



International symposium
Multiple-use services: from practice to policy

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Addis Ababa, Ethiopia



Conclusions report

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Background

The concept of multiple-use services (MUS) has emerged over the last five to ten years as an alternative approach to providing water services. It stems from the recognition of multiple use of water as a local practice, a fact often not considered in water services provision which has tended to focus on providing water for single uses e.g. for domestic water or irrigation only. Yet, people often use existing single-use systems to meet their multiple water needs. The MUS approach proposes to move from the mere recognition of multiple-use to water services provision, which takes people's multiple water needs as a starting point and tries to meet those in an integrated manner (Van Koppen et al., 2006).

A growing number of organisations have been undertaking activities on multiple-use services, ranging from conceptual and empirical research to piloting multiple-use services delivery and policy advocacy. The Multiple Use Services (MUS) Group was established in 2003 (originally under a different name, the PRODWAT group) as a network of organisations which jointly undertake research and documentation, promote implementation and learning, and facilitate information sharing and evidence-based advocacy on multiple-use services (MUS Group, 2008). In view of the growing body of work on this topic, the MUS Group, together with the RiPPLE (Research-inspired Policy and Practice Learning in Ethiopia and the Nile Region) research consortium organised an international symposium on multiple-use services from 4 to 6 November 2008 in Addis Ababa. The aim of the symposium was twofold: 1) to take a critical look at findings from research and practice on different aspects of multiple-use services provision and 2) to discuss implications for taking the MUS approach forward, in implementation, research, capacity development and policy, leading to strong policy recommendations from the symposium.



This paper provides the main proceedings of the symposium, particularly focusing on the conclusions from the discussions held at the event. It complements the other outputs: the background paper and the set of papers that were presented at the event have been published on the MUS Group's website (www.musgroup.net). In addition, a policy brief will be developed, containing policy recommendations to be used for advocacy.

Participants and modality of the event

The symposium brought together 68 participants, from 16 countries. These represented staff from NGOs, government agencies, research institutes, international agencies and UN bodies, funding agencies and consultants. For further details, see Annex 1.



Picture 1: The participants at the symposium

The programme consisted of 6 sessions. During the opening session, the host organisations IWMI, the MUS Group and RiPPLÉ gave words of welcome. This was complemented by an introductory speech made by Mr Abera Mekonnen, adviser to His Excellency Ato Asfaw Dingamo, the Minister of Water Resources of Ethiopia, on behalf of the Minister (see Annex 2).

There were five main sessions:

- Setting the scene. This introductory session provided the background to the symposium giving an overview of the origins and development of the MUS approach and defining key concepts.
- Thematic session 1: characterising mus. The objective of this session was to develop a common understanding of what multiple-use services are and the implications for service delivery in practice through analysis of case studies from a range of contexts and situations.
- Thematic session 2: impacts of mus. This session looked at the impacts of the MUS approach in terms of poverty reduction, income generation, food security, etc. It also looked into developing indicators for impact of mus.
- Thematic session 3: applying the MUS approach in projects and programmes. The focus of this session was on how multiple-use services can be practically provided through projects and programmes. Part was dedicated to appropriate technologies.
- Thematic session 4: scaling-up, replication and institutional change. The final thematic session looked at the kinds of institutional change needed to scale up the MUS approach, as well as at approaches and methods. Various discussions were held on specific follow-up activities at country and global level, in terms of research, implementation and networking. This also included a discussion on policy recommendations.



Welcome to the symposium

Each of the thematic sessions was introduced by one or more key note presentations, before presentation of other papers. These are all included in the proceedings document (see <http://www.musgroup.net/page/778>). Individual papers referred to in the text below can be found in this proceedings document. After presentations, discussions were held both in plenary and parallel sessions, guided by key questions. In addition, a number of “special” sessions included a demonstration of appropriate technologies in the garden, and a business meeting of the MUS Group. The conclusions presented below provide a synthesis of the different discussions and sessions.

Synthesis of the discussions

MUS as a service delivery approach?

One of the main points of discussion was how to understand the MUS approach. The case studies presented at the symposium highlighted a broad range of types and situations of multiple-use, ranging from the use of irrigation tanks for fisheries, the use of domestic water supply systems for small-scale productive uses at the homestead, and piped systems for multiple uses. The background paper and the paper by Patrick Moriarty (2008) suggest understanding MUS as a service delivery approach rather than as a specific system. This service delivery approach takes people’s multiple needs as starting point, and tries to meet these in an integrated manner, often from multiple sources and providing services with attributes such as quantity of water, quality, reliability, distance, etc. a service-delivery approach emphasises linking physical systems (i.e. infrastructure) to software aspects, such as management arrangements, financing mechanisms and institutional support. Finally, accepting mus as a service delivery approach also helps in differentiating it from Integrated Water Resources Management (IWRM). IWRM is about sharing water resources for different uses between sectors. MUS is about the development and management of infrastructure to provide

access to services. It owes to the holistic concept of IWRM, but is different in that its focus is on service delivery.

However, the service-delivery approach also received critique. If services are understood in a 'dependency culture', there is a risk that it may exclude self-supply options in which users themselves develop and manage infrastructure. It was suggested to explicitly include self-supply as a service delivery model. Secondly, it is noted that many practitioners in the sector relate themselves to the concept of systems, which to them also includes the service attributes mentioned. There may even be different use of the words "systems" and "services" in different sectors. Hence, there is a need to be clearer and more explicit on what service delivery entails.

Three domains of multiple-use service delivery

With these caveats mentioned above, MUS was accepted as a service delivery approach. With that acceptance, a distinction could be made between three domains of multiple-use. The first two are so called domestic-plus and irrigation-plus (also called productive-plus) approaches. These approaches apply to existing and new services, which can be more easily amplified in their service delivery objectives and activities. Domestic-plus services would refer to domestic services which provide a bit more water to accommodate small-scale productive uses at and around the homestead. Patrick Moriarty's paper argues that these mainly apply in (peri)-urban areas. Irrigation-plus would refer to the explicit provision of water for domestic uses, and other productive activities than field-irrigation in irrigation systems. Whereas these are generally well accepted and can be relatively easily addressed, the main challenge lies in rural areas, where many of the currently unserved live. In these areas, a paradigm shift is needed to a full multiple-use approach, which aims to meet people's multiple needs from the outset without any original sector bias. This represents a large group of potential future users. One of the discussion groups summarised it in the following diagram.

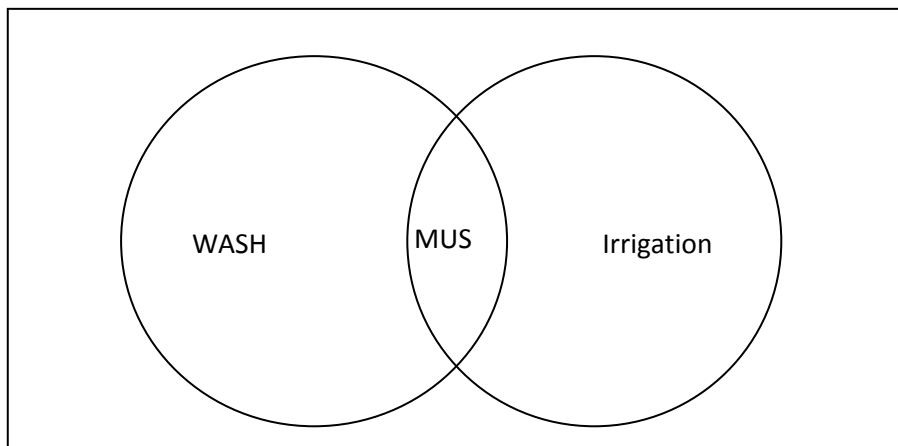


Diagramme showing the domain of MUS

The objectives, target groups and service provision options are different for each of these three domains. WASH currently focuses on provision of water for health, within a paradigm with an urban bias. Irrigation provides services for food production for rural farmers. MUS should be geared towards rural populations, particularly those currently unserved by irrigation systems. It would also need to define its service delivery objective. Discussions defined MUS objective as the provision of water for rural livelihoods which includes both health and production.

This also triggered a debate on levels of scale at which these services are provided. WASH services provide water to the homestead, and so would domestic-plus services. Irrigation provides water to

the fields. Irrigation-plus would also provide water for other uses at system level or community level. MUS is about meeting water needs at homestead level, as well as at community level.

Participants called for explicitly including sanitation and hygiene as part of multiple-use services. These are crucial for improvement in health of rural communities, and hence of people's livelihoods. In addition, there are opportunities for productive use of wastewater and dried human faecal material.

Impacts and benefits: MUS costs less

With a better definition of the objective of multiple-use services delivery and modalities of doing so, one can look at the expected impacts to be obtained and indicators for these. Expected and reported impacts are twofold: 1) improved livelihoods of users, and 2) more effective investments at system level. Improved livelihoods manifest themselves in increased production, improved health, additional income generation etc. A range of case studies, e.g. by Harischandra (2008) and Khawas and Mikhail (2008) reported such benefits. Renwick et al (2007) showed evidence from a large number of cases brought together in a global analysis. They link the size of these impacts to the level of access provided. In other words, for different levels of service provision, different levels of impacts on livelihoods can be expected. They also show that the additional costs of service provision can often be justified by the additional benefits.

The cost-benefit ratio becomes even more positive, when considering the fact that MUS allows economies of scale and efficiency in investment. Participants argued that we should emphasise the fact that MUS costs less. Investments in one service for multiple uses cost less than separate systems. Although evidence is still scarce, it can also be expected that multiple-use services are more sustainable, increasing life-spans and reducing annualised costs.



Introducing impacts of multiple-use services

The discussion on these impacts, led to a discussion on the need to further develop impact and performance indicators for mus. These would probably be something like “more livelihoods per drop, or per dollar invested”. They probably will also require a combination of quantitative and qualitative measures. With more clearly defined indicators benchmarks can also be developed, which will allow funders to take decisions on where to invest. All agree that this is a priority area for further research.

How to provide MUS services

The cases showed a wide range of ways in which multiple-use services can be provided. These included:

- Household options, often through self-supply. This includes for example experiences with rainwater harvesting in for example Thailand, rope pumps to increase water lifting and productive use of water at homestead level, but also point-of-use treatment options, so as to guarantee a minimal amount of potable quality water. Return on investments in such options is often very high (Holtslag, 2008). This even lead to the hypothesis that more progress towards the MDGs can be made by focusing on family-owned systems, rather than communal ones. However, not all agreed with that, recognizing that such options are not feasible in all circumstances.
- Developing new communal systems for mus. Examples include piped communal systems (Khawas and Mikhail, 2008) and small reservoirs (Harischandra, 2008; Adu-Wusu, 2008). Emphasis in these situations is given to also using open water sources to complement piped systems.



Appropriate technologies are considered crucial for multiple use services

often set targets, for example in l/p/d, or US\$/capita for investments. Accepting a MUS approach requires giving communities a bigger say in the service level (and hence costs) they aspire to, and could use. This requires careful participatory planning, and looking into different

- Addressing multiple-uses in existing domestic and irrigation systems. Systems which already have a reasonable level of access to water, can often much better provide water for multiple uses, by explicitly addressing it in operation and maintenance and management of the systems. Renault (2008) shows how multiple-use of water in large irrigation systems is addressed as part of efforts to move towards service-oriented management. Smits et al. (2008) conclude that small-scale productive use of water at homestead level can be relatively easily addressed in piped domestic systems in Honduras, by merely focusing on addressing it in management rules.

Looking across the cases, the following elements were identified as crucial to include MUS in projects and programmes:

- Appropriate technology. This not only applies to the mentioned household options, but also to communal systems.
- Following participatory planning approaches. Conventional approaches

investment scenarios. The question is what the most appropriate level of planning is. Probably it requires a combination of planning at community level for decision-making on individual's communities needs, as well as at either the watershed and/or district level. At those levels, economies of scale can be obtained by mobilizing multiple sources for multiple uses, and shared infrastructure.

- After-care. It was recognised that multiple-use service provision doesn't end with developing infrastructure only. After-care is needed to ensure continued performance and sustainability of services.

The discussions recognised that most MUS experiences remain so far at pilot scale. There is a need to move towards larger programmes, to further elaborate specify how multiple-use services programmes can be developed. Yet, participants expressed confidence that we have a solid base from the pilot experiences to further develop such programmatic models.

Scaling-up and institutional change

The final area of discussion was on approaches to scaling-up. It was recognised that scaling-up requires actions by a range of actors: water user groups, local government, line agencies, funders, NGOs etc. These all bring in skills and mandates needed to scale-up. By definition, MUS therefore requires a multi-stakeholder approach, which bring these together. Examples were shown on how learning alliances can facilitate such approaches, e.g. in Colombia and Nepal.

However, also many points of resistance are found, ranging from concerns on existing sectoral mandates to concerns on investments costs and technical design norms and standards. We need to understand these points of resistance and develop appropriate answers to these, and address them through action research, advocacy and awareness raising. At the same time, we need to think about incentives for changing, for example by emphasising how multiple-use can make the work of officials easier or more sustainable.



Brainstorming on scaling-up

Way forward

Based on the analysis of limitations to scaling-up and institutional change, participants looked into the way forward to overcoming these.

A call was made to develop country-specific strategies for MUS promotion and development. These would include activities such as mapping or assessment of the opportunities for mus development, advocacy and awareness raising, and capacity development. Above all, country-specific mus service delivery models need to be developed. That can only happen through pilot implementation at scale, combined with action-research and documentation. Multi-stakeholder approaches can bring such approaches together. Specific follow-up activities were developed for Ethiopia and Nepal, as both countries had relatively large delegations at the symposium from different agencies in their countries. Their full plans can be found in Annex 3.



The future of multiple-use services in Nepal

In addition to country-level activities, a number of activities need to happen globally. These can be divided in various categories.

- Policy advocacy. Continued effort is needed to promote MUS at policy level, and overcoming resistance to change. One group developed draft generic policy recommendations. After receiving inputs from the plenary session, this group will turn these into a policy brief, to be used amongst others at the 5th World Water Forum, where there will be 2 sessions on mus. Messages can be further adapted to different audiences, both globally and at country level.
- Research. During the symposium, a number of areas of further research were identified. The main focus of research was felt to be on the “how to” question, or, how multiple-use services can be provided in a sustainable manner. So, continued research would be needed on aspects such as technologies, governance of multiple-use services, and performance and impact indicators. The 2nd phase of the Challenge Programme on Water and Food (CPWF) provides an opportunity for such research. Linkages between the CPWF and the work of the MUS Group were further explored, and will be taken forward in the 2nd phase.
- Synthesis of implementation at scale. As mentioned above, further development MUS as service delivery model can only take place around implementation at scale. This is often context-specific. At the same time, there is an added value in synthesising across contexts and countries. The MUS Group offers a platform where such synthesis can take place. Also the CPWF will have synthesis activities on bringing research across context together.

- Networking. Participants at the MUS Group business meeting also acknowledged the work of the MUS Group in networking, and providing a platform for that. With an increased number of activities in different countries on MUS, the need for such networking is even greater. Discussions focused on how such networking can be continued or strengthened. Various potential activities were identified, such as establishing contacts for peer-assistance, the need for translation of documents and newsletter into Spanish and French, and the possibility to establish regional or country chapters of the MUS Group network. Further details can be found in the minutes of the MUS Group business meeting <http://www.musgroup.net/page/812>.

Conclusions

Reflecting upon the proceedings of the symposium, it was felt that as a MUS community we have achieved a high degree of understanding of the concept of MUS as a service delivery approach. In addition, there is a reasonably solid evidence base that MUS is a strong alternative approach to water service delivery particularly in rural areas. Many of the hypotheses formulated 5 years ago on what MUS could achieve and what would be needed to do so, have been confirmed. Or there are very strong indications that these hold true. In that sense, this symposium marked the end of the first phase of MUS-development, consolidating practical experiences and research findings into a model for service delivery.

If the symposium marked the end of the first phase, it also provided strong guidance for future work for its second phase. The overall focus of that second phase would be on elaborating MUS as a service delivery approach in all its attributes, such as objectives, performance indicators, technologies, etc. This will require implementation of MUS at scale across a range of contexts and countries. Research and documentation of implementation is then needed to define these service attributes and further consolidate the evidence base for mus. Such implementation at scale can only happen if there is adequate buy-in of all relevant stakeholders. Hence, policy advocacy and awareness raising are needed. At the symposium an attempt was made in developing policy recommendations. Last but not least, scaling-up will require continued networking across organisations and sectors, to exchange lessons learnt, synthesise findings across contexts and build up a critical mass of MUS expertise among practitioners and researchers. The MUS Group has been tasked to facilitate such networking, moving into the second phase of MUS.

Annex 1: list of participants

Name	Surname	Organization
Bekele	Abair	CRS
Hagossa	Abete	WRDB SNNPR
Adam	Abramson	Zuckerberg Institute for Water Research
Marieke	Adank	IRC
Cecial	Adhikari	Concern Worldwide Nepal
Ato Abebe	Ayewew	MoWR
Bert	Bakx	Aqua for All
Seleshi	Bekele	IWMI
Belayneh	Belete	HCS
Eline	Boelee	International Water Management Institute
Martin	Brakel van	WorldFish Center
John	Butterworth	IRC
Tamene	Chaka	RiPPLE
Bhojendra Kumar	Chhetry	Office of District Development Committee
Sunil Kumar	Das	Rural Village Water Resources Management Project (RVWRMP)
Paul	Deverill	UNICEF Ethiopia
Desta	Dimtse	RiPPLE
Abeta	Endeshaw	RiPPLE
Jojob	Faal	Overseas Development Institute
Eskindir	Feleke	Ethiopian Rainwater Harvesting Association (ERHA)
Abiti	Getaneh	Ministry of Water Resources
Fitsum	Hagos	IWMI
Jagath Kumara	Harischandra	Plan Sri Lanka
Larry	Harrington	Department of Crop and Soil Sciences, Cornell University
Paul	Hebert	Catholic Relief Service Kenya
Henk	Holtslag	Connect International
Martine	Jeths	IRC International Water and Sanitation Centre
Martin	Keijzer	Plan Netherlands
Narayan Singh	Khawas	Rural Village Water Resources Management Project (RVWRMP)
Barbara	Koppen van	International Water Management Institute
Zelalem	Lema	RiPPLE
Henk	Loijenga	Waterschap Velt en Vecht
Nadia	Manning-Thomas	IWMI
Eversto	Mapedza	IWMI
Fikir	Martin	
Robert	Meerman	RAIN Foundation
Tupac	Mejia	RAS-HON/FHIS
Anteneh	Mengiste	RiPPLE
Monique	Mikhail	International Development Enterprises
Wubalem	Negash	RiPPLE
Michael	Negash	WASH -1
Audrey	Nepveu de Villemarceau	IFAD
Madhab Raj	Neupane	KIRDARC Nepal
Alan	Nicol	RiPPLE
Stacey	Noel	Stockholm Environment Institute
Bishnu Maya	Paudel	Women Development Office
Frits	Penning de Vries	consultant
Lok Nath	Regmi	Office of District Development Committee
Daniel	Renault	UN FAO

Mary	Renwick	Winrock International
Ines	Restrepo-Tarquino	Universidad del Valle/Cinara
Sawaeng	Ruaysoongnern	Khon Kaen University
Laxmi	Shah	Women Development Office
Gokarna Prasad	Sharma	Office of District Development Committee
Rinku	Shrestha	Rural Village Water Resources Management Project (RVWRMP)
Mayling	Simpson-Hebert	Catholic Relief Service Kenya
Stef	Smits	IRC
Sam	Sternin	Bill & Melinda Gates Foundation
Joseph	Stocker	Water for All
Tesfaye	Tafesse	AAV-CDS (IDR)
Demekse	Tamisou	E/H/Zone-WRDO
Ganga	Tamrakar	DoLIDAR, Planning and Foreign Aid Coordination Section
Harry	Teuben	NGO Msele and NGO SOG Purmerend
Ian	Thorpe	PumpAid
Akihiro	Tsubaki	Ministry of Agriculture
Negosh	Wagesho	Arba Minch University (AU)
Simret	Yasubu	RiPPLE
Bob	Yoder	IDE International

Annex 2: opening speech by the Minister of Water Resources, Ethiopia

Dear Dr. Seleshi, Director of IWMI in Ethiopia, Dear Dr. John Butterworth, Coordinator of the MUS Group, Dear Dr. Alan Nicol, Director of the RiPPLE project, dear participants,

I am honoured to open this important international meeting here in Addis Ababa on a topic that is of key relevance to Ethiopia and the wider region in which we are situated.

Access to water is one of the major constraints to development countries like Ethiopia is facing. This begins right down at the local level where household's lack of access to this precious resource from wells, boreholes and protected springs seriously hampers development, and perpetuates poverty. We therefore recognize the importance of improving access to water supplies in our Universal Access Plan. The successful completion by 2012 of the UAP will enable 99.5% of the population to have access to improved sources at a close (1.5km for rural and 0.5km for urban) distance, alongside access to sanitation. In that way, the UAP will be supporting our PASDEP and other major development objectives of the government. The concerted effort by all organizations working in the sector will be very important in order to achieve the target.

However, we recognize that what households are then able to do with the resource is of major importance to lifting people out of poverty and preventing others from slipping below the poverty line. Access to water for basic domestic uses alone is not sufficient. People also require access to water for small-scale productive uses. Food security still is one of the major points on the agenda of the Government of Ethiopia. Food production needs to be stimulated, particularly at the local level. This can also create a bigger impuls to the economies. The provision of access to water for productive uses is crucial in that. Investing in access to water for domestic uses and for production at the same time has many advantages among which:

Greater synergies in investments and economies of scale can be obtained by developing services which provide for these needs at the same time. A much greater impact on poverty can be achieved, as the benefits obtained from domestic and productive uses are mutually reinforcing, and allow greater impact on people's health, income and food-security status. The approach of providing services for multiple uses of water at a local level is therefore of major importance, and we believe that this symposium provides a valuable recognition of this need.

However, we need to go beyond merely recognition. As government agency, we need to enhance our understanding of *what* kinds of technical and management systems can help to support multiple use, *how* people can use the resource to improve their lives and how we can integrate our actions in the design and delivery of better services with work in other sectors. Much can be learned from what is already happening in practice. Interest in multiple-use of water is on the rise in Ethiopia. In recent years several organizations working in the Ethiopian water sector have been implementing and upgrading systems that provide multiple uses of water. I believe that in other countries similar experiences exist which can provide relevant lessons for Ethiopia and vice-versa.

At your previous symposium in 2003 in Johannesburg, South Africa was the first country in the region to develop a policy on multiple-use. I think that the time is ready to also take this up in policies of other countries in Africa and elsewhere. Looking at the objectives of this symposium on Multiple-Use Services, I see that you aim to provide a platform for sharing lessons on how to apply this approach, and that you plan to discuss the way forward of this approach. These are very relevant objectives, which I hope provide answers to the questions posed above, so that we can

move forward in putting the multiple-use approach into action and into policy. I therefore very much hope that the findings of this meeting can be synthesized and fed into our annual Multi-Stakeholder Forum. In addition, I hope that lessons can be shared widely beyond Ethiopia, such as through the upcoming international WEDC conference that is being held in May of next year, and at the 5th World Water Forum, where policy makers from all over the world meet.

With that, ladies and gentleman, thanking the organizing institutions to give Ethiopia a chance to host the symposium, I wish you every success in your meeting and welcome you all to Ethiopia!

Thank you,

On behalf of His Excellency, Ato Asfaw Dingamo, Minister of Water Resources, Ethiopia

Annex 3: way forward in Ethiopia and Nepal

Ethiopia

1. **Assess** the existing MUS practices, knowledge and mapping them (by RiPPLE and key stakeholders), by action research activities
2. Conduct **national level MUS workshop** (link to FLoWS) > influence policy makers
3. Identify key stakeholders in MUS at all levels (through FLoWS organizers: MoWR and RiPPLE)
4. Establish MUS **network**/groups (at all levels)
 - a. Share information
 - b. Influence/initiate to have a national **MUS** day
 - c. Promote MUS in water related workshops (MoWR)
5. Develop **action plan** to promote and practice MUS to all levels
 - a. Action Research
 - b. Advocacy
 - c. Develop guidelines and manuals
 - d. Policy reviews

Nepal

Existing MUS related activities

- Nepalese community adopted MUS traditionally
- Different MUS implementer agencies working differently as per their different working modalities
- IDE/WI initiated from R&D stage with DWS & Micro-irrigation
- RVWRMP promoted those types of MUS with the WUMP (Water Uses Master Plan) & integrating micro-hydropower components as well
- Ineffective coordination with different groups (DOI, DOA, Fund-Board, WUA's (drinking & irrigation), NGOs INGOs, bilateral)

Next steps

- Establish **MUS Working group** (Learning Alliance) > (RVWRMP, IDE/Concern/Winrock...)
- **Advocacy** at different levels
 - Compilation, dissemination of best MUS practices & performance indicators
 - Information dissemination at local government and their capacity building
- MUS **strategy** drafting at **district** level (DDC+RVWRMP+IDE+KIDARC)
- **Feedback to policy** at MLD
 - Formation of Steering Committee (RVWRMP & DDC)
 - Approval of working guidelines/approaches/modality