software' elements); and because water supply has not been sufficiently reliable for households to maintain the functioning of pour-flush latrines.¹⁷ Indeed, the complexity of bringing about behavioural change is often responsible for slow progress in mobilising communities to maintain latrines (Danida, 2010). As one report observes: 'functionality and actual use of latrines is not recorded [in Lao PDR], so true coverage rates are likely to be lower than reported' (Giltner et al., 2010: 23).

¹⁶. Baetings, interview, 2010.

¹⁷. Vongkhamsao, interview, 2010.

4. Drivers of progress

This section attempts to identify some of the key factors – or ‘drivers’ – that have contributed to the progress in rural sanitation service delivery in Lao PDR described in Section 3. The section does not intend to confirm any causal hypotheses, but rather to suggest particular insights into mechanisms of change.¹⁸ Indeed, it is not possible to apportion causality to any *one* factor: a combination of different factors seems to have operated, depending on timing and context.

The following key drivers of progress are discussed in turn: 1) policy and institutional change; 2) a mode of delivery driven by household (private) investment and linked to broader socioeconomic change; 3) hardware, technology and infrastructure; 4) external development finance; 5) government financing and the hard work of Nam Saat staff; and 6) increasing government ownership of reforms, which is a slow political process. Some of these factors can be considered both drivers and outcomes of change.

4.1 Progress on policies, institutions and approaches

Compared with the 1980s, Lao PDR has made notable progress on the policy, institutional and methodological framework for sanitation service delivery. As one longstanding sector public servant put it, ‘in the 1980s, there was no support, no service, no strategy – we had nothing.’¹⁹

Experiences in many developing countries suggest that the quality and capacity of domestic institutions can have marked impacts on development trajectories (e.g. Rodrik et al., 2004). This relates to the legal framework and the ability of state institutions to deliver services, and the active engagement of national and local governance institutions in service delivery. The evidence collected for this study suggests that the quality and capacity of Lao PDR’s RWSS institutions have improved, even if there are considerable challenges to overcome (Section 4.1.3). Lao PDR’s institutional development can be seen as both an outcome and, to some degree, a factor contributing to progress in rural coverage.

This section gives an overview of the major developments, outlining in turn: 1) main policy and institutional reforms, including creation of an institution responsible for RWSS, development of a national RWSS strategy and institutionalisation of improved methods for service delivery; 2) progress in policy implementation; and 3) some ongoing challenges in translating policy into practice. Policy reform processes have been rather painstaking, and have been driven primarily by the technical support of key development partners.

4.1.1 Policy and institutional reform

The creation of Nam Saat

The National Centre for Environmental Health and Water Supply (Nam Saat) in the Ministry of Health (MoH) is the lead sector agency responsible for RWSS in Lao PDR. Supported by UNICEF, Nam Saat was created in the mid-1980s. Before that, there was no institution responsible for RWSS. Some key functions of Nam Saat are to:

- Train staff and facilitate their deployment at provincial level;
- Compile a national work plan and budget;
- Communicate with and coordinate development partners; and
- Lead a learning process and coordinate the planning phases of the annual implementation cycle (Andrehn et al., 2004).

¹⁸. Identification of these factors is particularly challenging because there is limited documentation charting the development of rural WASH in the country. However, recent studies by WSP and UNICEF have, to a degree, filled some of the gaps. Key informants also provided their views on contributing factors.

¹⁹. Government of Lao PDR official, interview, 2010; also Maniphousay et al. (2000).

Over the years, the capacity and reach of Nam Saat have progressively been built (as described below), and it has become the principal country agency for support to RWSS implementation (Chantaphone and Lahiri, 2004).

Early sanitation activities – the dominant supply-driven approach

In 1992, Nam Saat began a programmatic approach, with assistance from the Swedish International Development Cooperation Agency (Sida). For the most part, Sida directed funds through UNICEF to Nam Saat for implementation of WSS in rural areas. Additional support to the project came through a regional World Bank programme, the WSP for East Asia and the Pacific (WSP-EAP) (Sida, 2003).

Efforts in the 1990s to increase rural access to water and sanitation registered some progress: '[...] the early 90s have seen a rapid increase in improving the access of poor people to water and sanitation' (Maniphousay et al., 2000: 1). However, this increase was supply-driven and centred on 'hardware,' focusing on implementation and 'numbers' of installations with little or no attention to latrine use or impacts on health and the environment. Further, the focus was on more accessible and wealthier lowland provinces, where increases in coverage could be more rapid. There was also a tendency for the sector to be externally driven rather than Lao-led (ibid).

The strategy for RWSS (1997) – steps towards a more demand-responsive approach

In this context, there was a long process of policy and institutional reform (and implementation) from 1994 up to 2004. In 1994, with support from Sida and WSP-EAP, Nam Saat began work on a comprehensive sector strategy. The process was based on participation at all levels: notably, this was the first time such a participatory process had been tried in the sector (ibid). This was in line with government moves towards decentralisation in the late 1990s, which included the establishment of a rural development framework (Maniphousay et al., 2003).

The output of this process was a sector strategy in 1997 called the Sector Strategy: Rural Water Supply and Environmental Health Sector (Government of Lao PDR, 1997). This paved the way for an increased focus on software aspects and a strengthening of Nam Saat. Nam Saat subsequently disseminated the strategy document in both English and Lao. This is seen as a milestone in Nam Saat's – and the country's – evolving approach to rural WASH (Chantaphone and Lahiri, 2004).

The strategy, and subsequent efforts, had key impacts on rural sanitation service delivery. It committed the government and sector actors to direct their attention to poverty issues. Before it, there has been no defining policy on poverty; the strategy emphasised 'access to services for the poor and ensuring equity, on serving the more remote areas' (Maniphousay et al., 2003: 9).

Moreover, building on the principles in the strategy and drawing on support from external agencies, a number of more demand-responsive elements, accompanied by 'toolkits,' were developed and, to some extent, applied. Nam Saat Central (based in the capital), in consultation with local partners, external support agencies and INGOs, developed inter alia the following activities in a stepwise manner in 1997-2004 (Chantaphone and Lahiri, 2004; Government of Lao PDR, 2001):

1. **Institutional decentralisation.** There were steps towards more decentralised planning, with Nam Saat assuming a predominantly facilitator's role with increased community involvement. This was institutionalised in the '7-steps'²⁰ field methodology, designed to ensure interaction of provincial/district staff with communities to develop village action plans.
2. **A more 'demand-responsive approach' (DRA).** Tools were developed to increase demand responsiveness and community decision making in WSS selection. This had a number of interrelated elements, including: i) *community dialogue*: the implementation of participatory methods (e.g. participatory rural appraisals (PRAs)); ii) *informed choice*: communities were asked what kind of services they would like and were presented with a menu of technological options, with the relative costs and benefits; iii) *subsidies*: these were built into the approach and weighted according to indicators such as poverty or remoteness; and iv) *communication tools*: these were developed to enable Nam Saat staff to communicate with ethnic groups who do not speak the national language.²¹

²⁰. The steps are as follows: 1) primary data collection and evaluation; 2) consultation review about methods of implementation; 3) development of the annual plan from the Project Implementation Plan; 4) implementation of district and provincial capacity-building plan; 5) development of RWSS village action plan; 6) implementation of village RWSS action plan and construction; and, 7) monitoring, evaluation and learning. (Government of Lao PDR, 2001).

²¹. Government of Lao PDR official, interview, 2010.

-
3. **Equity: poverty and gender.** The focus on equity was sought through the strategy's aim to target poorer districts (noted above) and to facilitate the inclusion of poorer individuals in decision making. The strategy incorporated gender-equity issues, with the goal of increasing women's representation in village committees. Nam Saat staff received gender-awareness training (Sida, 2003).
 4. **Hygiene and sustainability.** Efforts were made to increase the emphasis on hygiene promotion and use and maintenance of sanitation facilities. The strategy recognised, for instance, that hygiene promotion is necessary to stimulate demand, and that to focus only on technical issues is ineffective for the sustainability of WSS systems (Maniphousay et al., 2003). Measures included the development of indicators to monitor and evaluate the impact and sustainability of constructed services and of Participatory Hygiene and Sanitation Transformation (PHAST) tools (Lahiri and Chantaphone, 2003).

By 2003, Lao PDR had a set of 'improved' and institutionalised methods for sanitation service delivery, which led, to a degree, to a greater focus on demand, sustainability and strategies for village-level planning.²² As one report notes, such reforms, 'created a good foundation to address the Millennium Development Goals' (Maniphousay et al., 2003: 1). As another source notes, 'prior to [...] the development of the first sector strategy, the approach used by government agencies to the delivery of services was top-down, centrally-controlled, and hardware-driven with the technical solution designed with minimal consultation with the recipient communities' (WSP, n/d: 3).

The revised strategy for RWSS (2004)

Much of the lesson learning from 1997 to 2003 was adopted into a revised National Strategy for Rural Water Supply and Environmental Health Sector in 2004. The revised strategy (still in force) confirmed Nam Saat's role in providing technical assistance and support, especially in remote rural areas with the highest incidence of poverty and disease. It also recognised the need for Nam Saat to create demand through targeted public awareness campaigns, and emphasised proper use of sanitation facilities accompanied by improvements in hygiene-related behaviour. The revised strategy also recognised the need for WASH development processes based around community participation, bottom-up planning, DRA, inclusion of disadvantaged groups and regular follow-up by district and provincial authorities (Government of Lao PDR, 2004; Robinson, 2009). This revision of the first RWSS strategy was a further important step in the institutionalisation of 'improved methods' in Lao PDR.²³ As one informant put it, 'today, evidence of this having impact is that all provinces use this [revised] RWSS strategy, including development partners working in the country.'²⁴

Capacity building

In parallel with these reforms, Nam Saat – supported by UNICEF and WSP, among others – carried out capacity-building activities to promote uptake of the newly introduced tools and methods. Specific activities up to 2004 are listed in project reports (e.g. Andrehn et al., 2004). They included training events; study visits for staff members aimed at improving their capacity in different fields as well as promoting the uptake of improved methods; dissemination of a large number of publications, training manuals, presentations and workshop reports; and the conduct of several studies, for instance on appropriate technology and gender promotion (ibid; Sida, 2004).

Capacity-building efforts have continued. UNICEF and the Netherlands Development Agency (SNV) are providing such support. UNICEF's WASH programme trained 1,679 government officials between 2006 and 2009 (using 26 structured training courses covering 15 different WASH topics) (Robinson, 2009). Although there has not been – to the best of the author's knowledge – systematic documentation of the impact of such activities, available evidence suggests some key benefits:

²². Godfrey, interview, 2010.

²³. Vongkhamsao, interview, 2010.

²⁴. Government of Lao PDR official, interview, 2010; also Giltner et al. (2010: iv).

- The capacity of Nam Saat staff has improved, particularly in terms of their technical knowledge and competence in dealing with WASH problems.²⁵ As one informant put it, capacity building ‘helped progress to an extent as the staff know better how to tackle the problems.’²⁶
- The improved methods and toolkits, developed from 1997 onwards, are now ‘institutionalised’ throughout Nam Saat at different levels.²⁷ Sida (2003) notes that, through the policy reform, dissemination and capacity building, many sector players in Lao PDR have accepted the RWSS sector strategy and improved methods.

4.1.2 Policy implementation

Available evidence suggests that these policy and institutional reforms were indeed implemented. This implementation was notable, although it was somewhat limited, as described in Section 4.1.3. Two issues are discussed briefly here: hygiene awareness and demand responsiveness.

Implementing hygiene promotion

In the past two decades, there has been an increase in efforts to promote hygiene awareness in Lao PDR (Annex 3). At a national level, a hygiene campaign has focused on the ‘three cleanlinesses,’ on radio and on television and in schools since the late 1980s. Also, according to one informant, national hygiene promotion has increased in the past decade, and has become more strategic in its targeting²⁸ (also Lamaningao and Sugiura, 2004). For example, from 1998, a variety of hygiene materials were produced on hygiene and sanitation with NGO support, especially the Adventist Development Relief Agency (ADRA) and the Australian Agency for International Development (AusAID) (Andrehn et al., 2004).

As for hygiene promotion in sanitation service delivery, progress has been made. In the late 1990s, for the first time, Nam Saat collected together all the examples of hygiene promotion materials that were in use in the country and mapped/categorised each according to its appropriateness to certain areas and project sites. Lahiri and Chantaphone (2003) note that Nam Saat Central, since the early 2000s, has played an increasing role in:

- Training of provincial and district staff on hygiene promotion and education methods;
- Overseeing and coordinating the RWSS sector;
- Monitoring sector partners’ hygiene activities at provincial and district levels;
- Reviewing and planning hygiene promotion approaches; and
- Producing manuals and information, education and communication (IEC) materials for field use.

For the first time, Nam Saat had started examining past services on the basis of use and sustainability, linked to its hygiene and sanitation programme. Previously, only the number of facilities in communities had been tracked (Lahiri and Chantaphone, 2003). Other stakeholders cite the building of a village-level network, with the training of extension workers in hygiene promotion and the appointment of hygiene caretakers in village water and sanitation (WATSAN) committees. PHAST has also been undertaken in a number of locations in Lao PDR, and is still being implemented now (Lamaningao and Sugiura, 2004; SNV/IRC, 2009c).

UNICEF has also played a key role in improving hygiene promotion in Lao PDR. For example, through support to the national School Sanitation Programme, UNICEF completed 1,021 school WASH interventions during the period 2000-2009, to serve a total of 216,600 students. Data suggest that 24% of elementary schools in Lao PDR have both functioning water supplies and sanitation facilities. UNICEF reports that it has trained approximately 4,000 schoolteachers to use the ‘blue box’ hygiene promotion kit – and anecdotal evidence suggests that the blue box approach to hygiene promotion is effective (Robinson, 2009).

²⁵ Government of Lao PDR official, Godfrey, interviews, 2010; also Sida (2003).

²⁶ Kootatep, interview, 2010.

²⁷ Bajwa, interview, 2010.

²⁸ Vongkhamsao, interview, 2010.

²⁹ Government of Lao PDR official, interview, 2010.

³⁰ Also, Bajwa, interview, 2010.

Implementing demand responsiveness

There is also some evidence to suggest that more 'demand-responsive' approaches were implemented, even if the extent of this is not known.³¹ For instance, in December 1998, the government and the World Bank signed the Provincial Infrastructure Project (PIP) Credit Agreement to support Oudomxay and Phongsaly provinces in remote northern parts of the country. The PIP was principally a roads and *urban* water supply infrastructure project, but it also supported 125 rural villages in 3 districts of Oudomxay (Beng, Pakbeng and Houn) and 75 villages in 3 districts of Phongsaly (Mai, Boun Tai and Khoua). A component of this – known as HASWAS (Hygiene Awareness, Sanitation and Water Supply) – was designed to test the application of the RWSS sector strategy. HASWAS was based on DRA methods, described above, and aimed at some of the poorest and most remote communities. The project lasted up to 2009 and was relatively small in terms of geographic spread (WSP, n/d).

More broadly, reports suggest that, to some degree, Nam Saat has institutionalised DRA. The 7-steps approach has ostensibly been incorporated as a guiding principle into Nam Saat activities. Another informant noted that the DRA toolkits were rolled out and adopted in the early 2000s, and uptake 'seemed good,' with the toolkits applied in a large number of villages. An evaluation by Sida (2003) highlights the following activities, although it does not specify their extent, either geographically or over time:

- Schemes were developed through a demand-driven approach and village-informed choice of technology, with village committees established to manage them.
- A bottom-up approach and awareness campaigns have improved community engagement in water supply systems and sanitary installations.
- The stepwise approach (the 7-steps) introduced in the strategy has provided communities in target areas with training to sustain RWSS facilities.

4.1.3 Remaining challenges in policy implementation

In spite of policy and institutional progress, there were – and are – some key barriers to overcome.

A still substantial focus on supply and hardware

Despite gradual progress towards a more DRA, it appears that there is still a substantial focus on hardware and coverage targets, with *relatively* limited attention to hygiene promotion and behaviour change. For instance, an evaluation of the Nam Saat programme in 2004 noted that the programme had a 'heavy hardware bias' and that there was 'too little hygiene promotion' (Andrehn et al., 2004: 15). Moreover, although the evaluation does not quantify this issue, it notes that 'in many areas people are told to build latrines as a precondition before the water facilities are constructed. Therefore, latrines are seen as instrumental to getting water, and some latrines have been poorly constructed and maintained. In addition, some people do not use the latrines as intended. Hand-washing also needs more promotion' (ibid).

The revised RWSS (2004) did emphasise a shift in focus towards hygiene promotion and the adoption of a DRA, as detailed above. However, available evidence suggests that this shift was limited, for two principal reasons.

First, as one informant noted, since Sida's withdrawal of major funding around 2004, there has not been a powerful donor financing the sector.³⁴ Since 2004, UNICEF has been the most prominent player in RWSS, but its budget in Lao PDR is extremely small (estimated recently at around \$1 million per year).³⁵ As such, there has been no major source of finance to follow up on the strategy and to ensure the substantial building of human and financial resources in Nam Saat – and to promote the changing of institutional incentives – to enable effective strategy implementation.³⁶ In this sense, progress stalled to an extent.

³¹. To the best of the author's knowledge, there is no evaluation of the extent and impact of DRA implementation in rural WSS in Lao PDR.

³². Government of Lao PDR official, interview, 2010; also Andrehn et al. (2004).

³³. Godfrey, interview, 2010. Quantification of the number of villages was not available.

³⁴. Bajwa, interview, 2010; Colin, interview, 2010.

³⁵. McCaughan, interview, 2010.

³⁶. Baetings, interview, 2010.

Second, government service delivery, up until recently, seems largely to have been wedded to the paradigm of hardware subsidies, and to a construction-led, relatively top-down approach. Indeed, the latest sector reviews urge a considerably greater focus on non-infrastructure – such as behaviour change, latrine usage and hygienic practices – in sector investments.³⁷ One informant had the impression that the focus is still on building as quickly as possible, and on ‘telling people what to do.’³⁸ This is symptomatic of the broader political system in Lao PDR, as Section 4.5 discusses.

Recently, however, there have been signs that the country and sector are becoming more open to other approaches. For instance, for the past two years, various INGOs, with WSP and UNICEF support, have piloted Community-Led Total Sanitation (CLTS). CLTS may be an appropriate approach for remote rural communities in Lao PDR, to trigger community-based change in a context of limited government resources (Lao PDR WASH Technical Working Group, n/d). Although it is too soon to tell, informants’ impressions are that Nam Saat has ‘opened its eyes’ recently, with a willingness to move towards different approaches, beyond subsidies.³⁹ One senior official acknowledged MoH enthusiasm for CLTS but wanted to see results of the pilots before taking it up on a larger scale.⁴⁰

Institutional challenges

Although both the existence and the expansion of Nam Saat represent progress, the institution has faced a number of constraints. Nam Saat is under-resourced, and is dependent almost entirely on external funding for operational activities (see Section 4.4). As one informant put it, ‘financing [for rural WASH in Lao PDR] is a challenge.’⁴¹

Furthermore, Nam Saat has limited influence within government. As Robinson (2009: 42) puts it, Nam Saat has ‘[...] relatively low standing and influence in government circles, with the result that the Nam Saat struggles to obtain the budget and human resource allocations required to tackle rural water and sanitation challenges in a comprehensive and effective manner.’ Even though Nam Saat staff are highly committed, the institution is ‘low down in the pecking order’⁴² or is relatively ‘lightweight in terms of government bureaucracy’⁴³ – especially when compared with the more powerful Ministry of Public Works and Transport (MWPT).

Limitations of the 2004 strategy

There are also challenges related to the content of the revised RWSS strategy (2004), which lacks clear implementation guidelines (one reason why it is being revised from 2009 to 2010).⁴⁴ For instance, it does not provide clear guidance on the types of investment and operations required to provide sanitation services to remote communities, or on the additional capacity that might be required to effectively implement the strategy (Robinson, 2009).

Hygiene awareness

Hygiene promotion appears to have increased in the country. However, the impression of sector experts is that this hygiene campaign has not been conducted on a large scale.⁴⁵ As WSP notes, ‘there are few funds available for hygiene promotion or for staff operations or community outreach, and what little is available covers *all forms* of health and hygiene promotion; very little is dedicated to sanitation’ (Giltner et al., 2010: iv; original emphasis). As one informant noted, on community and village-level hygiene awareness, ‘there is still a lot to do – the country is quite behind on this.’⁴⁶

Furthermore, there is very limited documentation monitoring the increase in and impact of hygiene promotion over the past decade. This makes it difficult to measure the benefits and impact of Lao PDR’s progress on hygiene promotion. For instance, there has been no evaluation of the UNICEF blue box initiative in schools (a toolkit to teach children about hygiene), so the extent to which this activity has translated into improved sanitation and hygiene outcomes remains unknown (Andrehn et al., 2004; Robinson, 2009).

37. E.g. Giltner et al. (2010); Robinson (2009). Figures on financial allocation to the sector also suggest a hardware bias – see Section 4.4.

38. Baetings, interview, 2010.

39. Baetings, interview, 2010; Colin, interview, 2010.

40. Government of Lao PDR official, interview, 2010.

41. Vongkhamsao, interview, 2010.

42. Colin, interview, 2010.

43. McCaughan, interview, 2010.

44. Government of Lao PDR official, interview, 2010.

45. Baetings, interview, 2010; Colin, interview, 2010.

46. Bajwa, interview, 2010.

In spite of these considerable challenges, there has been clear progress. For instance, the development (1997) and revision (2004) of the RWSS strategy has achieved positive impacts in terms of 'improvements to the implementation process for rural WASH interventions [in Lao PDR]' (Robinson, 2009: 52). New sanitation ideas have been progressively institutionalised and the policy and institutional framework has, to a degree, improved.⁴⁷ As one consultant put it, 'these policy reforms were necessary, but to date have not been sufficient.'⁴⁸

4.2 Service delivery through household investment

Alongside policy implementation, another key driver of progress has been household private investment in latrine construction, which was largely unsubsidised. This mode of sanitation delivery contributed to the bulk of latrine construction between 2000 and 2008.

According to available evidence, household latrine construction, subsidised and unsubsidised, played a significant part in the increase in access to basic sanitation. There is, however, no study that quantifies the relative contribution of different actors to investments in Lao PDR's rural (and urban) sanitation sector. There is a need to study rural WASH investment and outputs since 2000, in order to determine the 'proportion of the coverage deriving from government, donor, NGO and private investments' (Robinson, 2009: 60; also Giltner et al., 2010).

Nonetheless, available data tell us the following. In a situation analysis for UNICEF, Robinson (2009) indicates that, between 2000 and 2008, UNICEF's output totalled 25,906 household latrines (UNICEF is the main source of financing for rural latrine construction in the country). He also estimates that the combined efforts of all other stakeholders financed and supported an additional 1,000 latrines per year (i.e. around 8,000 from 2000 to 2008, not inclusive of 2008 output). This makes the combined sector output between 2000 and 2008 nearly 34,000. Nationally representative household surveys suggest the national stock of household latrines increased by 166,000 between 2000 and 2008. This suggests direct sector implementation (i.e. activities conducted by government and development partners) is responsible for approximately 20% of rural latrines constructed in that period (but not necessarily in use). Robinson thus infers that around 80% of recent gains in rural sanitation coverage results from 'self-supply' through private investments by individual households. Robinson says he reached similar conclusions in assessing latrine construction in Cambodia.⁴⁹

Robinson does not, however, include in his estimation the pre-2000 period, during which Sida and other agencies funded latrine construction. Moreover, the estimate of other stakeholders' contributions may not be entirely accurate, as he recognises. Nonetheless, his conclusion appears sound, based on available data.

A recent report commissioned by WSP reaches similar conclusions on spending in 2008/09 in Lao PDR. It underlines the weight of household investments in latrine construction in rural and urban contexts (see Section 4.4 below), finding that approximately 52.2% of expenditure on basic sanitation and hygiene promotion in Lao PDR came from these investments. The same report notes that, 'Household financing of latrine construction is a major factor in increasing coverage. An estimated 18% of household latrine construction in 2008/09 was subsidized, with the vast majority (75%) unsubsidized, medium-cost latrines' (Giltner et al., 2010: iii-iv).

In short, unsubsidised investments by private households have played a not inconsiderable role in increases in latrine coverage in Lao PDR from 2000 to 2008.⁵⁰

In trying to understand the drivers of the country's sanitation progress, one should ask why so many households have decided to invest in their own latrine, in many cases unsupported by financial subsidies. At the time of writing, no study has documented household motivations, so further research is needed. However, it is possible to identify some plausible reasons based on the informed opinions of sector experts, limited documentation and anecdotal evidence. There was probably a combination of motivations, dependent on the specific household and geographical context. A few points can be made.

⁴⁷. Bajwa, interview, 2010.

⁴⁸. Colin, interview, 2010.

⁴⁹. Robinson, correspondence, 2010.

⁵⁰. Bajwa, interview, 2010; Vongkhamsao, interview, 2010. At the time of writing, it is not known what proportion of these household investments involved self-provision/construction (i.e. households constructing the latrines themselves) or provisioning of the service (through payment) to service providers.

Requirements for water supply

One potential reason is that in certain areas – urban and rural – the construction of a latrine was a requirement (or ‘incentive’) laid down by government/donor programmes for access to water supply, which probably motivated much latrine construction (Giltner et al., 2010). In certain areas people were ‘told to build latrines as a precondition before the water facilities are constructed’ (Andrehn et al., 2004: 15).

Indirect benefits of sector efforts?

Another possible reason is that wider sector efforts to promote sanitation and hygiene may have contributed, in some way, to private individuals’ decisions to invest in household latrines (Robinson, 2009). Messages communicated by government and development partners may have influenced some groups. However, as noted above, hygiene promotion has been somewhat limited in Lao PDR, and its scope and impact have not been measured to date. Furthermore, informants suggested that many people have a preference for hygienic latrines, and a clean environment, and there is a cultural preference among some ethnicities for pour-flush toilets, which might explain their motivation for investing in a latrine.⁵¹

Broader socioeconomic development and rising incomes

Informant interviews also suggested that rural household investment trends are probably linked to wider socioeconomic trends, including: rising living standards and incomes; increasing rural-urban linkages; improving road networks; a rise in the availability of sanitation services, particularly in towns; and exposure to sanitation progress made in Thailand (through, for instance, Thai television) and Vietnam.⁵² Lao PDR’s progress in urban sanitation has, most likely, made some contribution to coverage improvement in well-connected rural area.⁵³

A related issue is income levels. As Robinson (2009) notes, it seems likely that the majority of these investments in Lao PDR have been made by non-poor rural households – those that live relatively close to roads and markets and those that can afford to construct private pour-flush latrines. The most remote and poorest communities need support from government, which explains why coverage in rural communities without roads increased much less than that in rural communities with roads (as noted above).

In this way, there are linkages between latrine coverage increases and socioeconomic progress in Lao PDR. Although the country is still classed as an LDC, in the past decade it has experienced consistently high growth rates. From 2003 to 2008, growth averaged 7.5% per annum, and the pace of growth is forecast to step up in both 2010 and 2011, underpinned by expansion in the mining and hydropower industries (ADB, 2010). However, growth in Laos is generally skewed towards the lowlands, urban areas and the elite (Commins et al, 2009).

In rural and agricultural development, the World Bank (2010) notes that policy reform and public investments have contributed to average annual agricultural sector growth of 4.7% over the past decade. Rural poverty is still high, however, although it has been declining steadily since the early 1990s: the proportion of the rural population that is poor fell from 52% to 43% between 1993 and 1998, and to 38% when most recently measured (2003).

When trying to understand, then, why Lao PDR has made considerably more sanitation progress than other LDCs (e.g. Mozambique, Table 1), this can be attributed, in part, to broader socioeconomic progress.⁵⁴

4.3 Hardware, technology and infrastructure

What other factors – along with policy change and private investments described above – have contributed to the rapid increase in access? Physical infrastructure development, with appropriate technologies, can make a positive contribution to progress. In this regard, the provision of subsidised sanitation technology and infrastructure played a role in the Lao PDR context.

⁵¹. Baetings, interview, 2010; McCaughan, interview, 2010; Vongkhamsao, interview, 2010.

⁵². Baetings, interview, 2010; Bajwa, interview, 2010; Colin, interview, 2010; McCaughan, Vongkhamsao, interview, 2010. Also Giltner et al. (2010). Experiences in Cambodia identified the following factors associated with motivation for household investment in latrines: 1) previous exposure to sanitation facilities (e.g. through urban visits); 2) easy access to urban areas (e.g. to obtain sanitation products and services); 3) low availability of defecation sites (e.g. distant forest cover); 4) awareness of good hygiene practice; and 5) above average wealth (e.g. villages with four harvests per year) (WSP study, in Robinson, 2009).

⁵³. Bouaphim, interview, 2010.

⁵⁴. Colin, interview, 2010; Baetings, interview, 2010.

4.3.1 Why such a 'rapid' increase?

Over the past two decades, the sanitation approach in Lao PDR has been, as noted above, primarily a supply-driven, subsidised and hardware-focused approach, with some elements of DRA adopted progressively. According to various sources, the dominant focus has been on 'numbers' and target coverage, which has led to pressures for rapid construction. Andrehn et al. (2004: 14) refer to 'eagerness to speed up construction' which resulted in 'pre-fixed implementation targets.' Hardware provision and subsidies, funded predominantly by Sida and UNICEF, have played a central role in enabling this pace of construction.

Such construction undoubtedly moved people onto and/or up the sanitation ladder. Also, the limited focus on software arguably sped up the coverage expansion. Equally, according to the statistics and to government policy (noted above), the focus was on more accessible rural villages, which enabled faster construction. Nonetheless, some latrines were constructed in more remote rural areas – some by government, others by externally funded rural development programmes and a handful of NGOs.⁵⁵

4.3.2 The choice of sanitation technology

The preference has been for the construction of more hygienic hardware, which has led to the construction of a large number of pour-flush latrines. Although precise numbers are not available, pour-flush latrines are 'overwhelmingly popular' and the 'majority of previous sanitation programs in Lao PDR have promoted pour-flush pit latrines' (Giltner et al., 2010: 48; Robinson, 2009: 61).

Such latrines are generally the preference of Nam Saat staff who, trained in environmental health, believe they are more hygienic and durable.⁵⁶ Such technology is indeed 'further up' the sanitation ladder compared with basic pit latrines. Furthermore, anecdotal evidence and general knowledge suggest that many Lao PDR people prefer pour-flush technologies – which tend to be odour-free: rather than using 'smelly' latrines, they prefer to defecate outside, and they have a preference for 'better' toilets (Andrehn et al., 2004).⁵⁷ The choice of sanitation technology was based on the 'community dialogue' model, described above (Section 4.1).

So, subsidies and hardware support enabled some households to construct these more costly and hygienic latrines. Programmes have also promoted bamboo lining as opposed to concrete lining, to reduce costs (Andrehn et al., 2004). However, such latrines require a reliable water supply, which has not always been available. They are also costly and therefore not accessible by the poorest groups without considerable subsidies (Giltner et al., 2010; Robinson, 2009). Dry latrines were also constructed, but less commonly.

4.3.3 Supply-driven *versus* demand-driven approaches?

There is some debate about the virtues of the dominant programmatic approach to sanitation delivery in Lao PDR. This is part of a wider debate between supply-driven and more demand-driven and 'demand-creation' approaches, such as CLTS. On the one hand, Lao PDR's approach has encouraged rapid latrine construction and contributed to impressive improvements in access (non-subsidised household investments aside). According to one informant, this is positive, in that, 'any approach which gets people interested in sanitation is welcome.'⁵⁸ Moreover, although comprehensive studies of hygiene and latrine use have not been conducted in Lao PDR, a study of 38 villages found positive hygiene impacts of latrine construction: 'after latrine improvements were made, the frequency of unhealthy disposal of excreta decreased by more than half in all categories. Hygienic habits were seen to improve after latrine construction' (Lahiri and Chantaphone, 2003: S111).

On the other hand, rapid construction, with limited software focus, has left question marks as to the long-term operation of latrines, or the willingness of households to use latrines over time. There is a risk that the country's focus on meeting the MDGs and national targets is 'emphasising quick coverage at the expense of longer-term system sustainability' (IWC/ISF, 2008: 40). This suggests that Lao PDR needs to step up its 'software' activities. Sustainability issues have not been evaluated systematically in the country, however.

There is also a case for the promotion of lower-cost approaches in Lao PDR, particularly in the more remote, poorer communities, and given Lao PDR's limited financial resources. Owing to accessibility, technical and social barriers in such areas, more resources and effort will be required. So, lower-cost approaches targeting poor households without

⁵⁵. Colin, interview, 2010.

⁵⁶. Colin, interview, 2010.

⁵⁷. Also Blackett, interview, 2010; Vongkhamsao, interview, 2010.

⁵⁸. Godfrey, interview, 2010.

access will be needed (Giltner et al., 2010; Robinson, 2009). As such, unsubsidised demand-creation approaches, with low-cost technologies (namely, CLTS), are currently being piloted in Lao PDR – the impacts of which remain to be seen.

However, latrine construction (with subsidies) and demand-creation approaches (without subsidies) are not necessarily mutually exclusive. Latrine construction may be an important step towards progress. For instance, in Malaysia, millions of latrines were constructed, followed by big campaigns to make latrines hygienic and to ensure that people use them. As one informant put it, ‘if you have managed to give people toilets, the next step is to get people to love their toilets.’⁵⁹ However, Malaysia had considerably more resources at its disposal than Lao PDR. As such, both approaches may be needed, but much depends on context and sequencing.

CLTS also requires significant resources, at least at the outset, to train facilitators to ‘trigger’ household/community action. Further, with CLTS there is a risk you can get ‘stuck on the first rung’ of the ladder – with a basic latrine – and therefore may need subsidies or external support at a later date to move up the ladder.⁶⁰ Equally, CLTS will need to be adapted to the Lao PDR context. It may be difficult to implement in the Lao PDR context, for reasons that include: cultural preferences for pour-flush latrines; people being accustomed to receiving subsidies; limited capacity of government staff to become CLTS facilitators; and other issues, such as the nature of supply chains and the need for effective behaviour change communication.⁶¹ Also, demand-driven approaches may prove challenging to institutionalise, given Lao PDR’s political system (Section 4.5). More broadly, CLTS – like many community-based management approaches – tends to transfer much of the burden of service provision to the community, away from the state. The key issue, then, is what steps to take in Lao PDR to change behaviour where people already have access to latrines, and how to increase equitable and sustainable access in remote and poorer areas, where most assistance is needed.

4.4 Development finance

The provision of development finance – from the government and external sources and, in cases, combined with households’ own resources – has contributed to progress made in rural sanitation coverage. It is not possible to identify precise figures on sanitation funding in Lao PDR, given that ‘very little information is available on how much money is being spent on sanitation and hygiene, by which entities, for what purpose, or in what locations’ (Giltner et al., 2010: 12). Nonetheless, some major sources and orders of magnitude can be identified.

4.4.1 External development aid

Box 1: Major sources of external financing for RWSS in Lao PDR since 1990⁶²

- **Sida’s** National Water Supply and Environmental Health Programme in Laos, which ran from 1992 up to 2004, with a short extension. This represented the largest source of RWSS funding, channelled primarily through Nam Saat and UNICEF.
- **UNICEF’s** Water and Environment Sanitation initiatives from the late 1980s up to the present. UNICEF is reported as the largest implementer of RWSS activities, even after withdrawal of Sida funds.
- A collection of other bilateral and multilateral donors with programmes in rural development with small rural sanitation components, such as the **World Bank’s** HASWAS and the **UN** Capital Development Fund.
- A collection of INGOs (e.g. **World Vision, Lao Red Cross, Concern**).
- Other international agencies and donors active in the sector (e.g. **SNV, WSP-EAP, AusAID** and the Japan International Cooperation Agency (**JICA**)).
- For urban development, including urban water supply and sanitation, Asian Development Bank (**ADB**) has been the major source of funding.⁶³

⁵⁹ Evans, interview, 2010.

⁶⁰ Cummings, interview, 2010; Evans, interview, 2010; Godfrey, interview, 2010.

⁶¹ E.g. Baetings, interview, 2010; McCaughan, interview, 2010.

⁶² Information in this box is indicative. This is not intended to be an exhaustive list of actors involved with and external funding for RWSS in Lao PDR. For more comprehensive overviews, see SNV/ICR (2009b; 2009c).

⁶³ Bouaphim, interview, 2010.

Without such external financing, Nam Saat would have been able to implement hardly any activities: ‘Government’s ability to implement plans and achieve sanitation coverage targets depends almost entirely on development partner financing via projects and programmes. In this sense, financing for sanitation and hygiene in Lao PDR is almost entirely “projectized”’ (Giltner et al., 2010: iv). Government expenditure on sanitation operations and hardware (i.e. capital investment) has been very low or non-existent.⁶⁴ External support was most significant up to 2004, until Sida ceased funding RWSS, as noted below. In short, external support enabled Nam Saat to *implement* the operations that contributed to the country’s progress in rural sanitation.

4.4.2 Government finance

Government financing, however limited, in the form of staff time, salaries and administrative expenses, contributed to latrine construction and awareness raising. The increase in water and sanitation coverage from 1998 to 2002 can be attributed mainly to the efforts of Nam Saat staff, according to Sida (2003). Similarly, another informant noted that it is Nam Saat staff who are doing ‘all the hard work on the ground.’⁶⁵ Estimates of government financing for sanitation activities over the years are not available, although estimates for financial year 2008/09 have been developed (see Section 4.4.4 below).

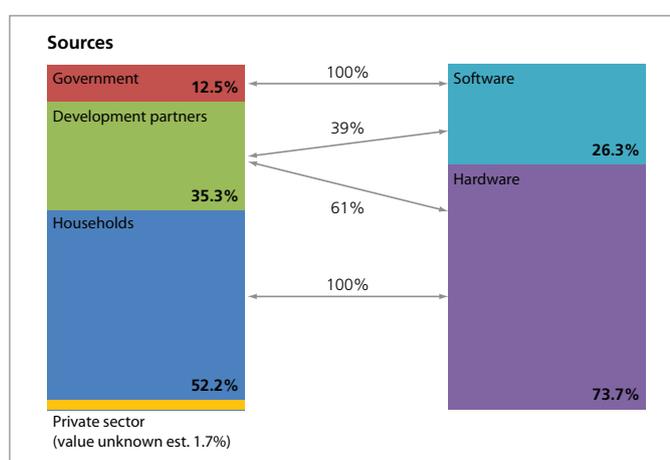
4.4.3 Household finance

As Section 4.2 outlined, household investment played a significant role in latrine construction. A WSP study notes that households are financing latrine construction in Lao PDR with and independent of subsidies. In cases where subsidies are available to ‘poor’ households, the household contributes labour and usually a simple latrine superstructure, frequently using low-cost local materials. According to estimates, however, a substantial percentage of latrine construction is being undertaken independent of subsidies (Giltner et al., 2010).

4.4.4 Sanitation financing 2008/09

In order to give an indication of financing in Lao PDR, a recent study for WSP has, for the first time, developed estimates for 2008/09 (Figure 3). Expenditure on basic sanitation and hygiene promotion in Lao PDR was in the order of LAK 49,714 million (around \$5.9 million) in 2008/09, with approximately 12.5% coming from government (largely in the form of staff time/salaries and administrative expenses), 35.3% from development partners and 52.2% from household financing of latrine construction.⁶⁶ This illustrates the substantial contribution from households and development partners. About 73.7% of the financing is for hardware (which includes household labour for latrine construction – including the cabin or ‘superstructure’) and about 26.3% is for software, which covers anything that is not hardware: hygiene promotion and education, project operations, administration and ‘capacity building.’ To the best of the author’s knowledge, there are no available statistics showing trends in budgetary allocation to sanitation over the years.

Figure 3: Estimate of financing for sanitation (urban and rural) in Lao PDR, 2008/09



Source: Giltner et al. (2010).

⁶⁴. Bajwa, interview, 2010. Also, Robinson (2009).

⁶⁵. Vongkhamsao, interview, 2010.

⁶⁶. Estimated government contribution may be generous, because it includes a percentage of teacher’s salaries for hygiene promotion.

4.4.5 Lessons learnt on sanitation financing in Lao PDR

Stakeholder interviews and document analysis suggest two major lessons regarding sanitation financing in Lao PDR. First, external financing has declined considerably since 2004, when Sida withdrew from the country. From 1992 until 2004, Sida represented the major source of finance for the RWSS sector.⁶⁷ Since the mid-2000s, the sector has lacked a strategic donor with adequate financing.⁶⁸ UNICEF, the largest implementer, has a budget of only around \$1 million per year for Lao PDR. This drop in financing has slowed progress (see also Section 4.1.3). A country that is so aid-dependent requires stable and long-term sources of financing; funding should, ideally, exit only when sustainability is assured. As such, there is a need to attract further external financing for RWSS in Lao PDR (Hutton et al., 2009; Robinson, 2009).

Second, apart from Sida and UNICEF, the bulk of external finance has focused on urban areas, or rural development, rural livelihoods or rural water supply, with sanitation relatively ignored or secondary.⁶⁹ So, for the past five years, there has been no big or 'visible' rural sanitation and hygiene programme or initiative in Lao PDR.⁷⁰ There is a need to galvanise efforts on *sanitation* provision to maintain and build on the progress that has been made. Indeed, the dynamics of sanitation and hygiene are in many respects different from those of water supply (Newborne, 2004). Sanitation and hygiene implementation require a different process to community water supply development: water supply development focuses on community management of a common system by collective bodies; sanitation and hygiene improvement needs to focus on a smaller unit and a different issue, that is, individual households and their highly variable hygiene behaviour (Robinson, 2009).⁷¹

4.5 Government 'ownership' of sanitation – steps in the right direction?

As previous sections noted, progress on rural sanitation provision has been notable, albeit with mixed impacts in terms of geographical outreach (equity) and sustainability. This section discusses the extent to which the government has 'owned' such progress. While 'ownership' is a difficult concept to measure, it seems that progress has been made in this regard, as Section 4.5.2 notes. However, the extent to which sanitation issues have become nationally owned and have become a political priority is questionable.

4.5.1 Limited ownership

First, there has been a lack of strong government leadership on sanitation issues. Informants noted that the government has been a relatively 'passive player' – open to new sanitation ideas and investment but not yet showing active leadership in the sector.⁷² As one report notes, 'the sanitation sector [...] can be characterised at the moment as being one in which there is a need for a considerable development of strategic vision and leadership' (SNV/IRC, 2009a: 26).

Second, structurally, as noted above, Nam Saat is not a powerful actor within the government machinery. It struggles to make its voice heard within the MoH and the government. As such, there is a challenge in getting RWSS recognised and 'bought into' at a higher, national level.⁷³

Third, the view of key informants is that RWSS is not a political priority in Lao PDR. As one WSP report notes: 'the sanitation sub-sector has limited visibility in Lao PDR. Sanitation is not high on the political agenda, either at national or local level [...] That sanitation is low on the list of political priorities is also reflected in the low level of government investment in this sub-sector. Most provision is via household investment or donor projects' (Hutton et al., 2009: 12-13).

It is important to recognise, nonetheless, that public budgetary allocation to sanitation remains low in many other developing countries. Also, Lao PDR has a very low level of resources available for social sector investments and needs to prioritise its investments. For instance, there is a lack of public health facilities and medical officers in Lao PDR, and providing these is seen as more of a priority than sanitation.⁷⁴ Indeed, based on its spending choices, the government has other political priorities, such as construction of roads and public buildings, funding of economic development

⁶⁷ E.g. with Sida funding, about 1,117 water schemes and 27,130 household latrines were constructed; in addition, 474 water supplies for schools and 463 school latrines were built during 2000-2004 (Andrehn et al., 2004).

⁶⁸ Bajwa, interview, 2010.

⁶⁹ Government of Lao PDR official, interview, 2010; Vongkhamsao, interview, 2010.

⁷⁰ Baetings, interview, 2010; Colin, interview, 2010.

⁷¹ As a result, sanitation and hygiene improvement require a different implementation process, and a different set of community institutions: the process needs to identify the various groups within a community (by wealth, by vulnerability, by need) and establish their different sanitation needs, preferences and priorities.

⁷² Blackett, interview, 2010; Baeting, interview, 2010.

⁷³ Baeting, interview, 2010.

⁷⁴ Kootatep, interview, 2010.

and seeking ways to maintain national cohesion.⁷⁵ Other observers suggest that the government priority is to maintain power through patronage (see Section 4.5.2). Maintaining such power does not necessarily require the provision of sanitation services, at least not to groups that do not constitute the government's power base.

4.5.2 Steps towards ownership?

It is also important to recognise steps taken to date towards government ownership of sanitation issues. The sector is in its early stages of development (SNV/IRC, 2009c). According to some interviewees, the government has been 'open' to sanitation investment and ideas that development partners have supplied, and has adopted some ideas quite quickly.⁷⁶ This is matched by a degree of 'goodwill' within government towards rural WASH. Meanwhile, the MoH is by no means 'anti' rural WASH, but has not yet elevated it to priority status.⁷⁷ According to one government official, the political elite is interested in WASH services and discusses these issues when the National Assembly meets⁷⁸ (evidence to corroborate this statement was not available).

Furthermore, in March 2008 the government established a National Steering Committee for Sanitation to oversee International Year of Sanitation activities, which marked a step forward. However, by 2009, this had not led to increased investment or commitments (Hutton et al., 2009).

Notably, much WASH provision has been planned and implemented through Nam Saat. This has arguably led to a higher degree of ownership than if the responsible institution had been bypassed. As noted above, informants report that Nam Saat has enthusiastic staff who are committed to improving sanitation service delivery.⁷⁹ Key staff members – for instance Dr. Chantaphone (who heads Nam Saat) and Dr. Fengthong (high-ranking official in the MoH) – have been involved in reform processes for many years. One informant noted that Nam Saat staff had recently managed to convince higher-level MoH staff to visit latrines in field sites, which was a major achievement.⁸⁰ This suggests that the government *may* be ready to drive further progress.

4.5.3 Wider governance issues, politics and sanitation

It is also important to reflect on Lao PDR's sanitation progress within the context of its wider political and institutional system. This political system – in which the sector is embedded – can help explain both the nature of the progress and its pace.

As Section 4.1.3 noted, progress towards a more balanced focus on hardware and software has been relatively slow. Demand-driven approaches depend at least in part on political processes of decentralisation, and the integration of principles of citizen participation and responsiveness into government institutions (e.g. Andrehn et al., 2004).

This type of DRA reform was (and is) challenging in the context of the political system. In brief, Lao PDR is a post-conflict, post-communist and one-party state. The ruling party – the Lao People's Revolutionary Party (LPRP) – holds the primary instruments of power, controlling the National Assembly, government and mass organisations (Commins et al., 2009; Stuart-Fox, 2006). There have been minimal democratic reforms, and limits are placed on political association and dissent (Stuart-Fox, 2006). Civil society organisation has historically been extremely limited. The country also has a bureaucratic, politicised and generally underperforming civil service; a weak judicial system and poor legislative oversight; and limited transparency and accountability mechanisms (ibid). There is also nepotism and patronage within political and bureaucratic systems (Bestari et al., 2006; Stuart-Fox, 2005). Given the limits on transparency, 'observers [...] find it difficult to understand the decision-making processes and structures [in Lao PDR]' (Bestari et al., 2006).

In terms of reform processes, Lao PDR's public institutions are generally characterised by a degree of inertia, with bureaucratic systems that are resistant to change (Stuart-Fox, 2006). Various studies also argue that the major political priority of the LPRP is to maintain its power. This has historically been exercised through various means, principal among which has been the construction of patronage networks. These depend to an extent on personal and family relationships, mainly with the dominant lowland elite in proximity to the capital, including powerful actors from the historically dominant Lao ethnic group. Since the 1970s, a ruling elite has emerged, combining the

⁷⁵ Bajwa, interview, 2010; Vongkhamsao, interview, 2010.

⁷⁶ Bajwa, interview, 2010

⁷⁷ Colin, interview, 2010.

⁷⁸ Government of Lao PDR official, interview, 2010.

⁷⁹ Godfrey, interview, 2010.

⁸⁰ Vongkhamsao, interview, 2010.

Party hierarchy with remnants of the former ruling elite, with wealth and power patronage (Commins et al., 2009; Stuart-Fox, 2006).⁸¹ As such, reform processes have been slow – reforms introduced by multilateral lending institutions have had limited effects where they have threatened the means available for exercising patronage and power (ibid). However, reforms and economic development policies that are in line with political priorities have been supported. According to Stuart-Fox (2006: 72), there are middle-level technocrats who appreciate the need for reform but, in some cases, ‘fear of retribution prevents them from speaking out.’ Reform in the country has, as such, been referred to as ‘glacial’ (Commins et al., 2009: 19; Stuart-Fox, 2006: 71).

Given this context, it is perhaps unsurprising that sanitation service delivery has tended to be relatively top-down, centrally driven and limited in its responsiveness to bottom-up processes, and that reform of thinking and processes has been relatively slow. As one informant suggested, the state typically dictates what people do; as it is a rather ‘top-down’ system, it is hard for the state and Nam Saat to let people decide.⁸² Indeed, Andrehn et al. (2004: 12) note that, in the late 1990s and early 2000s, Nam Saat staff were ‘not yet ready for the change to a more consumer-oriented and demand-driven approach.’ As one informant put it, given that Lao PDR is a post-communist state, the move to introduce DRA was ‘quite a big step.’⁸³ Moreover, research suggests that participatory techniques have been slow to take root in rural society in Lao PDR because ‘rural people in Laos are simply not used to participatory approaches, being more used to being told what to do by figures in authority’ (SNV/IRC, 2009c: 12). As such, processes from the 1990s marked the beginning of a very slow paradigm shift from a uniquely supply-driven approach to a *more* demand-driven approach.

Decentralisation has also progressed in Lao PDR, but this has been a slow, stepwise process, with some struggles between the centre, districts and provinces (Sida, 2004).⁸⁴ Indeed, as experienced in many countries, decentralisation of authority and decision making takes time because it requires changes in deeply rooted political culture, attitudes, norms and values (e.g. Crawford, 2009; Grindle, 2007). Decentralisation is also no panacea for instituting more demand-responsive and democratic systems, namely, in water and sanitation service delivery, as experiences elsewhere suggest (O’Meally et al., 2010).

In short, progress in institutional change and sanitation approaches has been relatively slow in Lao PDR, but this can be explained in part by the nature of the state and its political structures. Changes to political and institutional paradigms, cultures and incentives – all of which are linked to state-led service delivery – take time (DFID, 2009; Hickey, 2006). Some change has nonetheless occurred in Lao PDR. The stepwise changes in relation to RWSS, when set against the backdrop of a rather unresponsive state, are noteworthy. Sanitation progress in Lao PDR should, as such, be understood in the context of wider political processes.

⁸¹. Some interviewees supported this assessment (anonymous).

⁸². Anonymous, interview, 2010.

⁸³. Anonymous, interview, 2010.

⁸⁴. Also, Vongkhamsao, interview, 2010.

5. Conclusions

Lao PDR has achieved considerable increases in sanitation coverage in rural areas. The country has also made progress in terms of developing policies, institutions and methodologies to more effectively deliver rural WASH services.

In terms of equity, progress has been less clear: it appears that more affluent and non-poor rural populations and rural villages with access to roads have made most of the gains. As for sustainability, coverage has increased progressively over the past two decades, although serious questions are raised as to whether resource allocation to the sector is sufficient to maintain and reinforce this trend. Equally, in spite of progress in promoting demand responsiveness and behavioural change, there are doubts about the sustainability of sanitation provision with regard to the operation, maintenance and hygienic use of latrines over time. Overall, however, the prospects for further progress are good, despite the slow pace. As one interviewee put it, it 'is all to be played for now [...] and there is a sense that things are going in the right direction.'⁸⁵

The main drivers of progress include: 1) internal policy and institutional change and capacity building; 2) a mode of service delivery driven by household private investment, mostly unsubsidised; 3) sanitation hardware, technology and infrastructure provision with a focus on rapid coverage increase; 4) external development finance for capacity building and Nam Saat operations; 5) government financing of staff salaries and administration as well as Nam Saat commitment and hard work; and 6) the government's (passive) acceptance of reform and the (slow) process of increasing government ownership of rural sanitation issues.

5.1 Key lessons

- **Development finance and technical support** are needed over the long term. Especially in a country like Lao PDR, with very limited financial resources and a low base in service delivery, donor finance needs to be consistent, predictable and adequately sustained. Building effective service delivery policies and institutions, especially 'from scratch,' takes time. In Lao PDR, progress stalled to a degree, owing in part to a reduction in external financial support after Sida's withdrawal in the mid-2000s.
- Measures should be taken to **reduce aid dependency**. Aid to sanitation has arguably created disincentives for the Lao PDR government to allocate domestic resources to the sector. On the other hand, at least in the short term, Lao PDR lacks resources from the national budget for significant capital investment in the sector, so requires external support. As such, mechanisms should be put in place to ensure donors are held accountable for their sector impacts, and efforts should be made to build autonomous national capacity to deliver sanitation services.
- There is **no one 'blueprint' for progress** in sanitation delivery. Progress means different things to different people, as interviewees highlighted. Getting large numbers of people on the sanitation ladder can be seen as good progress. However, the question now is whether the Lao PDR government can ensure that households and communities hygienically use and maintain their latrines and can provide low-cost access to the poor and poorest currently without access. Debates will continue about the extent to which subsidies are appropriate for getting people on, and moving them up, the ladder (and in what sequence). In a low-resource environment, CLTS seems appropriate. However, CLTS needs to be adapted to the country context, and achieving CLTS at scale will require substantial investment. Sanitation services can be delivered in different ways – e.g. household investment, direct programmatic efforts, etc. Due attention should be given to leveraging the most appropriate mode of delivery in a given context and selecting the most appropriate type of technology.

⁸⁵ Colin, interview, 2010. Other interviewees generally concurred: Bajwa, interview, 2010; Baetings, interview, 2010; Government of Lao PDR official, interview, 2010.

- **Changes in behaviour and culture** are needed, even if this is challenging. Relatively limited promotion of sanitation and hygiene education, sensitisation and social mobilisation in Lao PDR have slowed progress towards the provision of more *sustainable* sanitation systems. Changing behaviour and cultural practices is complex, and often requires considerable time, resources and targeting.
- **Progress outside of the sector can contribute to sector progress.** Wider socioeconomic progress and levels of inequality may have a significant impact on people's opportunities to gain access to basic sanitation. In Lao PDR, the increase in household investments in latrines has been connected in part to rising incomes among some groups, which in turn is linked to wider socioeconomic progress.
- **Coverage targets**, such as the MDGs, **can provide incentives for latrine construction at the expense of system sustainability.** In Lao PDR, incentives to meet targets were cited as possible reasons for rapid latrine construction. This may be positive, but risks drawing attention away from sustainability and equity outcomes. Similarly, quantitative and aggregate measures do not reveal the more complex reality of progress. MDG WASH targets post-2015 may need to be reviewed to include outcome indicators, such as 'latrine use.'
- **National bureaucrats and technocrats can be key allies** in driving reform. Where there is limited high-level political support, civil servants may be allies in efforts to bring about sanitation reforms. The commitment of Nam Saat staff has contributed to progress within the country. Indeed, other studies note the role of mid-level government bureaucrats in promoting reform processes (e.g. Gaventa, 2008). In some contexts, it may be slower for donors to deliver services through government systems, but this may help in building reform-minded alliances within government.
- Sanitation service delivery is embedded in **wider political processes.** Allocation of resources to sanitation and transition to a system that is more responsive to citizen demands are inevitably political processes. By taking into account the broader political and institutional structures in Lao PDR, one can better understand why WASH reform processes have been relatively slow and challenging to adopt. One can also appreciate that Lao PDR's progress towards more demand-responsive service delivery – in the context of its 'top-down' and rather closed political system – has been quite significant. This has further implications: 1) the pace of service delivery reform is likely to be linked to the pace of broader reforms in governance and public administration; 2) changes in political systems often take time and are embedded in internal processes (e.g. decentralisation requires changes in political culture and norms), and donors will need to understand these processes to effect change; and 3) progress might best be judged against *historical* political and institutional change, rather than against some ideal-type concept of 'good sanitation governance.'⁸⁶

5.2 Challenges

- There is a need for a greater focus on **software (non-infrastructure) aspects** in order to meet and create sanitation demand, and on **sanitation and hygiene outcomes** such as latrine usage or open defecation-free villages.
- It is important to promote **greater political prioritisation of and public budgetary allocation to RWSS**, although it is challenging to elevate a marginal issue to a high political priority. This could be supported, for instance, through national-level debates and efforts to raise the profile of RWSS, in particular at a higher level in the MoH and political circles. This requires the building of coalitions with key political elites and reform-minded actors and the linking of sanitation issues to the overarching political priorities in the country.
- Nam Saat's influence in government is still relatively limited. Support is needed for the **building of Nam Saat's influence**, ensuring clear budget lines to rural WASH. Definitions of 'rural' and 'urban' need to be harmonised and institutional responsibilities for sanitation in these locations need to be examined.
- **Capacity still needs building** at all levels. Human resources have to be built in line with the national RWSS strategy, to ensure well-targeted capacity building.
- **Rural WASH requires further investment.** It is estimated that about \$4.75 million of investment per year will be needed to reach the government's 2015 WASH targets. Based on sector estimates of current external expenditures at around \$1.5 million per year, programme investment will have to triple over the next five years in order to meet the government's development objectives (Robinson, 2009). Also, development partner coordination and information sharing need to improve.

⁸⁶ For similar lessons, see Grindle (2004); Hickey and Bracking (2005); Moore and Unsworth (2010).

⁸⁷ This brief list of challenges is derived from this report's findings. It also draws on findings in key recent reports (e.g. Giltner et al., 2010; Hutton et al., 2009; Robinson, 2009).

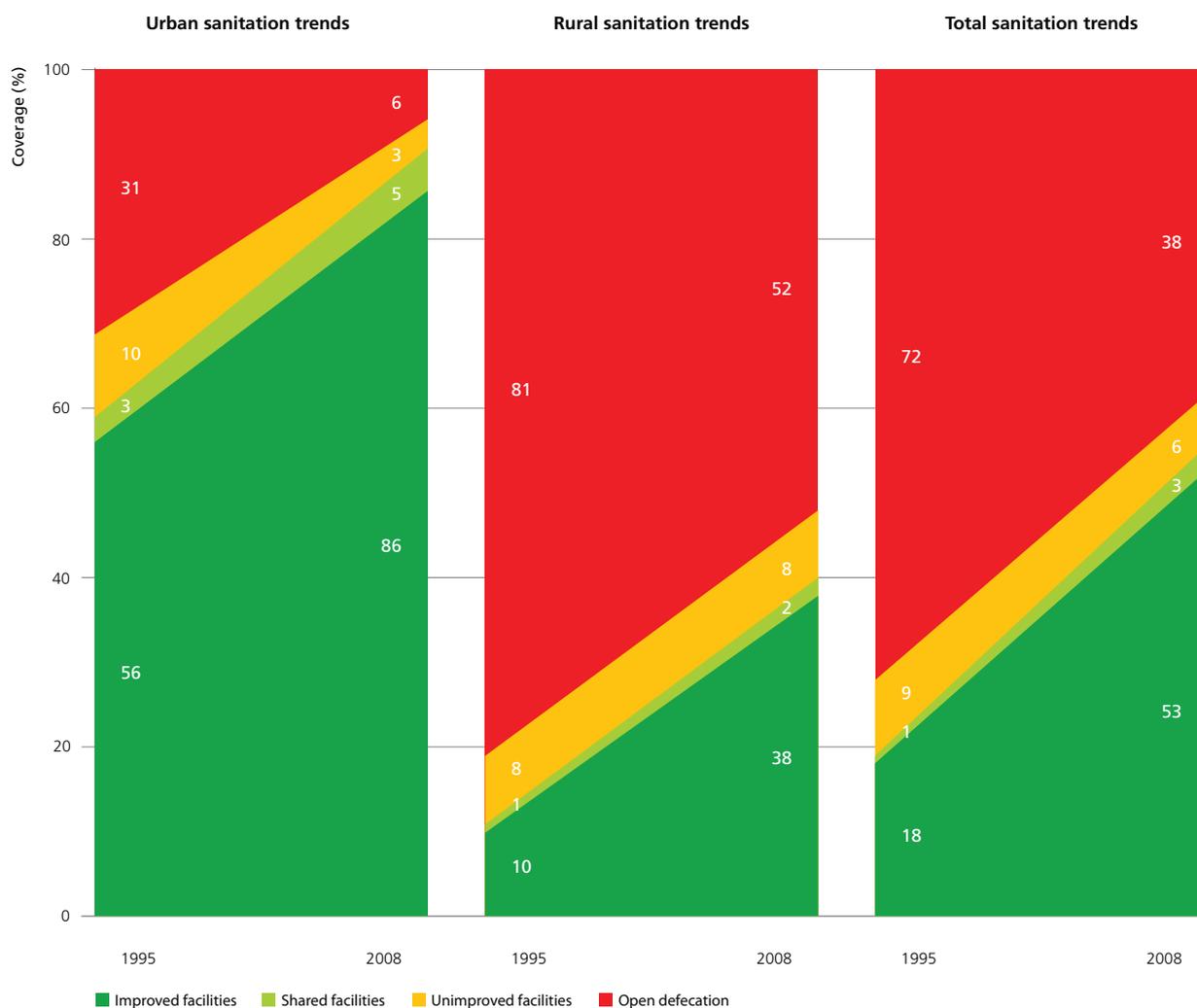
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- Better systems for **monitoring and evaluation** are necessary, to enable the monitoring of progress towards the national strategy and of equity and sustainability.
 - On equity, a major challenge is to ensure that the **difficult and isolated areas are served with affordable solutions**. There is a need to focus on rural areas without roads, and on the currently unserved. Programmes also should target the poorest groups and not just the better-off in the 'poorest districts.'
 - There is still **much to learn about the Lao PDR sanitation context** to improve services. Further research should look into, for instance: 1) household motivations for investing in sanitation, thereby helping in designing strategies to leverage such motivations; 2) the total investment made by different stakeholders in the WASH sector, to determine the proportion of coverage deriving from government, donors, NGOs and private investments; and 3) the nature of WASH sustainability and usage problems, in order to develop appropriate policy and practice responses.

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Annex 1: Trends in the use of sanitation facilities in Lao PDR, 1995 and 2008



Source: UNICEF (2010).

Annex 2: UN coverage estimates for improved water and sanitation in Lao PDR

	Population (thousands)			Population using improved drinking water sources			Population using an improved sanitation facility		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
1990	649	3,558	4,207	-	-	-	-	-	-
1995	836	3,973	4,809	78%	37%	44%	56%	10%	18%
2000	1,187	4,216	5,403	77%	40%	48%	62%	16%	26%
2005	1,610	4,270	5,880	74%	47%	54%	77%	30%	43%
2008	1,915	4,290	6,205	72%	51%	57%	86%	38%	53%
2015	2,732	4,296	7,028			69%*			54%*

Note: * MDG targets are based on JMP 1995 coverage estimates.
Source: UNICEF (2010).

Annex 3: Milestones in hygiene promotion in Lao PDR, 1997-2004

1995-	College of Public Health started teaching hygiene. During the past 12 years, about 200 students have graduated.
1996-1997	National Workshop on Water Supply and Sanitation – the meeting agreed to start hygiene promotion in 10 provinces supported by UNICEF and Sida.
1997-	National Strategy to Promote the Rural Water Supply and Sanitation Sector.
1998-	First trainers of trainers trained for national hygiene promotion.
1999-	Water quality control activities initiated.
2000-	Development of primary school hygiene promotion materials (e.g. blue box), comprising posters, games and other participatory tools on hygiene, latrine use, hand washing, environmental sanitation, etc.
2001-	Development of first manual in Lao on ‘Basic Knowledge on Hygiene Promotion.’ This contains lessons that were adapted and tailored for all forthcoming training events.
2001-2004	Training on hygiene (prevention of faecal-oral transmission) for provincial, district and village Nam Saat staff and WATSAN committees and training on operations and maintenance combined with hygiene promotion.
2001-2003	Training on hygiene promotion for teachers and students in primary schools (mainly for central staff), the Lao Women’s Union and the Youth Union through UNICEF’s School Sanitation Programme.
2002-2004	Training and materials developed to promote food hygiene and prevention of faecal-oral transmission.
2004	Revised national strategy incorporating hygiene education.
2004	Developing of guidelines for the 7-steps approach promoting the strategy.
2004	Development of the Village WATSAN Book integrating hygiene education into the implementation sequence for a WATSAN scheme.

Source: Andrehn et al. (2004).

Annex 4: High-ranking countries in access to improved sanitation (rural and urban), JMP 2008

Country	Absolute average yearly progress (%)	Rank	Relative yearly average progress (%)	Rank	Period covered	Access to improved sanitation (value for first year) (%)	Access to improved sanitation (value for last year) (%)
Myanmar	3.7	1	16.0%	3	1990-2006	23	82
Lao PDR	3.2	2	24.5%	1	1995-2006	13	48
Viet Nam	2.3	3	7.8%	10	1990-2006	29	65
Cambodia	1.8	4	22.7%	2	1995-2006	8	28
Pakistan	1.6	5	4.7%	17	1990-2006	33	58
Mexico	1.6	5	2.8%	26	1990-2006	56	81
Angola	1.5	7	5.8%	14	1990-2006	26	50
Rwanda	1.4	8	5.8%	15	1990-2006	25	48
Honduras	1.3	9	2.9%	24	1990-2006	45	66
Philippines	1.3	10	2.2%	31	1990-2006	58	78
Morocco	1.3	10	2.4%	27	1990-2006	52	72
Central African Republic	1.3	10	11.4%	5	1990-2006	11	31
Nepal	1.1	13	12.5%	4	1990-2006	9	27
Yemen	1.1	13	4.0%	20	1990-2006	28	46
Benin	1.1	13	9.4%	8	1990-2006	12	30
Thailand	1.1	13	1.4%	41	1990-2006	78	96
China	1.1	17	2.2%	29	1990-2006	48	65
Comoros	1.1	17	5.9%	13	1990-2006	18	35
Peru	1.1	17	1.9%	33	1990-2006	55	72
Egypt	1.0	20	2.0%	32	1990-2006	50	66
DRC	1.0	20	6.7%	11	1990-2006	15	31
Panama	1.0	20	1.6%	38	1995-2006	63	74
Sri Lanka	0.9	23	1.3%	42	1990-2006	71	86
Guatemala	0.9	24	1.3%	45	1990-2006	70	84
Malawi	0.9	24	1.9%	35	1990-2006	46	60
India	0.9	24	6.3%	12	1990-2006	14	28
Mozambique	0.8	27	3.7%	21	1995-2006	22	31
Tajikistan	0.8	27	1.0%	52	1995-2006	83	92
El Salvador	0.8	29	1.1%	49	1990-2006	73	86
Ecuador	0.8	29	1.1%	48	1990-2006	71	84
Cameroon	0.8	31	1.9%	34	1990-2006	39	51
Dominican Republic	0.7	32	1.0%	51	1990-2006	68	79
Tunisia	0.7	32	0.9%	55	1990-2006	74	85
Kiribati	0.7	32	3.1%	22	1990-2006	22	33
Syrian Arab Republic	0.7	32	0.8%	60	1990-2006	81	92

Source: Engel (2010).

Annex 5: Adjustments made by JMP to census and sample survey findings

Censuses and sample surveys often do not provide a sufficient level of disaggregation by type of drinking water source or sanitation facility used. Sometimes, a facility type is not well-defined and interpretation of whether or not such facility is improved is difficult. Based on other surveys on file, the JMP estimates what proportion of such poorly defined categories should be considered improved. For Lao PDR, this has been done in the following instances:

Water

MICS06	'Bottled water'	A separate analysis of MICS06 data was used to estimate the proportion of bottled water with household connections .
CEN05	'Piped inside/outside'	The 2005 census grouped piped connections into the dwelling, plot or yard with public taps. The ratio of house connections ('piped into dwelling' plus 'piped into yard or plot') to 'public tap/standpipe' of MICS06 is used to estimate the proportion of household connections in this category for this survey.
RHS05	'Mineral/piped water'	It cannot be determined what proportion of the 57.5% of the urban population uses mineral water and also has access to an improved drinking water source and what proportion uses a piped drinking water supply. The ratio of bottled water with an unimproved source to all piped and improved bottled water of MICS06 is used to estimate the proportion with an improved water source in this category for this survey. In a similar manner, the proportion of household connections is determined among this category – based on MICS06.
MICS00	'Bottled water'	As MICS06 showed, 74% of urban bottled water users also have access to an improved drinking water source and 58% have access to a household connection . The proportion of bottled water users with an improved drinking water source and with a household connection is estimated using the ratios found in MICS06.

Sanitation

CEN05, RHS05	'Other'	It is not clear what portion of these categories, which represented 10.8% of the urban population, are improved latrines and what proportion are unimproved latrines. The ratio of 'pit latrine with slab' to 'ventilated improved pit latrine (VIP),' 'pit latrine without slab/open pit,' plus 'hanging toilet/hanging latrine' in MICS06 is used to estimate the proportion of improved latrines in these categories for these surveys.
RHS00	'Dry'	
MICS00	'Traditional pit latrine'	It is not clear what portion of this category, which represented 8.7% of the rural population, is made up of improved traditional latrines. The ratio of 'private covered dry latrine (with privacy)' plus 'shared covered dry latrine (with privacy)' to 'uncovered dry latrine (without privacy)' plus 'bucket latrine (where fresh excreta are manually removed)' (i.e. the proportion of covered latrines among all dry latrines) in WHS03 is used to estimate the proportion of improved traditional latrines in this category for this survey.

Shared sanitation facilities

WHS03, MICS06	Shared facilities	The average proportion of shared facilities of an improved type of WHS03 and MICS06 is used to estimate the proportion of users of shared facilities for 1995-2008. Please note that the estimates for shared facilities are proportional to the estimates for improved facilities; they are not based on a trend analysis of the use of shared facilities.
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