



How Household Investment in Rural Water Supply can make a difference?

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Introduction

This document summarises the key issues raised during the seminar (by video conference) entitled “*How Household Investment in Rural Water Supply can make a difference*”, an initiative by WSP-Rural and Small Town Global Practice Team and the Rural Water Supply Network (RWSN).

A total of 31 participants from nine countries (Bangladesh, Cambodia/Netherlands, Ethiopia, India, Pakistan, Switzerland, Uganda, United Kingdom and Zambia) took part in the 2½ hour seminar (listed in annex 1). The event enabled an exchange of experience and perspectives on ground realities and initiatives taking place with respect to traditional and household improved water supplies at household level in South Asia, South-East Asia and Africa. The participants included senior management and technical staff from national and regional Governments, as well as the Water and Sanitation Programme (WSP), UNICEF, WaterAid and RWSN. It was clear that all had something to share and to something to learn from the seminar.

Brief oral presentations were given, followed by a brief synopsis of key points and by a question and answer session as synthesised below.

Stories told and issues raised

A key question raised at the start of the seminar was “**Does a country need to have a certain level of self supply in order to reach universal coverage of safe water supplies?**” Self supply, also referred to as self provision, was defined as improvements to water supplies through affordable investments by householders themselves. Such improvements can be undertaken in through incremental measures. The water from these supplies is often used for domestic and productive requirements. Through self supply, householders are able to improve their water supplies through a series of steps. Eventually the supply can be recognised as contributing to the country official drinking water statistics, and beyond.

Analysis of data on water supply coverage in India, Bangladesh and Pakistan reveals that access levels are very high. The official figures for India, Bangladesh and Pakistan are 95%, 98% and 92% respectively. In Bihar State (India) 100% of the population have access to improved water supplies; in the Punjab (India), the corresponding figure is 98%. However, in many parts of these three countries, self provision plays a very significant role alongside Government supplies, for example

- for the 1 million handpumps installed on protected wells through various programmes in Bihar State there are an estimated 7 million handpumps that have been installed by users themselves on private wells. Although most of these do not have an apron, their existence is a clear indication of the extent of investment in water supplies by householders themselves.
- In the Punjab, private handpumps and motor-pumps are used extensively.
- In Kerala State (India), officially 35% of the population have access to an improved source. However in reality, 85% of the population rely on open wells. An estimated 97% of the population boil this water before drinking it.

In fact, research is showing that even in cases where there are state-provided improved water supplies in India, that people still use non-protected sources. In some cases, the public sources are unreliable or water quality is not sufficient although the full reasons require further clarification. For these reasons, and no doubt others, people turn to household and communal traditional water supplies. There appears to be a growing recognition that household-owned and traditional sources co-exist alongside public supplies, and in fact complement public services. However, the concern being raised by water supply professionals is what can be done to ensure that these sources can be safer in terms of water quality.

Pilot projects over the last 3 to 5 years in Ethiopia, Uganda and Zambia are trying to encourage households to invest in making incremental improvements to their own water supplies. Each country has used a slightly different approach, and there are lessons to be learned from all.

In Zambia, the (WaterAid) project is set in one of the poorest districts in the country, with official coverage of less than 4%. The first striking aspect was the realisation by sector professionals that a **large number of wells that had been dug in the area** by households themselves before the pilot project. A total of 112 wells had been dug, of which almost half were already more than ten years old in an area with a population of 10,000. Once they were given the possibility to improve their sources further, **people became very active** in taking initiative and the interest continues to grow. No **subsidies** are being given, but rather people are being encouraged to invest their own finances. Over the last few months, a **micro-finance** aspect has been introduced, with very small loans being given out to enable people to make improvements to their wells. One of the main challenges faced in Zambia has been the fact that **materials are expensive**. Thus, prior to the pilot project, people were able to invest their labour to dig wells, but were not easily able to make the next step in terms of further protection or a technological improvement to the source. The Zambian team pointed out the need for **household investments to be recognised by officials**, and added that monitoring of water quality would improve understanding on the impact of incremental improvements on water quality.

Ethiopia's targets for water supply are considerably higher than the MDGs and in 2006 the country set out a universal access plan. There is an explicit focus on **low-cost technologies** (including the rope pump). Both household and communities are encouraged to improve their water supplies, with **subsidies** available for community schemes and technical advice available for households. Oromia and Amhara regions have particular experience in encouraging the construction of irrigation ponds and family wells by households. Although there have been some challenges there has also been considerable success with this approach. The main challenges faced in Ethiopia are: (i) some sector professionals **do not want to consider low cost options**; (ii) setting and managing **subsidies** is difficult and the (iii) the **capacity of the private sector** to provide low cost options is still relatively low. Initiatives have been made to train metal workshop enterprises in rope pump construction, and also to demonstrate them to water users. However the

Ethiopian team acknowledge that they are still learning and want to know more with respect to encouraging self supply.

In Uganda, self supply pilot projects were undertaken by NGOs, who managed to obtain more cost-sharing by communities through this method in comparison to the conventional approach of service delivery. The facilities constructed to date (mainly hand dug wells) were essentially **subsidised** by 50%, whereas in the conventional approach communities only contribute 10% of the construction cost. Central Government has been undertaking considerable **sensitisation of local Governments** to make them understand that **existing sources should at least be recognised** by Government and ways of improving them be considered. There is a growing recognition that simple upgrading of existing hand dug wells can lead to cleaner water. The Ugandan experience is that private water supplies are better maintained than public supplies, and that the water is shared with others beyond the owners. In Uganda, Government is particularly keen to promote self supply in poorly covered areas of the country where it is focusing on hand dug wells and domestic roofwater harvesting as the technology options. The main challenges faced with respect to this approach in Uganda are **communicating the idea of self supply** to professionals in the sector. Professionals have a particular mindset about what an improved technology should look like which is hard to change. The second problem is that communities are so used to the idea that they will receive a water supply with very little (or no) contribution that initially they **do not want to pay for the improvements**. Thirdly, raising the **capacity of local masons** to be able to provide incremental improvements to water supply technologies is a challenge to be overcome.

The Cambodia (Ideas at Work) project to introduce and market the rope pump to rural areas has learned much since it started two and a half years ago. The project is emphasising **technology demonstration** and the establishment of **distribution channels** to ensure that the products and spares are available locally. The fact is that there are many fantastic products on the market for rural water supplies but the rural people themselves do not know about them. **Gaining the trust** of the communities in the organisation promoting as well as in the technology itself (rope pump) has been a challenge for the project, particularly given the legacy of the Khmer Rouge. However, by demonstrating that the rope pump works, **adapting the technology** to the context (i.e. developing a more affordable product that can serve 3 to 5 families) and **providing choice** by introducing **complementary products** the project is gaining ground. Eight pumps were sold in the first year, 40 in the second year and a number of different products have been sold in the third year. The two main challenges faced are the fact that (i) NGOs have given services and products freely to people for so long, that households are used to it and thus reluctant to buy the pumps...after all someone may come later and give them a free one and (ii) it takes a lot of **time** for a market to develop and for products to take off. Three years is far too short.

Within the above presentations, and also through the question and answer session, there were a number of recurrent and pertinent themes as summarised below:

- What should the **role of Government** actually be in terms of supporting self supply, and in fact supporting all kinds of approaches? The West Bangladesh case where local Government has the responsibility of ensuring that no-one should be excluded from having reliable access to a sufficient amount of good quality water at an affordable price is particularly interesting. This Government role opens the door for provision of improved water in all sorts of forms and through different approaches (e.g. private, public, NGO), thus leveraging considerable investment. In this particular case, the role of government is to ensure that all water sources in the area, whoever the provider, are screened for arsenic and protection from contamination and that they are being effectively operated and maintained. In Pakistan, it was noted that there may need to be a major change in role

of the Government from the “*provider of water to ensuring water provision*”. The Zambian team noted that the role of Government should be to regulate the quantity and quality of water used.

- The issue of **productive use, and economic use** of water was raised several times. In fact this is a key driver in encouraging people to improve their own water supplies. It was pointed out that in Zambia, for agricultural water, self supply is the norm. In Ethiopia there appears to be no distinction between domestic and productive water for the irrigation ponds and family wells constructed by households. It has been found that even when promotion efforts stop, people continue to improve their supplies. In Cambodia, if there is a direct financial return from the water supply, it can be easier to obtain micro-credit (discussed below).
- To **subsidise** or not to subsidise the hardware for household improvements was a recurring question, with the projects in Zambia, Ethiopia and Cambodia clearly not subsidising hardware, whereas in Uganda 50% subsidies have been given to date. Interestingly, in Bangladesh it is the norm to for households to provide themselves with a water supply when they construct their homes. Where incremental improvements are not being made, investments are clearly needed to raise awareness and skills and thus link a latent demand for improvements to the supply of technologies and services.
- Issues of **equity** were raised with respect to self supply. What happens when a family is too poor or does not invest in improving their own water? Are they just left behind? The response was yes and no, and is a concern that was not discussed conclusively. The fact that private sources seem to be commonly shared with the wider community may address this concern but there is clearly scope for more debate in this regard. The question of whether it was **fair to expect rural households to pay** for investments when urban dwellers receive subsidised piped schemes was raised. However, the Zambia and Ethiopia experience, as well as the statistics from India, Bangladesh and Pakistan suggest that people are already investing in their own supplies, but are limited in terms of knowledge, skills, technology access and credit to make further improvements. Also, given the slow progress in the reach of public services (e.g. 4% coverage in the Zambian pilot project district) it would seem unfair not to encourage household investments and thus expect them to wait for years (or for ever) for a programme to construct a standard service.
- If self provision is not the norm, technology subsidies are not given, and people do not have ready cash at hand, alternatives such as **micro-credit, group savings or revolving funds** are required. The Zambia project is currently trying out micro-finance and will have more to share over the coming months. The facilitation of credit access is underway in Ethiopia. The Cambodia project faces challenges as microfinance is generally only available for products with a commercial value (i.e. not domestic water supply). Microfinance was not part of the self supply pilot in Uganda but there is an example in Uganda of a microfinance organisation including domestic roofwater harvesting in its portfolio and also of group savings that enable people to invest in domestic roofwater harvesting at household level.
- Zambia, Ethiopia, Cambodia and Uganda all recognise the need for **training** of masons and other private enterprises in order to raise their skills and ability to provide rural dwellers with services. There is clearly a need to link the supply of products and services with the demand in rural areas. One area not discussed in the seminar was the extent to which private enterprises in India, Bangladesh and Pakistan were trained in the past. However, some of the main technologies used for private supplies (such as hand sludging and well digging) are ancient traditions.

- The **water quality** issue was raised. It was pointed out that although self provision of water supplies in India, Bangladesh and Pakistan is widespread, that there are concerns about poor water quality. However, it was noted out that even some public supplies suffer from water quality problems. The overall consensus seemed to be that one of the main aims of encouraging people to improve their own water supplies in an incremental manner is to improve the (bacteriological) quality of the water. Despite this, it should be born in mind that studies (e.g. Uganda) have shown that even when the water quality at the source is good, it is generally contaminated by the time it is consumed in the home (due to poor hygiene practice and lack of a safe water chain). Thus the participants were challenged as to how important the source water quality actually is.
- A recurrent theme in the discussion was the **attitude of the professional** to self provided, and incrementally improved water sources. One problem is that since these sources are not immediately **counted as contributing to the MDGs** or national targets, the incentives for professionals to encourage the improvements are simply not there. Uganda however pointed out that domestic roofwater harvesting is considered as an improved water supply while in Ethiopia, once a minimum threshold in terms of the facility has been reached, it is counted in the statistics. Zambia RWS strategy includes improved traditional sources as an acceptable service to households. It was stressed that many professionals have a psychological barrier to self supply sources, incremental improvements and low cost options. These professionals have been trained and conditioned to only consider certain types of physical infrastructure.

In drawing to a conclusion, perhaps the final, and most pertinent issue raised during the seminar is how should Government, an NGO or another organisation best plan and implement projects and programmes that encourage households to invest in improving their own water supplies? If it is indeed recognised that household investment has a role to play alongside conventional approaches, how can this best be encouraged, given the social, economic, institutional and environmental context of the particular country or region? Clearly more documentation, dialogue and exchange on this pertinent issue are still required.

Annex 1 Participants List

Country	Participants	Organisation
Bangladesh	Mark Ellery Abul Motaleb Md. Akhtaruzzaman	WSP WSP
Cambodia/ Netherlands	Angelique Smit	Ideas-at-Work
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Pakistan	Masroor Ahmad	WSP
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