Multiple uses of water to enhance poor people's livelihoods – relevance for the SADC region

Background paper for the session on "multiple uses of water at the household level" at the WARFSA conference, 2 Nov 2006, Lilongwe, Malawi

By: Stef Smits[1], Tessa Cousins[2], Vusi Dlamini[2], Edward Guzha[3], Barbara van Koppen[4], Fungai Makoni[5], and Theo Maluleke[2]

Background

In rural and peri-urban areas, people require water for both domestic (drinking, washing, cooking, etc) and productive purposes, such as growing vegetables, watering, livestock, post-harvest crop processing and micro-enterprises. Providing water for productive uses can enhance people's livelihood options by making significant additions to household food security and nutrition, and generate income. Research in 13 villages in the Bushbuckridge Local Municipality in South Africa showed that where villagers had more water, the economic activities of many poor households in the village doubled (Pérez de Mendiguren and Mabelane, 2001; Pérez de Mendiguren, 2004).

However, most formal water supply services do not aim to meet all these demands. "Domestic" water supply services are not usually planned or designed to take account of small-scale productive uses; indeed such practices may even be prohibited. In piped water supply schemes in South Africa, amounts supplied are often too low and too erratic to allow for productive uses. Communal hand pumps also practically limit water use to domestic use only. In a survey in three districts in Zimbabwe it was noted that in the area which had predominantly communal hand pumps, only 5.3% of the respondents used water for domestic and productive purposes. In areas where a large proportion of the people had family wells, close at hand, this percentage increased to over 25% (Katsi, 2006). The design and technology for water supply directly affects the use of water for multiple needs. A similar story can be told for the irrigation sector. In irrigation schemes, even other productive uses such as livestock watering are not considered. The multiple sources of water, available to the poor, are often not considered in an integrated way to

[1] IRC International Water and Sanitation Centre, Delft, the Netherlands
[2] Association for Water and Rural Development, Acornhoek, South Africa
[3] Mvuramanzi Trust, Harare, Zimbabwe
[4] International Water Management Institute, Tshwane, South Africa
[5] Institute for Water and Sanitation Development, Harare, Zimbabwe

meet the various demands. As demands are not met entirely, this limits the potential benefits that water services can have for the users. In addition, it can have a negative impact on sustainability. It has been reported that people resort to making unauthorised connections to get more water to meet their demands and responsibility in maintaining water supplies is lower when not all needs are met.

The above facts and situation have been observed over years by a number of organisations in the water sector (see for example Moriarty et al., 2004). Recognising the observations and facts on the need to meet various water demands implies following a different way to providing water services to the rural poor, a so-called multiple use services (mus) approach. This paper serves as background to a session which aims to set out this approach, show the potential relevance for the SADC region, and share practical experiences with the approach from the region.

The multiple use services approach

The most comprehensive description of the multiple use approach is provided by Van Koppen et al. (2006). Van Koppen et al. (2006) define the multiple use water services (mus) approach as "*a participatory, integrated and poverty-reduction focused approach in poor rural and peri-urban areas, which takes people's multiple water needs as a starting point for providing integrated services, moving beyond the conventional sectoral barriers of the domestic and productive sectors*".

This definition provides a number of angles to look at multiple uses of water, and get a better understanding of what it means:

- ***Services, not systems***; providing water for multiple needs does not imply all the water necessarily needs to come out of one pieces of hardware (system). Rather, it means the provision of water of a given quality and quantity with a given reliability at a given place. This is what we call a water service. For multiple uses, the latter is the key issue: ensuring that water is delivered, rather than the specific inputs. This also implies that there may be various types of systems, which can contribute to delivering the service.
- ***Approach, not a "thing"***. Focusing on services also implies that there are service providers and service users. In order to provide a service, certain approaches need to be followed, e.g. assessing what the needs are, planning according to these needs, actually carrying out operation and maintenance and administration of the services, and monitoring it. Mus is therefore not a "thing", but a service provision approach.
- ***Scale and level***. Implicitly the definition contains various levels of scale to look at. It starts from the users, i.e. the individual or household level. Service provision typically takes place at a village level. However, service providers are typically located at the intermediate level, where they provide services to a number of villages. Taking a service approach, implies addressing issues at intermediate level. In turn, intermediate level service providers, operate within a national framework of policies and institutions. Following a mus approach at intermediate level, may imply actions at national level to enable that.

Van Koppen et al. (2006) have taken these issues further in the form of a framework for multiple use services. This framework consists of the three key institutional levels (community, intermediate, national) (see figure 1). Sustained livelihoods at community level require a number of principles to make up for a service, such as appropriate technology, but also financing mechanisms, community institutions, etc). These are supported by support provided by service providers at intermediate level, in the form of coordination, strategic management, among others. The intermediate level support in turn relies on an enabling environment at national level, which consists of elements such as policy, financing and coordination. Taken together, these principles form the mus approach.

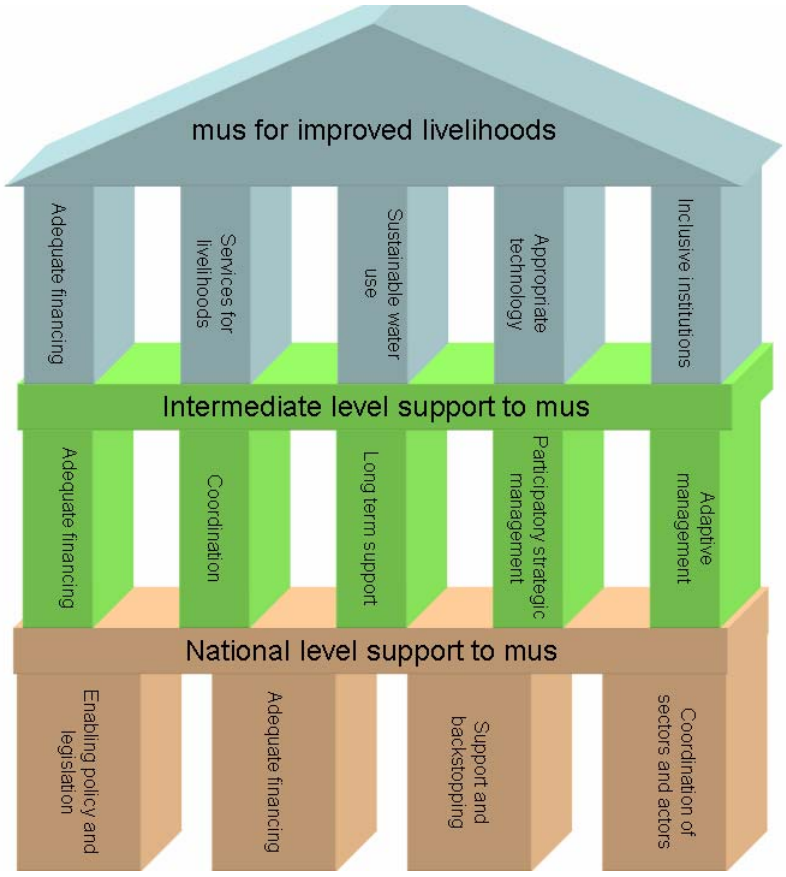

Figure 1: framework of principles for multiple use services (van Koppen et al., 2006)

This framework can be read in two ways:

- A set of principles that need to be in place to provide water services that meet people's livelihoods needs. As such, this figure 1 may be hugely discouraging. We know that many of the principles are currently not in place, and it may take a long time before they are. For example, intermediate level agencies are currently disempowered in many places to fulfil the principles at that level. One could think that if one pillar would be missing, the entire approach would collapse.
- The second way of using this, is as an analytical framework to think of sustainability and scale. It is possible to start working on providing water for livelihoods by

focusing on only one or few of the principles. However, that could result in working on isolated cases of success. The framework helps in analysing principles that would be needed to sustain the work, and scale it up, and looking into practical ways of working with the other principles, even if those are largely absent.

Relevance for the SADC region

Having now looked at what following a mus approach implies, this section will look at its relevance for the SADC region. In addition, it will point at a number of opportunities to start following the approach in the region.

Using water for multiple uses is not new in the region. Many would argue that the practice has always been there, since times immemorial. Surely, where people have easy and reliable access to water, they use it to meet their multiple needs. As shown earlier in this text, in those areas in Zimbabwe where people have family wells at their homesteads, large proportion of the households use it for a range of activities.

So, if the practice is new, what is new about the approach? The issue lies in the fact that many water programmes take a narrow sub-sectoral approach. For example, the Integrated Rural Water Supply and Sanitation Programme (IRWSSP) in Zimbabwe primarily focused on providing clean water for domestic use only (Makoni and Smits, 2006 forthcoming). The provision of water for other uses wasn't conceived of. In smallholder irrigation programmes, similar limiting approaches prevailed such that water will be pumped directly from the water source (dam) to the irrigation system. This left farmers with no water for household use – even for drinking whilst in the scheme (Zawe and Mamhunze, 2005).

This narrow approach to water programmes goes against some of the regional commitments.

Water provision plays an important role in the Poverty Reduction Strategy Papers (PRSPs) in some countries in the region. There are on-going efforts among the region's national governments and regional institutions to establish a **regionally integrated economy**. Such efforts are tapping into the potential of water and water-based resources in the achievement of economic prosperity based on the **equitable and sustainable** use of natural resources. (SARDC, 2002)

- All countries in the region are committed to reaching the Millennium Development Goals (MDGs). Yet, many are struggling to reach MDG7, which aims to reduce by half the proportion of people without access to water supply. Providing services which meet all people's needs are likely to be more sustainable. Hence, a mus approach can help accelerating reaching the MDGs (Van Koppen et al., 2006).
- Need to localise IWRM (Integrated Water Resources Management). IWRM is high on the agenda in the SADC region.(SADC-WSU, 1999). A common critique however, it that IWRM initiatives in the region tend to focus at the river basin level, and end up in discussions on policies and institutions only. As argued by GWP, mus

is a way of bringing IWRM principles down to the local level (GWP-IWMI-IRC, 2006).

These kinds of commitments, enable, or rather make it imperative, to follow a mus approach to water programmes. The question is where and how to start. In line with the framework, a number of opportunities exist at the different levels:

Community level

The most obvious opportunity is to apply the principles of the mus framework in community water supply programmes. Fortunately, a large number of organisations in the region are working on this. In Zimbabwe, organisations such as PumpAid and Mvuramanzi Trust are pioneering appropriate technologies for multiple uses (see Robinson et al., 2004; www.pumpaid.org). Also, large scale implementation programmes are now starting to apply mus principles, as witnessed in a recent programme, being implemented by UNICEF in Zimbabwe (UNICEF, 2006).

Intermediate level

Most countries in the region are in processes of decentralisation, transferring responsibilities and resources for water services provision to local authorities. This provides an opportunity for following a mus approach. Local governments are close to the needs to the communities and in theory are small enough to provide effective integration between different departments within local government. However, many local governments are also struggling with their new roles. Some organisations therefore focus on supporting local governments in following a mus approach. A good example is the SWELL (Securing Water to Enhance Local Livelihoods) programme, followed by AWARD (Association for Water and Rural Development) in South Africa (Maluleke *et al.*, 2005). In this programme, communities and local government are brought together for joint integrated planning for multiple uses of water. The programme also shows that there is more need for strengthening capacities at intermediate level.

National level

Few countries have also started developing policies around multiple use of water. The best example of that is South Africa. In the Strategic Framework for Water Services (DWAF, 2003), it recognises the role of water in supporting people's livelihoods, and promotes that services providers consider these livelihoods aspects in service delivery. DWAF and other national agencies are developing a range of initiatives in the fields of policy, guidelines, research and dissemination to support implementation of mus at decentralized level (see Cousins and Smits, 2005). Also in Zimbabwe, the issue of multiple uses of water is also included in the new Draft Domestic Water supply policy which is yet to be approved but now at an advanced stage. Mus approaches are also part of discussions at national level, for example in the WES-WG (Water and Environmental Sanitation Working Group), a sector wide coordination body for the water sector (Makoni and Smits, 2005), even feeding into policy discussions.

Session “multiple uses of water at household level”

At regional level, the research community is also contributing to better understanding of the mus approach, and how it can be applied in the region. One of the groups involved in such research is the MUS project, which brings together a number of organizations from the region, with partners from other countries around the world. Given this context, the MUS project is hosting a session on “multiple uses of water at household level”, at the WARFSA conference, on 2 Nov 2005 in Lilongwe, Malawi.

This session aims to bring together experiences with multiple uses of water in the region. The specific objectives of the session are:

- To introduce a conceptual framework for multiple uses of water
- To share and discuss experiences with multiple uses of water in the region
- To draft a regional agenda for research and dissemination

In this way, it is expected that the research community in SADC can contribute to taking the topic of multiple use forward in regional water programmes.

Acknowledgements

This background paper and session have been carried out as part of the MUS (Multiple Use Systems) project, which is part of the Challenge Programme on Water and Food.

References

Cousins, T. and S. Smits (2005) *Report of the national seminar on initiatives and experiences on multiple use approaches to water*, 24th August 2005, SANBI Auditorium, Pretoria Botanical Gardens. www.musproject.net

DWAF (2003) *Strategic Framework for Water Services*. Pretoria, South Africa

SARDC (2002). *Vision and Framework for Action - Rapid Review of Existing Material in Southern Africa* – report compiled by the Institute for Water and Sanitation Development (Harare, Zimbabwe) in association with the Southern Africa Research and Documentation Centre (Harare, Zimbabwe).

GWP-IWMI-IRC (2006) *Taking a multiple use approach to meeting the water needs of poor communities brings multiple benefits*.
http://www.iwmi.cgiar.org/waterpolicybriefing/files/wpb18.pdf

Katsi, L. (2006) *Assessment of factors which affect multiple uses of water and their impact on the sustainability of rural water supply sources in Zimbabwe. A case study of Marondera, Murehwa and UMP districts.* MSc thesis, University of Zimbabwe, Department of Civil Engineering, Harare, Zimbabwe

Makoni, F. and S. Smits (2005) *Workshop on Learning Alliances for multiple use water services*, 19-20 February 2005, Harare, Zimbabwe. www.musproject.net

Makoni, F. and S. Smits (2006 forthcoming) *Policies and institutional framework for multiple use of water in Zimbabwe*. Working paper MUS project

Maluleke, T., Cousins, T. and S. Smits (2005) *Securing Water to Enhance Local Livelihoods (SWELL): Community-based planning of multiple uses of water in partnership with service providers. A case study on its application in Bushbuckridge, South Africa*. MUS Working paper. www.musproject.net

Moriarty, P., Butterworth, J. and B. van Koppen (2004) *Beyond domestic: case studies on poverty and productive use of water at the household lev*el. Delft, the Netherlands, IRC International Water and Sanitation Centre

SADC-WSU (1999) *Vision for Water, Life and the Environment in the 21st Century.*

Perez de Mendiguren Castresana, J.C. (2004) Productive uses of water at the household level: evidence from Bushbuckridge, South Africa. In: Moriarty, P., Butterworth, J. and B. van Koppen (2004) *Beyond Domestic. Case studies on poverty and productive uses of water at the household level*. IRC Technical Paper series 41, IRC International Water and Sanitation Centre, Delft, the Netherlands

Perez de Mendiguren, J.C. and M. Mabalane (2001) *Economics of productive uses for domestic water in rural areas*. AWARD research report, Acornhoek, Republic of South Africa, AWARD

Robinson, P.; Mathew, B.; Proudfoot, D. (2004) Productive water strategies for poverty reduction in Zimbabwe. In: Moriarty, P., Butterworth, J. and B. van Koppen (2004) *Beyond Domestic. Case studies on poverty and productive uses of water at the household level*. IRC Technical Paper series 41, IRC International Water and Sanitation Centre, Delft, the Netherlands

UNICEF (2006) http://www.unicef.org/infobycountry/media_35414.html

Van Koppen, B., Moriarty, P., and E. Boelee (2006) *Multiple-use water services to advance the millennium development goals.* Research Report 98. Colombo, Sri Lanka: International Water Management Institute. www.musproject.net

Zawe, C. and P. Mamhunze (2005). *Some forgotten issues on Small holder irrigation schemes' designing*. Department of Irrigation, Chinhoyi, Harare.