Report of MUS Group meeting 20 December 2013

Hosted by IRC International Water and Sanitation Centre
at the International Water House, The Hague, The Netherlands

Introduction

MUS Group members have always indicated a keen interest in understanding better how multiple-use services can be provided. One of the service delivery models is self-supply, whereby users develop and manage their own systems – but often with support. The critical question though is what type of support is needed and how it can be provided.

The same question also can be asked for communal multiple-use services, that are often externally initiated. For these systems to meet users' needs, it is obvious that their participation in the design is key. Whereas there is ample experience in participatory design for domestic or irrigation systems, this is less so the case for designing water services for multiple-use.

During the MUS Group meeting which took place on 20 December 2013 at the International Water House, The Hague, The Netherlands, a total of 20 participants countries came together to discuss the two types of water supplies for multiple-use and the critical questions on support to self-supply and participatory design of communal systems.

Objectives of the meeting were:

- Discussing the linkages between self-supply and multiple-use of water
- Discussing how MUS can best be considered in participatory design processes

The meeting consisted of three blocks:
Block 1: self-supply
Block2: Participatory design for MUS
Block 3: Activities of the MUS Group.

This report gives an overview of the presented cases and of the main points raised and discussed related to each of these three blocks.

Block 1: Self supply

The emphasis in this session was on self-supply acceleration, which includes the creation of demand, private sector developments, ensuring access to finance and the development of an enabling environment for self-supply to reach more people in a shorter time with better quality water supplies, and development of support services for self-supply. In their introduction to this block, John Butterworth and Sally Sutton raised the point that self-supply can be seen as the ultimate form of MUS. As it is about households, they can make the decisions about which water needs can be met. MUS is natural and automatic in self-supply. Self-supply is applied everywhere from the USA and Ireland to Mali, where people dug their own wells. Self-supply acceleration happened in countries like Zimbabwe, Zambia, Mali and Uganda, and Ethiopia.

The following are some highlights of presentations and case studies on self-supply:

Experiences with Rope pumps and other low cost technologies for MUS and Self supply – By: Henk Holtslag, freelance consultant

Henk opened his presentation with the following proposition: To reduce poverty it is more effective to invest in self-supply than in communal supply. It is unknown how many open wells exist in Africa, but a rough estimate is between 3 and 5 million. These can relatively easy be upgraded. To ensure water quality, self-supply should go hand in hand with treatment at the household level. Distribution of pumps needs to be done by the local private sector, not by NGOs (I.e. profit based sustainability: see also http://300in6.org/). Introduction of pumps which can provide higher qualities of water, like the rope pump, also makes economic sense. A case study in Nicaragua showed that a family with a pump on average earns USD 220 more per year than a family without pump.

Households, communities and schools: more than elephants – By: Gwen Vaughan, PumpAid

Gwen told the story of the development of the approach by PumpAid, an organization set up by three teachers in Zimbabwe, which developed a protected rope pump, known as Elephant Pump. Nowadays, about 10% of rural water supply in Zimbabwe is provided through these kinds of pumps. Monitoring of impact of 15 years of rope pumps in Zimbabwe shows that their functionality is great. They can deliver clean water. There is a clear correlation between community engagement and sustainability. They are cost-effective, but are not always used for much more than domestic use. PumpAid has made a big shift from a technology focus, to a more approach-driven organization, focusing for an important part on self-supply. And we still have questions on how we promote and accelerate self-supply

Self-supply acceleration in Ethiopia – By: John Butterworth, IRC

In his presentation, John started by showing the results of the National WASH Inventory for Ethiopia shows that 1 percent of households in Ethiopia's Southern Nations, Nationalities, and Peoples' Region (SNNPR) use their own well as main drinking water source. A further 1 percent uses their neighbors' well. There are however also woredas where this amounts to 20% and kebeles where even half of the people mainly rely on self-supply for their main source of water supply.

Self-supply holds promises for great success in Ethiopia. Self-supply features in the One WASH National Programme (OWNP), and in Oromia and SNNPR annual plans. It would supply a million people in SNNPR alone (16,000 group wells and 40,000 household wells). Under the household irrigation strategy, 380,000 wells are planned in SNNPR alone. However, this is done without consideration of domestic or drinking water use. These is thus a strong need for better coordination between these sectors.

Comparison of costs and leverage between self-supply acceleration (7 programs in Zambia, Zimbabwe & Uganda) and community water supply (2 programs Zambia, Uganda) shows that the average public investment per capita for self-supply acceleration is lower than for community water supply, while leveraging considerably higher private investment. The average public investment per capita is USD 8 for self-supply acceleration vs. USD 39 for community water supply. Each USD of public investment leverages on average USD 1.9 private investment in the case of self-supply acceleration vs. USD 0.025 for community water supply.

The Technology Assessment Framework; considerations for MUS – By: Vincent Casey, WaterAid

WASH technology development often takes place in an environment in need of structure, according to Vincent's presentation. All too often there are no formal standards for technology assessment. Where standards exist they are informal, unclear, or overly bureaucratic, and they lack an institutional home. As a consequence technologies and services introduced do not meet user needs, or are too expensive for users to pay for. The WASHTech project aims to produce a systematic and robust framework for assessment of WASH technologies and the approaches used to introduce them. A framework for assessment of technologies could help identify issues that impact on the sustainability of a technology or service, identify issues that could impact upon scalability, and highlight priority areas that need to be addressed to avoid wasted time and money. Technology is the entry point for analysis of sustainability and scalability of the overall service. The technology applicability framework (TAF) considers social, economic, environmental, institutional / legal, skills and technical factors from different perspectives, e.g., those of the user / buyer; producer / provider; and regulator / facilitator. The framework employs a simple "traffic light" score card in assessing these factors.

Various technologies, amongst which rope pumps, water harvesting tanks and ferro-cement tanks, were assessed using this framework in Burkina Faso, Ghana and Uganda. Findings indicated that in Uganda rope pumps were introduced into situations with too many users, resulting in frequent breakdown and consequently user fatigue and abandonment. Almost 100 percent of these introductions were NGO subsidized. Follow-up was weak and issues were not addressed. There was also lack of district involvement and ownership. In Ghana there was weak demand for rope pumps from users who voice preference for other pumps. A 'champion' and effective promotion were lacking, and perceptions from users and authorities were negative. In Burkina Faso findings were more positive in terms of demand from users but there were still issues with affordability and level of subsidy. The perception from authorities also was not overly positive. The recommendations from the assessment include the implementation of rope pumps as self-supply option with lower user numbers and carrying out more vigorous promotion especially in areas with shallow groundwater. The implementation also needs an institutional home that will champion its standardization and uptake.

Main discussion points block 1:

How can governments support self-supply acceleration?
There is a need to address the question how self-supply fits in water governance more critically. Government policies are generally hampering self-supply. Governments assume responsibility for regulating public services and, for that, overlook the role of self-supply. The bureaucracy behind public investment is often huge. Good marketing to get development partners and governments interested in self-supply is lacking.

In order to scale up, governments have to be involved from the outset. This needs leveraging Government interest in alternatives to community supply. There are huge financial implications in how to reach more remote users. For example in Honduras, the overhead costs of reaching remote households with public water supply are prohibitive. In Burkina Faso there is the perception of competition between self-supply and distribution companies and networks, but the reach of government water supply has stretched to its limits. Starting point for marketing self-supply can be having the national level analysis where they are with reaching the MDGs. Then they will realize the

need for different approaches, like self-supply. But we also need to be realistic about the role of the private sector for self-supply. We are talking about dispersed and remote rural communities, characterized by a limited presence of private sector, so actually stimulating that in itself will be a huge challenge.

Competing water uses and potential over-abstraction of water resources.
There is a need to look at the political economy of competing investments. In India, the private sector is mostly behind groundwater irrigation. Irrigation canals are becoming replenishers of groundwater. There are problems of reaching the poor, as in the productive use sector no-one cares about poor peoples' multiple water needs. There is a need for protection of their water rights. Concerns over the 'overuse' of water in the domestic sector are negligible in comparison to water use in agricultural irrigation. In rural areas it can be difficult to develop the role of the private sector in the provisioning of self-supply. Unless there is water supply directly to the home or community, poor people, particularly women, will be struggling to find alternative solutions. Regulation remains a difficult issue.

The point was made that Africa is not India and that the risk of water resources depletion because of self-supply is not a big treat in Africa at the moment. It was argued that if it does, it may not be bad, as it could be a stimulant for recharge.

Competition or complementarity between self-supply and community water supplies.
There is a need to focus on the complementarity of communal and self-supply. On the one hand, the sustainability of distribution network is not possible if there is competition in the form of self-supply. But in other areas, where piped schemes will not reach, self-supply can be complementary strategy. Rather, we need to think of gradual strategies of accepting self-supply for a period, with longer term strategies to extend self-supply, whereby we also recognize that that there may be health issues, if people take water from their own well. It also depends on the type of settlement. In rural areas, we may want to accelerate self-supply to increase coverage, and in peri-urban areas decelerate it, to help communal systems work better. In all of this, we have to recognize that there are these different realities, about which much is assumed and little is known. We need to do more work on that. As a group, we need to assemble best practices on MUS and self-supply, to start answering these questions.

Block 2: Participatory design for MUS

This block was introduced by Barbara van Koppen (IWMI) with a look at the formalization in the water sector[1], sector related legislation and accountability (which can become quite contradictory), and vested interests as challenges to the participatory design of MUS.

Reflections on user participation in water system design in Bolivia and Peru – By: Jeroen Vos, Wageningen University and Research Centre

This presentation looked at the realities of legislation and governance in water service provision, accountability, rights and "voice and vote". Examples of MUS in Bolivia and Peru highlight conflicts and questions and issues in the participatory design of MUS, such as who participates, who generates knowledge, who decides on who can participate with what "voice and vote"? Multiple water services require a participatory governance & participatory design approach, and should be

[1] Along a continuum, where e.g. in Sub-Saharan Africa less than 5 percent of the sector is formalized, countries such as Bangladesh somewhere between 5 - 35 percent, and in Western countries almost 100 percent

designed in dialogue. They do require support services for designers and service suppliers, and adhere to principles of equity, and ecological, economic and social sustainability.

A step-by-step approach for community participation – By: Robert Meerman, RAIN Foundation

Robert presented the principles and process of participatory design, and the rationale for community participation at the various design and implementation stages of the project in a step by step approach. An intervention sustainability solutions framework was presented, based on a community rainwater harvesting project for MUS purposes, in Ethiopia. Challenges to the sustainable utilization of the rainwater retaining structures include soil erosion in catchment areas, resource flows limiting community capacity, the socio-political environment, expectations management and the project design itself. It was concluded that community participation still a very ambiguous concept; there is need for participation principles that relate to the context setting.

Main discussion points block 2

Flexibility of the design parameters
When planning water for multiple uses, do you need to assess people's water needs in detail as part of the participatory design process? Or, should you rather design flexible systems that can be adjusted to people's livelihood changes over time? There is definitely something to say for the latter approach. Instead of having an elaborate assessment of livelihoods and the water needs related to it, it might be useful to have a dialogue with water users and include their wishes and ideas into the design of water services in that way. One can also provide water in larger quantities in domestic-plus systems, so people can use it as they see fit, and adjust to changes in their livelihoods. However, this could bring along challenges with overdesigning, which is more expensive and more difficult to manage. Moreover, over-designed schemes can also be considered less flexible, as cheaper, smaller systems can be easier expended upon.

What is the role of community in decision making related to technology choice and design?
Community groups and end users need to be included as early as possible, to help them to express their needs. Engineers must remain the leaders of the design process, but have to be open to demands of users. In some case, there is a need to also physically show different options to users, so they can make their own choice (e.g. SMART Centres).

MUS, cost recovery and service levels
In WASH, capital maintenance expenditure financing is often not there and has to be covered by subsidies. This is also the case in irrigation. Could it be paid for as well (at least partially) from user revenues? Irrigation is income generating, but user perception often is that water from canals should be free. In general, cost recovery in irrigation is even lower than in WASH. MUS could be an opportunity to increase opportunities to pay for capital maintenance expenditure. The MASsMUS guidelines of FOA indicate that more uses of water increases willingness to pay, while productive use increase ability to pay. The studies in Kenya and Senegal presented in last year's meeting by Dr Ralph Hall suggest there is a correlation between better services and MUS, but the causal relationship could not be determined. In the case of self-supply, people cover their own CAPMANEX. This is an extra argument for self-supply.

Activities of the MUS Group and its members

The Secretary of the MUS Group, Stef Smits, presented the 2013 activity report of the group. In addition, this session provided space for MUS Group members to share updates on activities which are currently being undertaken or planned for the coming period.

MUS Secretariat update –Stef smits. IRC

The MUS Group website has been restructured and updated. Please visit: http://www.musgroup.net/. Furthermore, the new MUS brochure and briefing note have been published.

MUS in the Water, Land and Ecosystems programme - Martin van Brakel, WLE

A brief overview was provided of WLE and past linkages between CPWF and the MUS Group. Martin also presented the Water, Land and Ecosystems programme, a new research programme following up on the Challenge Program on Water for Food. There is potential scope for MUS. Self-supply is of great interest, and there might be interest to support research to the ones who support self-supply. The WLE will have open calls for proposals for innovations. The first call is to come out early 2014. Martin will share the calls for proposals when these come out.

MUS in the arid lands areas of Kenya –René van Lieshout, IRC

René presented a methodology for local water master planning which is currently under development in Kenya. The methodology strengthens management, capacity building and governance. Challenges to be addressed are the application at scale, and estimation of the required resources. The methodology has been developed for arid lands in Kenya, where grazing management is currently failing. CRS is now piloting the methodology in other areas. The methodology includes:

- Geo-hydrological landscaping to maximize buffering of shallow groundwater reserves
- Estimation of demand per different types of uses
- Quantitative water demand assessment using an Excel tool

World Water Forum - Francois Brelle, ICID

We committed with ICID to develop guidelines for MUS, to be ready by the time of the next World Water Forum in Korea. We need to think of scope of guidelines, e.g. cost recovery, and link with IWRM. The plan is to talk with Robina at next call to take it forward, under one of the working groups of ICID. We can plan for the next Forum. This will be taken up in a next conference call.

Wateraid community-based water resources management in Burkina Faso - Vincent Casey, WaterAid

WaterAid pilots work in Burkina Faso on community based water resources management, and the risks they face. Within that, we look at MUS. We facilitate a process of understanding what water is used for and identify threats. With that, they set up mechanisms for principles for local water resources management. We are looking to scale that up elsewhere in West and East Africa.

Rural Water Supply Network e-discussion on MUS –Vincent Casey, Water Aid

An e-discussion on MUS is under preparation with RWSN, and will cover various topics. The topics that have been suggested so far are:

- Reaching the unserved and poorly served (week 1)
- Enhanced food security, health and livelihoods (week 2)
- MUS contribution to water supply services that last (week 3)
- MUS and sustainable groundwater management / governance (week 4)

Stef, Barbara and John will do a final review of the questions for the e-discussion. The e-discussion will lead to synthesis and practical uptake by members and participants.

MUStRAIN case studies –Eline Boelee

Under the MUStRAIN project a number of case studies on different elements related to MUS have been published. These can be found here: http://www.irc.nl/content/search/?SearchText=mustrain