

ASSESSMENT OF THE PERFORMANCE  
OF THE SERVICE DELIVERY MODEL  
FOR POINT WATER SOURCES  
IN UGANDA



a research study report

# Assessment of the Performance of the Service Delivery Model for Point Sources in Uganda

## Final Research Report

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### By:

Valerie Bey, Programme Officer, IRC. Email: [bey@irc.nl](mailto:bey@irc.nl)

Peter Magara, National Learning Facilitator Triple-S Uganda. Email: [magara@irc.nl](mailto:magara@irc.nl)

Joseph Abisa, Research Officer, Triple-S Uganda. Email: [abisa@irc.nl](mailto:abisa@irc.nl)

## EXECUTIVE SUMMARY

Uganda has three existing Service Delivery Models (SDMs) for rural water supplies: two models under the Community Based Management System – one for point sources, managed by Water Source Committees (WSCs), and one for piped schemes, managed by Water Supply and Sanitation Boards – and the Self Supply model. These SDMs for rural water supply are being promoted and implemented across the country with varying levels of success. Data collected as part of the routine monitoring by the Ministry of Water and Environment, highlights for instance the low functionality of Water Source Committees and the stagnation of the functionality of water sources, suggesting that the current rural water supply SDMs need to be improved in order to provide better services.

This study focuses on the Service Delivery Model for point sources, or WSC SDM, in 8 selected districts of Uganda: Alebtong, Lira, Kitgum and Nwoya in the Technical Support Unit (TSU) 2, and Kabarole, Kamwenge, Kasese and Kyenjojo in TSU 6. As any proposal for improving the WSC SDM needs to be grounded on a good knowledge of the current situation, this report contains a description of the model (as outlined in national sector documents), followed by an assessment of the performance of this Service Delivery Model, and an analysis of success factors and weaknesses. The study looks at the traditional WSC SDM, but also at two innovations within the management system (which is one part of the SDM): the involvement of Hand Pump Mechanics Associations (HPMAs) in Kasese district and the integration of community-led savings and credit initiatives in financing operation and maintenance (in Kamwenge district).

The performance of the WSC SDM is measured against a set of Service Delivery Indicators (SDIs) that were specially designed for this purpose. These SDIs describe how water supply services are delivered and supported across the different levels of service delivery:

- Service delivered
- Users' level
- Service provider level (WSC)
- Service authority level (sub-county and district)

Data was collected from each of these four levels in order to measure the compliance of the WSC SDM with the prescribed norms and guidelines found in national policy documents.

Findings from the study reveal that the great majority of households, between 88% and 97% depending on the district, access sub-standard water service, i.e. a service that doesn't meet the basic norm for at least one of the four water parameters (quality, quantity, accessibility and reliability). In particular, the quantity of water accessed (in TSU 6 districts) and the reliability of facilities were found to be very low. However, reliability is significantly better in the two districts where innovations to the standard management system have been found. The level of service is generally not influenced neither by the performance of the Water Sources Committees, nor by any of the service authority (sub-county or district). The only factors that seem to have an impact on the service are the payment of water fees by users and the performance of the districts, both having a positive correlation with the reliability of the facilities.

At users' level, the study focused on users' satisfaction and participation in the management and maintenance of their water facility. The level of users' satisfaction is in general higher than the level of service people actually receive. The level of service, the performance of the WSC or the performance of the service authority do not seem to have any influence on users' satisfaction. The level of participation of users in the management and maintenance of the water sources was found fairly low. However, a better performing Water Source Committee does contribute to increased participation of users in the management and maintenance of the water facility. Although the policy framework clearly states that communities are responsible for the management and maintenance of their water facilities, including for preventive maintenance and repairs, and payment of required funds, this in practice happens to a limited extent only. The very low payment for water may be due to different reasons, e.g. a very low demand for improved water sources, lack of trust of water users in their WSC when it comes to managing collected funds, weak sense of ownership among the communities, the feeling that water should be a free commodity, or insufficient post-construction support to service providers.

The performance of the Water Source Committees, based on a self-assessment, was found quite low, in particular in TSU 6. The two districts in TSU 6 where committees are doing better are the ones where innovations to the standard management system have been found. The situation is better in TSU 2, where many committees probably have been established more recently. Performance of WSCs improves when districts are better performing, in particular in the provision of post-construction support. Sub-county (S/C) performance doesn't positively influence the performance of committees. This may be due to various reasons: there may be a threshold effect, i.e. a S/C would need to be above a good performance level to have any effect on the performance of the committees, or it may be that the capacity of the WSCs is so low that it cannot absorb the support in an optimal way. In addition to more efficient post-construction support by the service authority, some professionalisation of the service provider



function seems necessary, and a number of options are proposed: establishing sub-county based water user associations, privatising management of point water sources at sub-county level, or promoting Sub-county based Water Supply and Sanitation Boards.

Considering the service authority level, most sub-counties have an overall performance that is below the benchmark or just reaching it. The overall performance of the districts was found better than the one of sub-counties. Three areas were identified as critical gaps at the service authority level:

- an institutional gap at sub-county level as regards to the provision of water services, calling for a structure at S/C level with a focal person for water there;
- limited resources both at S/C and district level, both in terms of staffing and financial resources, and notably for post-construction support activities. For example, in 2012, Kabarole district only allocated USD 0.005 per capita per year to these activities.
- A weak coordination between stakeholders, leading to non harmonised approaches and conflicting messages delivered to the water users, hence undermining sense of ownership within the communities.

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## ABBREVIATIONS AND ACRONYMS

CapEx	Capital Expenditure
CapManEx	Capital Maintenance Expenditure
CBMS	Community-Based Management System
CBO	Community-Based Organisation
CDO	Community Development Officer
DIM	District Implementation Manual
DLG	District Local Government
DWD	Directorate of Water Development
DWO	District Water Office
DWSCC	District Water and Sanitation Coordination Committee
DWSCG	District Water and Sanitation Conditional Grant
ExpDS	Expenditure on Direct Support
FGD	Focus Group Discussion
GoU	Government of Uganda
HA	Health assistant
HPM	Handpump mechanic
HPMA	Handpump Mechanic Association
IRC	IRC International Water and Sanitation Centre
JPF	Joint Partnership Fund
km	Kilometre
LG	Local Government
lppd	Litres per person per day
M&E	Monitoring and Evaluation
MIS	Management Information System
MoFPED	Ministry of Finance, Planning and Economic Development
MoU	Memorandum of Understanding
MWE	Ministry of Water and Environment
NETWAS	Network for Water and Sanitation Uganda
NGO	Non Governmental Organisation
O&M	Operation and Maintenance
OP-5	Operational Plan for the 5-year period 2002-2007
OpEx	Operating and minor maintenance Expenditure
QIS	Qualitative Information System
PCS	Post Construction Support
RGC	Rural Growth Centre
S/C	Sub-county
SDA	Service Delivery Approach
SDI	Service Delivery Indicator
SDM	Service Delivery Model
SPR	Water and Environment Sector Performance Report
SWAp	Sector Wide Approach
Triple-S	Sustainable Services at Scale
TSU	Technical Support Unit
UGX	Uganda Shilling
UNICEF	United Nations Children's Fund
USD	US Dollar
UWASNET	Uganda Water and Sanitation NGO Network
WASH	Water Sanitation and Hygiene
WSC	Water Source Committee
WSSB	Water Supply and Sanitation Board



# 1 INTRODUCTION

## 1 INTRODUCTION

**Sustainable Services at Scale (Triple-S)** is a six year multi-country learning initiative that seeks to improve sustainability of rural water services and to bring about greater harmonisation through increased sector capacity. Triple-S aims to contribute to the realisation of indefinitely sustainable water services delivered at scale by supporting a paradigm shift at the operational level for decentralised service delivery and bringing about a re-appraisal of the design and planning mechanisms used in the rural water supply sector. It is an initiative of the International Water and Sanitation Resource Centre (IRC) in the Netherlands, and it is currently being implemented in Burkina Faso, Ghana and Uganda.

In Uganda, Triple-S operates as a consortium comprising the Ministry of Water and Environment (MWE) / Directorate of Water Development (DWD), IRC, Network for Water and Sanitation Uganda (NETWAS) and the Uganda Water and Sanitation NGO Network (UWASNET).

Triple-S seeks to identify and understand the key challenges and bottlenecks that are currently confronting rural water service delivery in Uganda and to pilot and test new ways of improving the delivery of rural water services. The initiative does this through a rigorous process of learning and research which involves the full range of stakeholders in the rural water sector, both at national and decentralised levels. Initially, Triple-S has been carrying out activities in two pilot districts, Kabarole and Lira; but it also started implementing some learning and research work in neighbouring districts, with the aim to scale up to more districts after the pilot phase.

### 1.1 Service Delivery Approach, Service Delivery Models, and Management Systems in Uganda

The Service Delivery Approach (SDA) is at the heart of Triple-S. It is a strategic concept for improving long-term rural water services at scale and ensuring sustainability. The approach focuses on the water service received by a population, rather than on the system by which the service is delivered, where access to a water service is described in terms of a user's ability to access a given quantity of reliable and affordable water, of an acceptable quality, at a given distance from her or his home. It promotes a planned approach to provision to a district-wide (or equivalent) population, with attention paid to maintaining the service at an acceptable level indefinitely.

A Service Delivery Model (SDM) is the 'how to' of applying the service delivery approach and includes the following:

- policy and legislation at national level;
- the service to be delivered (level of quality, quantity, reliability, accessibility);
- the infrastructure used to deliver the service;
- the management system needed to operate and maintain the infrastructure;
- the revenue mechanism that will make the service financially sustainable; and
- the support to providers at local level.

SDMs are always country-specific and guided by the country's existing policy and legal frameworks. These frameworks define the norms and standards for water supply; the roles, rights and responsibilities of the providers and users of the service; and financing mechanisms at national level. SDMs thus cut across different institutional levels. They differ by level of service delivered, type of infrastructure and management arrangements.

The Uganda Country Study<sup>1</sup> undertaken as part of the initial work of Triple-S found that Uganda has three

<sup>1</sup> Nimanya, C., Nabunnya, H., Kyeyune, S. and Heijnen, H., 2011. *Uganda: Lessons for Rural Water Supply; Assessing progress towards sustainable service delivery*. The Hague: IRC International Water and Sanitation Centre and Kampala: NETWAS. Available at [http://www.waterservicesthatlast.org/countries/uganda\\_triple\\_s\\_initiative/overview\\_country\\_report](http://www.waterservicesthatlast.org/countries/uganda_triple_s_initiative/overview_country_report)

existing SDMs for rural water supplies. These include two models under the Community Based Management System (CBMS) – one for point sources, managed by Water Source Committees, and one for piped schemes, managed by Water Supply and Sanitation Boards (WSSBs), and the Self Supply model. CBMS was introduced in the country in 1986 under a national programme supported by UNICEF. CBMS emphasizes communities' responsibility and authority over the development and Operation and Maintenance (O&M) of their facilities. The Uganda Operation and Maintenance Framework (2004, updated in 2011) recognizes this approach as the best option for O&M of communal water supply facilities in rural areas and Rural Growth Centres (RGCs), due to its benefits in terms of sustainability, empowerment of communities and low cost nature.

Main features of the three main SDMs found in rural Uganda are as follows:

- For point sources (boreholes and dug wells, fitted with a handpump or not, protected springs), each water user group organises itself by forming a Water Source Committee - WSC (sometimes also called Water Source Committee - WSC) to manage and oversee the O&M of the water facility. This SDM is the main model applied in rural areas of Uganda nowadays
- Water Supply and Sanitation Boards (WSSBs) are normally in charge of the management of small piped water schemes, often found in Rural Growth Centres (RGCs). The small schemes usually have simple technologies and piped networks, and the main distribution takes place through public water taps or kiosks, although some private and institutional connections also exist.
- Self-supply initiatives refer to private initiatives by individuals, households or community groups to build, improve and manage their own private water supply systems, without or with only limited help from government or non-governmental organisations (NGOs). The individual, household or group provides the bulk of the investment cost for the building / upgrading of the water facility, either in cash or kind. In Uganda, self-supply initiatives can take many forms: a few logs across a waterhole; an earth bund around a waterhole to divert runoff; a protected natural spring or shallow groundwater source; a hand-dug well constructed by a householder and shared with neighbours; a simple handpump to lift water from very shallow depths; the widespread use of rainwater, etc. Although self-supply is not yet formally recognised in policy, the Ministry of Water and Environment (MWE) has already strengthened its support to this model, with for example the drafting of a national framework to guide self-supply efforts and activities.

## 1.2 Rationale and Scope for the Study of the Service Delivery Model for Point Sources in Uganda

The three main SDMs for rural water supply described above are being promoted and implemented across the country with varying levels of success. The Water and Environment Sector Performance Report (SPR 2011) reveals that only 71% of the management structures (WSCs and WSSBs) in rural areas are currently functional. This implies inefficiencies in the technical and administrative management of the water systems, and is likely to lead to delays in operation and maintenance activities and in addressing of system breakdowns. In addition, in Uganda the functionality of point water sources over the last five years has stagnated at 80%-83% despite the continued investment in rural water supply. This suggests that the current rural water supply service delivery models, including the WSC SDM, need to be improved in order to provide better services.

Any proposal for improving the existing SDM for point sources needs to be grounded on a good knowledge of the current model. For this reason, Triple-S has embarked in an exercise of describing and assessing the performance of this service delivery model. This cross-sectional study is the subject of the present report.

As highlighted in the definition, one component of a SDM is the management system in place for ensuring the operation and maintenance of the infrastructure. A management system refers to the institutional arrangements for the provider of the water service, and the support and technical assistance offered to this service provider.

This study dealt with the analysis of the **SDM for point sources** in rural areas of Uganda. As under CBMS point sources are managed by WSCs, in this report this SDM will also be referred to as the **WSC SDM**. As highlighted in the definition, a SDM comprises a number of elements, which are however not all covered in this study. The study focused on the operational aspects of the WSC SDM, looking at:

- the service delivered (level of quality, quantity, reliability, accessibility);
- the management system in place to operate and maintain the infrastructure (including the support and technical assistance offered at local level to the provider of the water service);
- some activities that are the responsibilities of the local government, such as planning, provision and monitoring of water facilities, coordination of stakeholders, etc.

This study not only focuses on the traditional model, but also looks at several local innovations within the WSC management system that have been identified, presented and discussed during various fora and learning events<sup>2</sup>

<sup>2</sup> Such as National Learning Forums, Regional Learning Forums, Inter District Meetings, or Triple-S inception meetings in Lira and Kabarole districts among others

in Uganda. For example, some of the innovations within the WSC management system include the involvement of Hand Pump Mechanics Associations (HPMAs), or the integration of community-led savings and credit initiatives in financing O&M. Some of these innovations have been in existence for over 10 years but had not yet been scaled up within districts or regions at the time data was collected for this research. These innovations offer nonetheless great opportunities for information sharing and possibly replication, therefore some of these are also looked at within this research.

### 1.3 Objectives of the Research on the WSC SDM in Uganda

The objectives of this research are:

1. To describe the WSC service delivery model, and some innovations within the standard management system, particularly in terms of roles and responsibilities of all stakeholders.
2. To assess the performance of the WSC SDM in terms of service delivery and compliance of stakeholders with their roles and responsibilities, based on an agreed set of service delivery indicators. Service delivery indicators (SDIs) are indicators that describe the way in which water supply services are delivered and supported. Such indicators have been developed in different countries, such as Ghana (within the Triple-S initiative), Colombia (for a study done for the Inter-American Development Bank<sup>3</sup>), and in Uganda for the present study.
3. To examine success factors and weaknesses of both the standard WSC SDM and adapted innovations within the corresponding management system.
4. To identify opportunities for improving the WSC SDM for further piloting and testing.
5. To establish a baseline of service delivery performance in the study districts.

In a nutshell this research hence looks at how the WSC SDM “should be”, how “it actually is” (including some innovations), what the success factors and weaknesses are, to then formulate relevant recommendations.

### 1.4 Structure of this Report

This research report starts with a presentation of the conceptual framework and methodology for the study, including a short description of the process for developing the service delivery indicators, and of the methodology used for data collection and analysis. This is followed by a brief description of the WSC SDM, looking at the institutional framework, financing mechanisms, planning and implementation cycle, technologies, O&M and related institutional support mechanisms, monitoring, and presenting some innovations within the traditional management system. The performance of the WSC SDM is then measured and analysed, using the developed Service Delivery Indicators. Success factors, weaknesses and opportunities for this service delivery model and innovations within the corresponding management model are then discussed. The report ends with the presentation of a number of recommendations, for building on existing strengths of the studied SDMs, addressing weaknesses and seizing opportunities.

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<sup>3</sup> Smits, S. et al., 2012, *Gobernanza y sostenibilidad de los sistemas de agua potable y saneamiento rurales en Colombia*, Inter-American Development Bank, <http://www.es.irc.nl/page/73773>



# 2 CONCEPTUAL FRAMEWORK AND METHODOLOGY

## 2.1 DEFINITION OF FUNCTIONS IN RURAL WATER SERVICE DELIVERY

Within the conceptual framework developed by Triple-S for rural water service delivery, various institutional levels are considered. The definition of these levels is based on functions related to service delivery. Broadly speaking, three distinct groups of functions can be identified:

- Service provider functions  
The service provider is the organisation or operator that manages and delivers the water service to a defined population in a defined service area, taking care of operation, maintenance and administration of the system. In the case of community-based management the service provider therefore is the entity at community level, but for this study, the WSC, which carries out day-to-day operation of the physical system, including preventative and corrective maintenance, book keeping, tariff collection, etc is the service provider.
- Service authority functions  
The service authority is the body – often district local government or equivalent – with legal responsibility for guaranteeing a water service in a defined area, fulfilling functions such as planning, coordination, oversight of water services. It may be the legal owner of assets but not necessarily so. In some cases, it may also have delegated functions of regulation. The service authority usually is responsible for technical assistance to providers of the service, but can contract this out to an association of community-based providers, a non-governmental organisation (NGO) or the private sector.  
In the case of Uganda, tasks related to the service authority functions are split between two administrative levels: districts and sub-counties<sup>4</sup>.
- Policy and normative functions  
This refers to the overall enabling environment where sector policy, norms and regulatory frameworks are set, service levels defined, and macro-level financial planning and development partner coordination takes place. In Uganda, these functions are fulfilled at the national level. It can also be the level at which learning, piloting and innovation is funded and promoted. Overall sector guidance and capacity building is set by this level of authority.

This research is therefore focusing on the performance of the service providers and service authorities, as well as on the level of service delivered, in the study areas. Although also part of the service delivery model, the fulfilment of the policy and normative functions at national level are outside the scope of this study.

## 2.2 Methodology

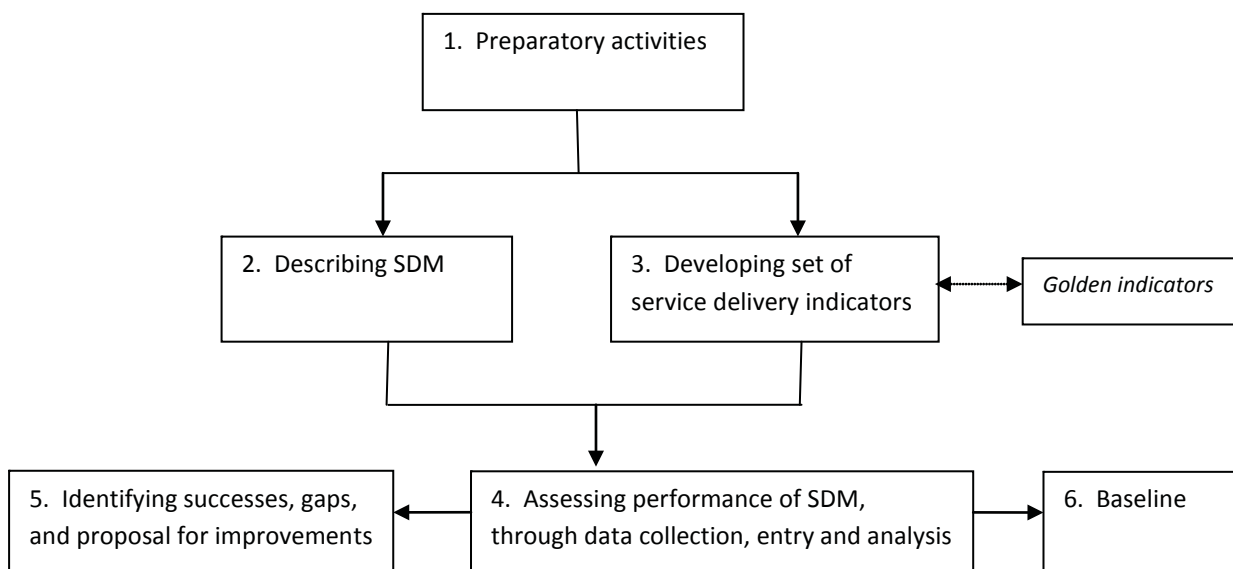
This section describes the general flow of the study, as well as the methodology that was used at the different stages, from preparatory activities, development of the service delivery indicators, development of data collection tools, sampling and data collection, data entry and analysis. Challenges encountered while conducting the research are also mentioned.

### 2.2.1 Flow Diagram for the WSC SDM Study

The study of the service delivery model for point sources encompassed a range of activities, such as a desk-based description of the model according to the national guidelines and standards, the development of service delivery indicators, the assessment of model against the developed indicators, documentation of the findings and formulation of recommendations.

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<sup>4</sup> In Uganda, districts are divided into counties (in rural areas) and municipalities; the counties are in turn divided into sub-counties, which are further divided into parishes and villages.



**Figure 1: Flow Diagram for the study of the SDM for point sources in Uganda**

Step 1: Preparatory activities

These activities included the development of a concept where the research plan and methodology are described, as well as the introduction of the research team to the some of the methodologies to be used for the study.

Step 2: Describing the service delivery model

After sharing the concept note with key stakeholders at the national level (functionality working group), a table of content for the description and analysis of the WSC model was developed. This was followed by a desk review of national guidelines and frameworks describing the model. Information gaps were filled through key informant interviews.

Step 3: Developing set of service delivery indicators

The aim of the study being to assess the performance of the WSC SDM in terms of service delivery and compliance of stakeholders (users, service providers and service authority) with their roles and responsibilities, service delivery indicators (SDIs) were developed to measure and qualify this performance. A framework for the development of SDIs for the WSC model, based on national policies, guidelines and strategies was first drawn. An initial draft of indicators was prepared with the involvement of various sector stakeholders, and then discussed; key informant interviews were undertaken to fill any gap. The final first draft of the indicators was then presented to the functionality working group & MWE Senior Management Team for validation. The detailed methodology for developing the indicators and their list is presented in part 2.2.2.

Step 4: Assessing performance of SDM, through data collection, entry and analysis

Data collection tools were first developed, based on the information required for the calculation of the value of the service delivery indicators. Data was then collected in 8 selected districts. After collection, data was entered in Microsoft Excel and analysed. The process for the development of data collection tools, sampling and data collection, as well as data entry and analysis are described in parts 2.2.3, 2.2.4.

Step 5: Identifying successes, gaps, and proposal for improvements

The statistical analysis made during Step 4 permitted assessing the performance of the WSC SDM in the selected districts as regards to service delivery and compliance of local stakeholders with their assigned roles and responsibilities. A comparative analysis of the standard WSC SDM and of the innovations within the management system was also made, success factors and weaknesses identified, and recommendations formulated. The interpretation of the analysis results was carried out in consultation with key sector stakeholders, with for example data interpretation and validation meetings held at district level. During these meetings, district and sub-county staffs also provided additional information that helped interpreting the results.

Step 6: Establishing baseline of the service delivery status

The analysed data constitutes a baseline of the status of rural water service delivery in the 8 districts where the study was undertaken.



## 2.2.2 Development of Service Delivery Indicators – SDIs

Before developing SDIs, indicators currently in use in the sector were reviewed, with the idea of aligning as far as possible the SDIs with existing monitoring systems and practices. The Water and Sanitation sub sector in Uganda uses 11 Golden Indicators to measure performance of WASH service delivery. Six of these 11 indicators were found relevant for rural drinking water service delivery:

- Access: % of people within 1 km of an improved water source
- Functionality: % of improved water sources that are functional at time of spot-check
- Per Capita Investment Cost: Average cost per beneficiary of new water and sanitation schemes
- Water Quality: % of water samples taken at the point of water collection that comply with national standards (for rural protected sources, E. Coli)
- Equity: Mean Sub-County deviation from the National average in persons per improved water point
- Management: % of water points with actively functioning Water Source Committees
- Gender: % of Water Source Committees with women holding key positions.

The golden indicators provide good information about the adherence to a number of service delivery norms (quality, distance, access, management structure), but they also have a number of limitations. The indicators do not provide for example information on the underlying reasons for the service actually received by users, on tariff recovery arrangements, on the actual service performed by service providers, or on the performance of authorities responsible for monitoring and regulating services, yet these are key in ensuring sustainability of the service.

SDIs therefore can complement the Golden Indicators by keeping track of the actual service received, performance of service providers and authorities, which can help devising remedies to ensure that users have continuous access to water. SDIs were therefore designed in such a way that they can describe how water supply services are delivered and supported across the different levels of service delivery:

- Service delivered
- Users' level, looking at users' satisfaction and sense of ownership of the water facilities<sup>5</sup>
- Service provider level
- Service authority level

The process of developing SDIs involved a number of steps that included the review of WASH sub sector policies and guidelines, followed by the translation of performance standards, roles and responsibilities of stakeholders into measurable parameters, which were used to develop indicators.

### Step 1: Review of policies strategies and guidelines

The review of policies and strategies was an important step that provided information on the parameters of the service, and on the roles and responsibilities of stakeholders at different levels. The list of policy and guideline documents reviewed is shown below:

- i) National Water Policy 1999
- ii) Water Act 1997
- iii) National framework for Operation and Maintenance of Rural Water Supplies - March 2004
- iv) District Implementation Manual 2007
- v) Rural Water Supply and Sanitation Handbook for Extension Workers: Volume I – Community Management
- vi) Rural Water and Sanitation Operational Plan (2002 – 2007)
- vii) Sectoral Specific Schedules/Guidelines for the Water and Sanitation Sector, 2009/10

### Step 2: Developing Service Delivery Indicators for the study

The information on performance standards, stakeholders' roles and responsibilities gathered from the review of national policies and guidelines was used as a basis for developing parameters to assess the performance of stakeholders and services. These parameters were then translated into indicators at different levels of service delivery, which were validated with stakeholders at district and national level. The detailed process is presented in the next step, while the table below shows the list of SDIs, together with a brief description of the tracked parameters.

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<sup>5</sup> In all this report, by ownership we mean the sense of ownership what users have (or do not have) regarding their water facility. Here we do not look at aspects such as legal ownership.

<p><b>1. Service delivered</b> Parameters of the water service in terms of water quality, quantity, distance of the water point and reliability of the facility</p>
<p><b>2. Water User Level</b></p> <p>1.1. Users' satisfaction with the service delivered <i>Users' satisfaction with the quality of water (colour, taste, odour, hardness), quantity of water, distance of the water source, reliability of the water system, affordability of the service</i></p> <p>1.2. Users' participation in the management and maintenance of the water source <i>Level of participation of users in key activities for management and maintenance of the water source: payment of water fees and keeping the water source clean, as indicators of their sense of ownership</i></p> <p>1.3. User's hygiene &amp; sanitation behaviour <i>Access of water users to toilets with proper hand washing facilities</i></p>
<p><b>3. Service Provider Level</b></p> <p>1.1. WSC composition, capacity &amp; internal processes <i>Presence of an elected and gender-balanced WSC; WSC training and regular retraining; way decisions are taken by the committee</i></p> <p>1.2. WSC administrative tasks &amp; accountability mechanisms <i>WSC holding executive meetings and meetings with users, keeping and displaying financial &amp; management reports, and formulating local water user rules</i></p> <p>1.3. WSC involvement in operation &amp; maintenance of water facilities <i>WSC collecting user fees and providing feedback to users on O&amp;M funds, carrying out preventive maintenance, and calling Handpump Mechanics to carry out minor repairs</i></p>
<p><b>4. Service Authority Level</b></p> <p>1.1. Resources of the District Water Office (DWO) <i>Resources in terms staff, equipment and availability of key sector documents</i></p> <p>1.2. District planning, procurement and contract management <i>Level of compliance of the district planning, procurement and contract management with the Public Procurement and Disposal of Public Assets Authority (PPDA)</i></p> <p>1.3. Community mobilisation by sub-county during the provision of the water facility <i>Level to which community mobilisation and participation was done applying the 6 critical requirements contained in the OP-5 (Operational Plan for the 5-year period 2002-2007)</i></p> <p>1.4. Utilisation of District Water and Sanitation Conditional Grant (DWSCG) as per the prescribed formula or not</p> <p>1.5. Support, Supervision &amp; Monitoring to service provider by the district <i>Whether the DWO has a plan in place for providing technical support to WSCs, whether technical support is provided in line with the plan, and whether the DWO monitors the performance of water services and updates the Management Information System</i></p> <p>1.6. Post-construction management support &amp; supervision by sub-county to WSCs <i>Support from the sub-county to WSCs in the areas of software information on behaviour change and environmental issues, sanitation &amp; hygiene promotion; retraining of WSCs; monitoring of records and finances; conflict resolution</i></p> <p>1.7. Support, Supervision &amp; Monitoring to Handpump Mechanics (HPMs)/local artisans by the district <i>Availability of an updated inventory of trained artisans and HPMs; HPMs/local artisans regularly reporting to the sub-county &amp; DWO on services delivered and issues; functional spare parts supply mechanism decentralised to district/sub-county level; existence of an association of HPM/ artisans at district level</i></p> <p>1.8. Coordination and harmonising of District Local Government (DLG) Departments, non-governmental organisations (NGOs) &amp; community-based organisations (CBOs) involved in rural water service delivery <i>Existence of a functional District Water and Sanitation Coordination Committee (DWSCC), representative of stakeholders involved in the provision of water, sanitation and hygiene (WASH) services in the district, ensuring coordination at decentralised level, synergies and partnerships between government and other stakeholders resulting in more efficient use of resources, as well offering opportunities for learning.</i></p> <p>1.10. Support &amp; Supervision to Districts and sub-counties by Technical Support Unit (TSU) <i>Support and monitoring of performance of districts and sub-counties by TSU in the areas of reporting, mapping and monitoring; ensuring adherence to policies / guidelines; "ad-hoc" technical support and capacity building; supporting coordination at district and inter-district levels</i></p>

**Table 1: Overview of Service Delivery Indicators developed for the study**

### Step 3: Defining scoring tables using Qualitative Information System (QIS)

One important aspect during the development of service delivery indicators was to promote participatory monitoring methods that help reflection at local level. This was addressed by using the Qualitative Information System (QIS) methodology for most of the indicators. QIS is a methodology that is used to quantify people's perceptions against a set of micro scenarios that describe performance using a nominal scale that is developed with the concerned group.<sup>6</sup> The methodology provides people with the opportunity to assess and reflect on their own performance and to receive on spot feedback on the improvements required. Besides the collection of data on current performance level, this methodology has the potential of influencing stakeholders to improve their attitudes and practices.

Below is an example of a QIS table:

<sup>6</sup> For more information on the QIS methodology, see for example Christine Sijbesma and Leonie Postma, "Quantification of qualitative data in the water sector: the challenges", Water International, Vol. 33, No. 2, June 2008, 1–12. Available at <http://www.irc.nl/docsearch/title/1717981>



<b>Observation</b>	<b>Score</b>
There is no WSC in place	0
WSC holds at least 1 executive meeting in a year but has no records	25
Bench Mark: WSC holds quarterly meetings with the executive & users, and keeps records	50
WSC holds monthly executive meetings & quarterly meetings with users, keeps up to date records and formulates local water user rules	75
Ideal Situation: WSC holds monthly executive meetings & quarterly meetings with users, keeps up to date record, formulates local water user rules, keeps and displays financial & management reports at key strategic points	100
Reasons for the score:	

**Table 2: Indicator on Management & Governance - WSC administrative tasks**

key national stakeholders reviewed the SDIs and developed corresponding QIS tables to rate performance of stakeholders in fulfilling their roles and to measure perceptions of users on satisfaction with services received. These were then validated and updated with district level stakeholders in Kabarole and Lira, and with staff from the Technical Support Unit (TSU) 2. ANNEX 2 shows the QIS tables developed after validation with district level stakeholders.

After the analysis work, the draft set of indicators were reviewed and refined. The work done on service delivery indicators in the context of this research fed into the development and application of a performance monitoring framework of rural water services in Uganda.

### 2.2.3 Development of data collection tools

Once the SDIs and corresponding QIS tables had been developed and validated, data collection tools were drafted, to collect data on each SDI, as well as additional qualitative information when felt necessary. Data collection was done using both qualitative and quantitative methods, and included structured interviews with household members, Focus Group Discussions (FGDs) with stakeholders at all levels (users, service provider and service authority), key informant interviews with service providers and service authority, as well as field observations.

Different tools were used for collecting data from the different levels of service delivery (users, service providers, and service authority):

- For the user level, household questionnaire & FGD guides for water users, capturing information on the service delivered (in the households questionnaires) and users' satisfaction and sense of ownership (using QIS tables for self-assessment by user groups, and also through the household questionnaires as regards to management and maintenance of the facilities).
- For the service provider level, one FGD guide was used for collecting information from the WSCs. This guide comprised the various QIS tables developed for this level, to be used for self-assessment by the interviews WSCs, together with some additional questions on the composition of the committee, number of water users, and relationships with other local stakeholders (HPMs, local government staff).
- For the Service Authority level, two FGD guides were developed (for the sub-county technical team, and staff of the Technical Support Unit). Again, these guides comprised the various QIS tables developed for this level, to be used for self-assessment by the interviews sub-county and district staffs. In addition, a key informant interview guide was used with District Water Officers, to collect additional data on resources of the office, procurement and contract management, use of the District Water and Sanitation Conditional Grant, support and supervision activities.

It should be noted that a number of water service parameters reviewed in this study were assessed based on water users' perception, for instance:

- water quality was not assessed through water quality testing, as this would have required the use of portable water quality testing kits and to train enumerators in the use of the kits. Instead, users were asked about their perception about the water quality
- similarly, no accurate measure of the distances between the water points and individual households (e.g. using GPS) was made, the answers recorded were based on users' estimations of the distance from their home to the water source. Nonetheless, it is an interesting indication of how people perceive the distance from the water facilities.

Uptime of the water facilities over time could not be measured precisely, as WSC usually do not keep very accurate records on these. A way to approach this variable was therefore to ask users when the last interruption of the water service had occurred, and how long it had lasted. Any facility that had not been providing water for more than 2 weeks<sup>7</sup> during the last interruption was considered not reliable. Respondents were only asked about the last interruption of service.

<sup>7</sup> Representing approximately 95% of a year in terms of number of days.



The data collection tools were first pilot-tested and reviewed before full rolling out of the data collection. They are presented in ANNEX 3

## 2.2.4 Sampling and data collection

### 2.2.4.1 Sample selection and design

For this study, two Technical Support Units (TSUs), No. 2 and 6, were selected from the 8 TSUs in the country. These TSUs were selected because they host the Triple-S Uganda pilot districts, and their main characteristics are as follows:

- TSU 2, in Northern Uganda, hosts Lira district. This technical support unit is responsible for providing oversight and capacity building to 15 districts, including Lira (Triple-S pilot district), in the Lango and Acholi sub regions. The region suffered from the two-decade civil conflict between the Government of Uganda and the Lord's Resistance Army that ended in 2003. During the insurgency, about 1,800,000 million people had to leave their homes and settle in Internally Displaced People's (IDP) camps. The communities had to rely on relief agencies for basic services, as there was an interruption in the local government service delivery system. To date almost 90% of the communities have returned to their ancestral homes though the effects of the conflict are still evident. During the conflict, the communities had been exempted from contributing towards capital costs for new water sources and operation and maintenance for existing sources. However, with the commencement of the recovery and rehabilitation phase in 2006, community contribution was re-introduced. The landscape in the region is relatively flat. Deep boreholes are the most common water supply technology. Kitgum, one of the districts in the region has the highest number of boreholes in the country (MWE 2010). Access to improved water sources ranges from 57% in Amolatar to 92% in Gulu while functionality ranges from 70% in Amuru) to 86% in Kitgum (MWE 2010).
- TSU 6, In Western Uganda, is responsible for providing oversight and capacity building to 8 districts, including Kabarole (Triple-S pilot district), located in the Mid-Western part of the country. Compared to TSU 2, the region has been relatively stable over the last years. Crossed by the Rwenzori Mountain, the region has a mountainous terrain. The main water technologies are protected springs and shallow wells, and a number of gravity flow schemes are found. Deep boreholes are the least common technology in the area. All the districts in the region<sup>8</sup> have access to safe water near or above the national average of 65%, with Kasese at the lowest (61%) and Kabarole at the highest (90%). However, with regard to functionality of water sources, only Kyenjojo district is in line with the national average of 81%; the rest of the districts are below average.

The study targeted 30% of the districts in the two TSUs, which represents 4 districts per TSU<sup>9</sup>, or a total of 8 districts for the two TSUs. In each TSU, the Triple-S pilot district was included in the sample, together with three other districts, which were selected using both purposive and random sampling techniques. The following criteria were used for selecting the other districts:

- For TSU 2, representation of new and old districts, and representation of sub regions within the TSU
- For both TSU 2 and TSU 6, diversity of water technologies in the sample

In TSU 2, Alebtong and Nwoya were selected from the new districts (one from the Lango and the other from the Acholi sub region), while Lira and Kitgum were selected from the old districts.

The main criterion used in TSU 6 was diversity of water technologies, since no new districts had been established in the region by the time of inception of the study. The following four districts with a hilly / mountainous terrain were selected to capture the protected spring technology: Kabarole, Kasese, Kamwenge and Kyenjojo.

Main characteristics of these various districts are shown in ANNEX 1.

In each of the districts, 2 sub-counties were purposively selected: a peri urban sub-county and a relatively rural sub-county. At sub-county level, 2 parishes were selected, considering proximity to the sub-county headquarters to do the selection. Finally, in each parish, 8 water sources (with their related Water Source Committees and user groups) and at least 100 households were randomly selected.

The list of sub-counties and villages where the research was undertaken is shown in ANNEX 4.

### 2.2.4.2 Data Collection

Enumerators were hired to collect data from the different levels (users, service providers and service authority), using the designed data collection tools, on paper.

The table below summarises the number of interviews and Focus Group Discussions conducted for the whole study.

8 June 2011

9 The National average of 15 was used as the basis for calculating the 30%



Method	Target Stakeholders	Number
Key informant Interviews	District water Officers	8
Focus Group Discussions	Technical support Unit	1 (3 staff of TSU 2)
	Sub-county Technical teams	16 (2 in each district)
	Water Source Committees	124 (8 in each S/C, except for 4 S/Cs were only 4 WSCs were met)
	Water User Groups	124 (8 in each S/C, except for 4 S/Cs were only 4 user groups were met)
Household Interviews	Households	1600

**Table 3 Summary of data collection methods used for different stakeholders**

### 2.2.5 Data Entry and Analysis

All the data collected was manually entered in an excel database.

Although the focus of this research was rural point water sources, some enumerators also interviewed households that fetch their water from gravity-fed schemes and committees that are tap committees. This was mainly the case in Kasese district, where point sources are often found in town while many users in rural areas rely on piped schemes. These households and committees that are outside the scope of this research were therefore removed from the database; this reduced the number of households and WSCs included in the analysis to respectively 1434 and 103.

The following analysis was then done, still under Microsoft Excel:

- A univariate analysis of the data, where each parameter was looked at independently from others. It shows results on the main features at the service delivered, users, service provider and service authority levels.
- A bivariate analysis, looking at correlations between the indicators of service delivered, users' satisfaction and sense of ownership, service provider performance and service authority performance.

Data interpretation and validation meetings were organised with district stakeholders in TSU 2 and TSU 6, providing platforms for collective interpretation and validation of the research findings. Objectives of these meetings were to:

- Get insights from district stakeholders, providing qualitative data to substantiate the quantitative data collected during the study; the feedback from the stakeholders was used for further analysis of the data and also to inform the report writing
- Enhance the capacity of district stakeholders in interpretation and analysis of data on rural water performance
- Undertake a comparative analysis of performance of rural water service delivery across districts in the 2 regions
- Enable stakeholders to make recommendations on how to improve performance of rural water services.

# 3 KEY ELEMENTS OF THE SDM

## 3 KEY ELEMENTS OF THE SDM FOR POINT SOURCES IN UGANDA

A Service Delivery Model includes a number of elements: policy and legislation at national level, service to be delivered, infrastructure used to deliver the service, management system for operating and maintaining the infrastructure, revenue mechanisms, and mechanisms for supporting the service providers at local level. The aim of this study is to analyse the performance of the WSC SDM in a number of these elements, and the results from this analysis will be presented in the next chapter. The present chapter provides first a description of key elements of the WSC service delivery model as per national policies and guidelines. After a presentation of the main stakeholders at national and decentralised levels, funding mechanisms for rural drinking water in Uganda are described. This is followed by a presentation of the planning and Implementation cycle for rural water service delivery, looking at roles of the various stakeholders before, during and after construction. This presentation includes a brief description of the main water supply technologies in use within the WSC service delivery model in Uganda, and of the operation and maintenance arrangements as set in national guidelines. Finally, the two innovations within the management system that were reviewed within this study are briefly described.

### 3.1 Stakeholders at national and decentralised levels

A number of stakeholders at different levels (national, decentralised and community level) play a role in the provision and sustaining of rural water services. These are briefly presented in this sub-section, together with some of their key responsibilities.

#### 3.1.1 National Level

The Ministry of Water and Environment (MWE) has the responsibility for setting national policies and standards, which are documented in sector documents (see list in part 2.2.2), supporting and regulating the delivery of water services in Uganda, and determining priorities for water development and management. It is responsible for ensuring that policies are followed, and that approaches used contribute towards the attainment of sector objectives. The MWE monitors and evaluates sector development programmes to keep track of their performance, efficiency and effectiveness in service delivery, and to take the necessary remedial action.

Over 200 Civil Society Organisations (CSOs) and NGOs are supporting implementation of rural water service delivery in Uganda. Most of the CSOs in the sector operate under the coordination of the Uganda Water and Sanitation NGO Network (UWASNET). These NGOs and CSOs, who provide water facilities to communities, also play an important role in mobilisation, training, planning, and follow up support. The MWE has a framework for cooperation between local governments (LGs) and NGOs for water and sanitation, which guides LGs and NGOs on how to jointly plan and implement community mobilisation / software activities with respect to WASH.

#### 3.1.2 Decentralised structures

District local governments (DLGs) are empowered by the Local Government Act for fulfilling water service authority functions, ensuring the provision of water services. The implementation of water and sanitation sub sector activities by DLGs is guided by annual Water and Sanitation Sector Schedules / Guidelines prepared by the MWE. These guidelines include references to sector policies and strategies, provide guidance on work plans and reporting requirements, and set down sector standards, principles and procedures.

District Water Offices (DWOs) receive funding from Central Government in the form of District Water and Sanitation Conditional Grants (DWSCGs) and can also mobilise local resources for water and sanitation programmes. Their duties as service authority entail the following:

- Overseeing the implementation of water and sanitation programmes;
- Through the District Water and Sanitation Coordination Committees (DWSCCs), strengthening collaboration and coordination with other sectors (health, education, social development and agriculture) and other players (private sector, NGOs and CBOs and civil society). The DWSCC membership consists of administrative and political leaders, technocrats and NGO/CBO representatives at district level;

- Providing back-up support and technical guidance to sub counties in planning and budgeting, implementation and monitoring of their work plans;
- Ensuring established standards for O&M are maintained;
- Budgeting for co-funding of major repairs as part of the planning process;
- Where the need for major repairs arises, providing the required guidance and supervision;
- Undertaking routine water quality monitoring after construction;
- Monitoring the performance of O&M and taking relevant actions to address shortcomings with support from the Directorate of Water Development (DWD).

As set in the 2009/10 Sector Schedules, the minimum staffing of a District Water Office (DWO) for undertaking its duties includes:

- 1 Senior Engineer / Senior Water Officer;
- 1 Hygiene Education / Sanitation Officer / Planner;
- 1 Assistant District Water Officer Mobilisation
- 1 Technical Officer (minimum Diploma in civil / water engineering) in each county; and
- 1 Borehole maintenance Supervisor

The Sub County has the following main roles and responsibilities:

- Mobilising communities and ensuring community management of water supply and sanitation facilities;
- Reviewing and prioritising rural communities and growth centres for requests for water supply and sanitation improvements;
- Supporting communities in planning and budgeting for community-based water supply and sanitation projects and facilitating communities to request for assistance;
- Co-ordinating and supervising water supply and sanitation work being done in the sub county;
- Preparing plans and budgets incorporating O&M aspects;
- Training, follow up, monitoring and provision of back-up support to WSCs;
- Conducting hygiene education and sanitation improvements sessions;

At regional level, Technical Support Units (TSUs) are de-concentrated structures of the MWE. They are 9 TSUs in total in Uganda servicing 111 districts. TSUs were established to build capacity of the districts following decentralisation of rural water supply and sanitation and the channelling of government grants to the sub-sector via the District Water and Sanitation Conditional Grant. TSUs are responsible for providing support to local governments through monitoring adherence to standards, capacity building (e.g. in procurement, financial management, reporting, management information systems), support in coordination of NGOs, and effective use of the private sector<sup>10</sup>. (MWE 2013 – 2018). The TSUs were intended to be temporary and to gradually withdraw from well performing districts. The total cost of the TSUs is approximately UGX 3.4 Billion (USD 1.34 Million) per year which is equivalent to approximately 5% of the DWSCG (Ibid).

### 3.1.3 Community / service level institutions

A community refers to a cluster of households that are jointly using a common resource. Water users at each water point are expected to establish a Water Source Committee (WSC), an executive organ of a water user group. As community-based water service provider, the WSC is responsible for carrying out the service management functions including minor operation and maintenance and other day to day management functions of the water source.

The Private Sector is responsible for direct implementation of water and sanitation sector activities. This comprises construction of water sources and borehole drilling as well as the provision of consultancy activities. The engagement of the private sector is undertaken through a competitive manner and is based on national procurement guidelines. Supervision of the private sector is undertaken by the District Water Office and/or appointed consultants. Private firms undertake design and construction in water supply and sanitation under contract to local and central Government.

Handpump Mechanics (HPMs), Hand-pump Mechanics Associations (HPMAs) and scheme attendants carry out preventive and minor repairs on point sources and rural pipe schemes. The government, through the MWE, and its development partners, has been promoting since October 2011 the setting up of HPMAs in all districts in Uganda. The role of HPMAs is to regulate the individual Pump Mechanics and improve their response to repair requests from the community.

10 Ministry of Water and Environment, Joint Water and Environment Sector Support Programme (2013-2018)

### 3.2 Funding Mechanisms for water and sanitation

The planning and financing framework follows a Sector Wide Approach (SWAp) that aligns government, development partners, and civil society to a common policy, development plan and expenditure programme<sup>11</sup>. The approach promotes harmonisation of policies, strategies and provides an institutional framework for stakeholder coordination, joint monitoring, review and sector learning.

The main government institution that makes decisions about sector financing, mobilisation of funds, coordination of development partners input and allocation of funds is the Ministry of Finance, Planning and Economic Development (MoFPED). The sector guidelines 2009/10 clearly state that it is the responsibility of the MoFPED to review sector plans as the basis for releasing allocated funds, and to review reports on compliance to sector objectives. The MWE has the overall responsibility for sector planning and budgeting. Funding for the Water and Sanitation sector comes primarily from:

- i) Government of Uganda (GoU) funding from treasury, comprising both GoU's local resources and grants and loans from development partners operating under the sector budget support framework
- ii) Donor funding
- iii) Internally generated funds, i.e. revenue generated from water sales and sewerage services, and environmental services to the general public
- iv) Investments from NGOs.

Partner funding is channelled through two main funding mechanisms: the Joint Partnership Fund (JPF), a basket funding arrangement that is largely aligned to government systems, and Sector Budget Support, most of which is allocated to the district local governments through District Water and Sanitation Conditional Grants<sup>12</sup> (DWSCGs). The 2009/10 Water and Sanitation Sectoral Specific Schedules provided the following guidelines as regards to the spending of the DWSCG:

- Investment in new water facilities:  $\geq 70\%$
- Investment in software activities:  $\leq 11\%$
- Rehabilitation of boreholes and piped water schemes:  $\leq 8\%$
- Investment in Sanitation facilities:  $\leq 6\%$
- Supervision, monitoring and DWO operational costs:  $\leq 4\%$

Investment in new water facilities (or capital expenditure / CapEx) is given priority with an upper limit of not less than 70% of the grant, while rehabilitation of existing facilities (Capital maintenance expenditure / CapManEx) have an upper limit of 8% of the grant. Only a maximum of 4% of the grant can be allocated to supervision, monitoring and other operational costs (hence including Expenditure on Direct Support / ExpDS). Operating and minor maintenance expenditures (OpEx) are seen as the responsibility of water users and to be covered through tariffs and contributions from users.

### 3.3 Planning and Implementation Cycle for Rural Water Service Delivery

This sub-section, which is based on the District Implementation Manual (MWE, 2007), provides an overview of the cycle for delivery of rural water services, which includes the following steps: planning activities, activities related to the provision of water services (software and construction activities), and post-construction activities (O&M and related institutional support mechanisms, monitoring).

#### 3.3.1 Annual planning cycle for the provision of rural water services

Planning for rural water and sanitation services is decentralised. The district is responsible for overseeing the planning process. Each DWO starts by developing a three-year District Development Plan, which sets out a medium-term strategy to improve water and sanitation in the district, outlining the local water sector strategic objectives, priorities, targets, strategies, approaches and opportunities, and detailing the resources and technology mix proposed for different sub counties in the district. The district development plan is then updated annually through a participatory process that starts with prioritisation of water and sanitation issues at the lower local government level. The District leadership then invites NGOs active in water and sanitation to incorporate in their plans into an integrated District Development Plan.

<sup>11</sup> Water and Environment Sector Performance Report (SPR) 2009

<sup>12</sup> Joint Water and Environment Sector Support Programme 2013 – 2018



### 3.3.2 Activities related to the provision of water services

#### 3.3.2.1 Software activities

Districts are expected to implement WASH activities using a demand driven approach whereby community members are first made aware of the benefits of improved water supplies and sanitation and then demand service improvements with the support of local Governments and NGOs/CBOs. These activities are referred to as software activities. Software activities are guided by the Software Steps, as outlined in the District Implementation Manual / DIM (MWE, 2007). The steps are grouped into four phases:

- 1. General Planning and Advocacy Phase**, during which meetings are convened at various levels to review the water and sanitation situation in the district. Applications from villages are screened in order to identify the most needy areas using the 'Some for All but not all for some principle'.
- 2. Pre-construction Mobilisation and Training Phase:** set of Critical Requirements, which consists of minimum conditions that have to be met before a communal water source is constructed, have been designed to guide local government institutions and other stakeholders during the pre-construction mobilisation phase.

**Summary of Critical Requirements contained in the Operational Plan for the 5-year period 2002-2007 (OP-5):**

1. Settlement of land and ownership conflicts with formal agreements in place;
2. Community capital cash contribution;
3. Preparation of a realistic and viable 3 year O&M plan with guidance from the District and S/C;
4. Gender mainstreaming;
5. Hygiene promotion and sanitation through emphasising exemplary leadership and targeting latrine coverage of 30% during mobilisation and 95% four years after completion of the water facility for sustained health benefits;
6. Signed Memorandum of Understanding (MoU) which stipulates nature of cooperation and responsibilities between GoU, Districts, Sub-Counties, communities and contractors.

**Figure 2: Summary of Critical Requirements contained in the OP-5; Source: DIM (MWE, 2007)**

During the Pre-construction Mobilisation and Training Phase, extension workers ensure that the critical requirements are fulfilled before investment decisions are made and conduct training of WSCs on their roles.

- 3. The Construction Phase**, during which, apart from the provision of hardware, caretakers are trained in preventive maintenance of the system and the WSCs are trained in O&M.
- 4. The Post-Construction Phase**, which involves a review of ongoing operation and maintenance approaches, re constituting and re training WSCs, support them in their O&M functions such as connecting them to technicians and spare part suppliers, monitoring functionality of facility, and quality of water delivered by them (Operation and Maintenance Framework 2004).

#### 3.3.2.2 Construction activities

In Uganda, it is usually the private sector that undertakes the construction of water sources for water users, under contract to District local Government and other development partners. NGOs and CBOs are also involved in

supporting communities through the provision and improvement of facilities.

When private companies and/or individuals are contracted to construct water facilities, district local government staff either undertake the supervision (usually for the construction of spring and shallow wells) or contract this to private sector consultants (as often the case for deep borehole drilling and construction of piped water schemes). District local government both procures the services of consultants (for supervision/design) and contractors (for construction) and manages their contracts.

The water supply technology selected for a particular area depends on user preference; operation and maintenance considerations; and the hydrological and/or hydrogeological potential. Groundwater forms a major source for water supply in Uganda, mainly through drilling and digging of shallow and deep wells equipped with handpumps or motorized pumping equipment (DIM 2007). The main technologies used for point sources under the WSC service delivery model include:

- Deep Boreholes

The DIM (2007) defines a deep borehole as those with a depth of 30 meters and more. Boreholes can have a number of different designs, depending on the geology and hydrogeology, and on the amount of water required from the well. Borehole drilling in Uganda is generally undertaken by the private sector contractors and the NGOs. With proper utilisation and preventive maintenance, boreholes are designed to last for 10 to 25 years. When the borehole eventually silts up, even the movable parts will cease to function. At this point, rehabilitation becomes inevitable.

- Shallow well

A shallow well comprises a dug or drilled hole that penetrates the water table, enabling water to be drawn up to the surface. In Uganda, a shallow well is defined as a well to a depth of 30m. Prior to construction of a shallow well, a suitable location must be found, balancing favourable hydrogeological conditions against the community's location desires.

- Protected spring

Springs form when a subsurface aquifer meets the ground level. Spring protection is a low cost technology and can yield water of good quality in rural areas. Protection of a naturally occurring spring prevents contamination of the water, eases access and collection of water, improves hygiene and safety around the spring and can increase yield. A spring is protected by constructing a box of brick/stone masonry or concrete around it so that the water flows out through a pipe without being exposed to external pollution.

- Rainwater Harvesting

Rainwater harvesting refers to the collection and storage of rainwater for domestic and agricultural purposes. In Uganda, Government has long neglected rainwater harvesting in preference to the construction of springs, shallow wells, deep boreholes, and piped water supplies. However it is now increasingly being recognized as one of the key solutions to providing accessible and safe water, particularly in rural areas.

### **3.3.3 Post-construction activities**

#### **3.3.3.1 Operation and Maintenance and related institutional support mechanisms**

The Community Based Management System (CBMS), under which the WSC service delivery model falls, follows a three tier system for O&M of rural water systems, involving water user groups, district and the central government:

- The water user group, normally represented by the Water Source Committees are responsible for the day to day management of the water systems
- The District provides technical post construction support
- The central government plays a regulatory role and provides financing through the DWSCG.

In Uganda, rural water supply O&M activities are usually described as falling into two categories: routine maintenance and minor repairs on one hand, and major repairs on the other hand. The WSCs are responsible for routine maintenance and minor repairs of water facilities. To manage this function, water users are expected to pay water fees. Several arrangements are available for mobilisation of water users' fees that include: pay as you fetch, monthly payments, and contributions at the time of break down. Routine maintenance tasks are



a role of facility caretakers whereas minor repairs are usually done by an artisan (Hand Pump Mechanics or technician). Each Sub County has at least 2 hand pump mechanics to support WSCs in repairing water sources. Some repairs to water facilities are classified as major on the basis of the inputs (skill and materials) required and costs involved. Major repairs are the responsibility of the District. The O&M Framework (MWE, 2004) does not clearly describe rehabilitation costs but like the major repairs, they are a responsibility of the districts.

**Table 4: Typical minor and major repairs and related cost categories.**

Technology	Maintenance <i>Operating and minor maintenance expenditures (OpEx)</i>	Minor repair	Major repair <i>Capital maintenance expenditure (CapManEx)</i>
Borehole (with handpump)	<ul style="list-style-type: none"> <li>• Clearing drains and surroundings</li> <li>• Maintaining fence</li> <li>• Periodical checking and service of handpump</li> <li>• Periodical replacement of fast wearing parts (buckets, valves, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Repair of damaged parts outside routine service</li> <li>• Replacement of damaged slow wearing parts (handle, chain, few pipes and/or rods, cylinders)</li> <li>• Repair of cracks to platform or drain</li> </ul>	<ul style="list-style-type: none"> <li>• Fishing of dropped pipes and rods</li> <li>• Desilting of rods</li> <li>• Repairs to borehole casing and screens</li> <li>• Replacement of platform and drain</li> <li>• Replacement if rising mains</li> </ul>
Protected Spring	<ul style="list-style-type: none"> <li>• Clearing intake area, drains and surroundings</li> <li>• Maintaining fence</li> </ul>	<ul style="list-style-type: none"> <li>• Repair of cracks to retaining wall, platform or drain</li> </ul>	<ul style="list-style-type: none"> <li>• Re-protection (due to diversion or major failure)</li> </ul>

**Table 4: Classification of maintenance of repairs (Source: Operation and Maintenance Framework, 2004)**

### 3.3.3.2 Monitoring and Evaluation

Monitoring is a vital component in ensuring the continued functionality of the water sources. The process permits the identification of problems with the systems and solutions to deal with the identified problems before they become too complicated. Each District is expected to have a monitoring and evaluation system which enables it to track, analyse, assess and report on progress, service delivery, performance and results, and ultimately improve performance.

In order to strengthen the management of the Ugandan Water and Sanitation Sector, enhance policies and ultimately improve service delivery, DWD/MWE has developed a performance measurement framework that focuses on the analysis of eleven golden indicators. These 11 golden indicators for rural areas are:

1. Access: % of people within 1 km of an improved water source
2. Functionality: % of improved water sources that are functional at time of spot-check
3. Per Capita Investment Cost: Average cost per beneficiary of new water and sanitation schemes
4. Sanitation: % of people with access to improved sanitation
5. Water Quality: % of water samples taken at the point of water collection, that comply with national standards (for rural protected sources, E.coli)
6. Water for production: cumulative water for production storage capacity (million m3)
7. Equity: Mean Sub-County deviation from the National average in persons per improved water point
8. Handwashing: % of people with access to (and using) hand-washing facilities
9. Management: % of water points with actively functioning Water Source Committees
10. Gender: % of Water Source Committees with women holding key positions
11. Water Resources Management: Compliance % of water abstraction permits holders complying with permit conditions

The MWE coordinates the collection of data on these indicators and publishes results in an annual Sector Performance Report. Collection, storage and analysis of data to generate the golden indicator values are part of the District Monitoring and Evaluation (M&E) system.



### 3.4 Descriptions of Innovations within SDMs

A number of innovations within the traditional, well-recognised service delivery model for point sources have emerged in Uganda, and have been recognised and partly documented. These include the involvement of Hand-pump Mechanics Associations (HPMAs), or the integration of community-led savings and credit initiatives in financing O&M. As by the time of this research these two innovations had been in existence for many years, without having yet been brought to scale, these have been further reviewed in this study.

#### 3.4.1 Integration of local Savings & Credit strategy (Y-Y) for financing O&M

The Y-Y strategy is a community managed savings and credit initiative that is used to leverage financing for operation and maintenance costs for water sources. The initiative seeks to address the challenge WSCs face in mobilising communities to contribute towards operation and maintenance of water sources. Routine collection of water user fees (pay as you fetch) is not a common practice as WSCs mainly mobilise money when sources break down. The MWE study 2011 on effectiveness of CBMS shows that about 60% of WSCs only mobilise funds for operation and maintenance when sources break down. Mobilisation of the funds also takes time due to the low willingness of users to pay for water. Some of the reasons advanced for low willingness among users include inadequate information on how WSCs manage funds, and conflicting messages from politicians and technocrats (IRC 2012).

The Y-Y strategy seeks to link payment for water to livelihood of households through providing water users access to micro credit from the operation and maintenance funds. Depending on the amount agreed upon with the WSCs, water users are expected to make monthly payments typically ranging from 200 to 2000 Uganda Shillings (UGX), i.e. USD 0.08 to USD 0.83<sup>13</sup>. All collected water user fees are recorded properly for transparency and accountability purposes. The users determine the percentage of the collected money to be reserved for operation and maintenance. The rest of money is used as soft loans for lending out to members who wish to borrow. Each household is allowed to borrow a minimum amount at an interest rate of 5 – 10% per month as stipulated in the constitution. The water users meet monthly with the WSCs on agreed dates/days to review the proceeds, pay more user fees and access loans.

##### Key elements of the Y-Y strategy

- WSC must have a list of all water users
- Standard user fees are agreed upon, to be paid per Household
- WSCs must be functional
- WSC and Water Users must have regular monthly meeting
- There must be collaboration between water users and the local leaders
- There has to be constant water supply to encourage the water users to pay
- Record books and record keeping must be available to ensure accountability

**Figure 3: Key elements of the Y-Y strategy**

The Y-Y strategy started in Mukono village of Rukooko parish, Kabambiro sub-county, and has since spread across Kamwenge, and in neighbouring districts of Kabarole and Kyenjojo. According to findings of this study, the initiative has contributed to improving reliability of rural water services. Kamwenge district performed highest on reliability of water services in TSU 6 and this was partly attributed to implementation of the Y-Y strategy.

#### 3.4.2 Handpump Mechanics Associations (HPMAs)

A HPMA is a district based association that brings together Handpump Mechanics (HPMs) operating in a specific district. The Operation and Maintenance Framework (2004), provides for a three tier system for supporting O&M that identifies 3 major actors: Government (Central, District, Sub-county), Private Sector and Community. The HPMs are categorized under the private sector actors with a responsibility for repair and maintenance of water systems. MWE has trained at least 1 HPM per sub-county in almost 90% of the districts in Uganda to enable them perform their roles. However, districts have faced several challenges working with individual HPMs such as vandalizing of water sources in search for spares, HPMs over charging communities, while individual HPMs have had difficulty in accessing spare parts<sup>14</sup>.

In a bid to address the challenges, some DLGs in partnership with Civil Society Organisations (CSOs) established HPMAs to coordinate and supervise the work of HPMs, provide them with peer support, and link them to spare parts. Kibaale district in Mid-western Uganda was one of the pioneer districts that established a HPMA in 1996. By 2010 the associations had spread to a number of districts including; Adjumani, Arua, Kaboong, Kasese among others. Experiences from the districts showed that HPMAs contributed to improved access of HPMs to access to spare parts; improved information flow between Water Source Committees (WSCs) and HPMs; reporting

<sup>13</sup> With an exchange rate of USD 1 = UGX 2404.10 on 01 March 2012 (Source: OANDA Currency Converter <http://www.oanda.com/currency/converter/>).

<sup>14</sup> MWE Concept note on formation and operationalization of HPMAs



functionality of water facilities; and supporting District Water Offices (DWOs) in conducting major repairs for water sources. This has contributed to increased functionality of water sources especially boreholes (SPR 2010).

At the time of the inception of this study the HPMA was looked at as an innovation in providing post construction support for community managed water services. The study sought to generate further evidence to influence MWE to recognize HPMA as support structures for operation and maintenance of community managed water services. Following the publicity of HPMA in several WASH forums<sup>15</sup> at regional and National level, MWE bought into the Countrywide roll out of HPMA and established an undertaking (8) on the formation and operationalization of HPMA. The Undertaking<sup>16</sup> (also referred to as functionality thematic group) seeks to establish HPMA in at least 80% of the districts in Uganda by June 2012 and have them operationalized in at least 30% of the districts by June 2013.

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15 Inter district Meetings, Joint technical review, National Learning Forums

16 Also called the functionality thematic group

# 4 FINDINGS

## 4 FINDINGS ON THE PERFORMANCE OF THE SERVICE DELIVERY MODEL FOR POINT SOURCES IN UGANDA

This chapter presents the results of the analysis of the data collected at the various levels of service delivery, as defined in previous chapters: service delivered, water users, service provider, and service authority (and related support functions).

The first section of this chapter (4.1) consists of the presentation of the results of the univariate analysis of the data. It shows results on the main features at the service delivered, users, service provider and service authority levels, with the view to present to the reader a detailed and accurate picture of the situation in the regions where the research was conducted.

This detailed analysis of the main characteristics of the service delivered, the satisfaction and sense of ownership of the users, the service provider and the service authority, is complemented by the presentation of the scores obtained when applying the service delivery indicators at these different levels. In other words, the performance at the various levels is also presented in this first section.

Here, results are usually presented at the geographical level of the district.

Following the univariate analysis, understanding of how the WSC SDM functions and performs is taken a step further by looking at correlations between the indicators of service delivered, users' satisfaction and sense of ownership, service provider performance and service authority performance. This bivariate analysis for instance looks at whether the performance of the WSC (measured through the application of the SDIs) or the level of the service delivered do have an influence on users' satisfaction. Another example of area of analysis is the impact of the performance of the service authority on the performance of WSC. Here, the analysis is done at a higher level of aggregation – usually the TSU level.

Finally, the last section presents the results obtained in communities where innovations in the management system are found, i.e. user groups found within a district where a HPMA has been in existence for some time or communities whose WSC is functioning as a savings and credit scheme. This section illustrates and discusses how these innovations seem to have a positive influence on the level of the service delivered, users' satisfaction and sense of ownership, as well as the level of performance of the concerned WSCs.

### 4.1 Univariate analysis - General findings and performance at service delivered, users, service provider and service authority levels

The first part for the univariate analysis focuses on the service delivered, its main parameters and how the overall service can be rated against the Ugandan national norms.

The analysis at users' level is first structured around the three areas of users' satisfaction with the service delivered, users' participation in the management and maintenance (including financial contribution to O&M and for repairs), and users' hygiene and sanitation behaviour. For each of these three areas, general statistics are first presented, followed by the discussion of scores obtained for the service delivery indicators at users' level. An analysis of the overall performance at users' level is then made. This sub-section ends with results regarding the satisfaction of water users with their WSCs.

At the service provider level, general findings regarding the presence and membership of WSCs are first presented. This is followed by an analysis of their performance against service delivery indicators for the service provider

level.

Finally, for the service authority and support functions level, relationships between the WSCs and handpump mechanics are analysed, as well as general governance issues, such as accountability mechanisms towards users and WSCs. Basic features of the service authority –sub-county and district – are presented, followed by levels of performance achieved by these service authority entities and by one of the Technical Support Unit (TSU).

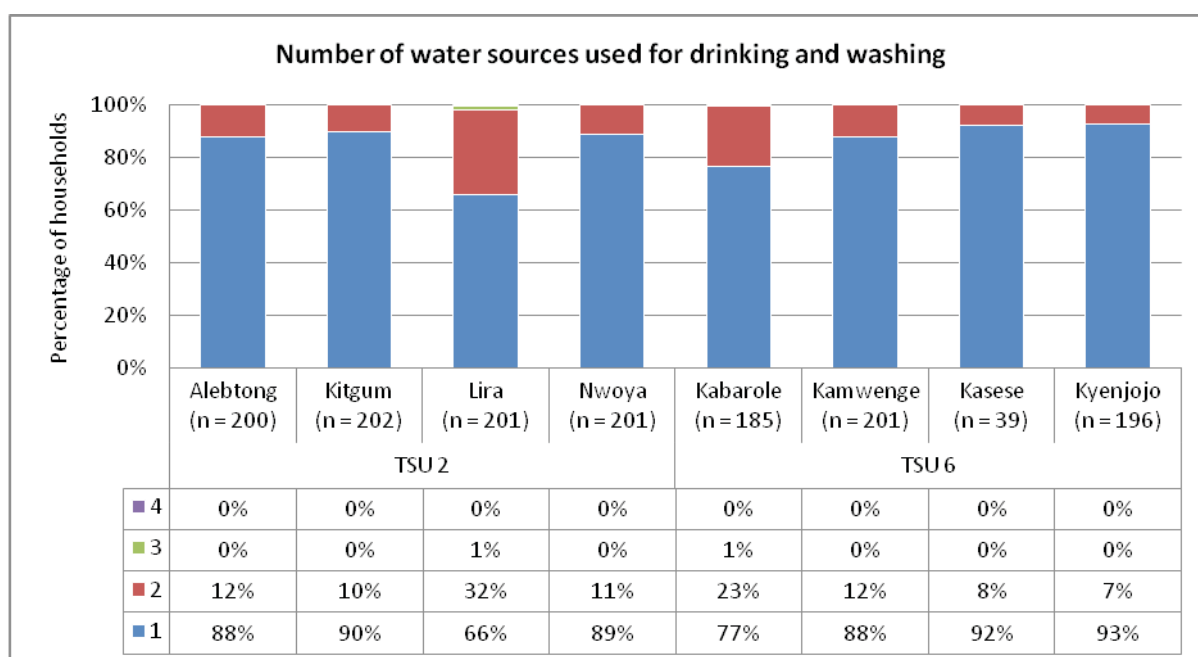
#### 4.1.1 Service delivered

This sub-section starts with a brief overview of the type of water sources found in the study districts, followed by a presentation of findings regarding the service delivered to users in the study districts.

The water service delivery ladder that was defined for this study, which is presented page 46, covers water quality, water quantity, distance from the water source and reliability of the water facility. But, to get a deeper understanding of the current status of point water sources, data collection was not limited to these four parameters, and information was also gathered on crowding of facilities, as well as on the time users spend for fetching water (which is related to crowding as well as to distance of the water point). Findings on these additional aspects are shown at the end of this part on service delivered.

##### 4.1.1.1 Sources of water

One of the first questions of the household interviews was to enquire about where people get their drinking and washing<sup>17</sup> water from. As shown in the graph below, a number of households (up to 27%) in Lira District) obtain their drinking water from more than one source.

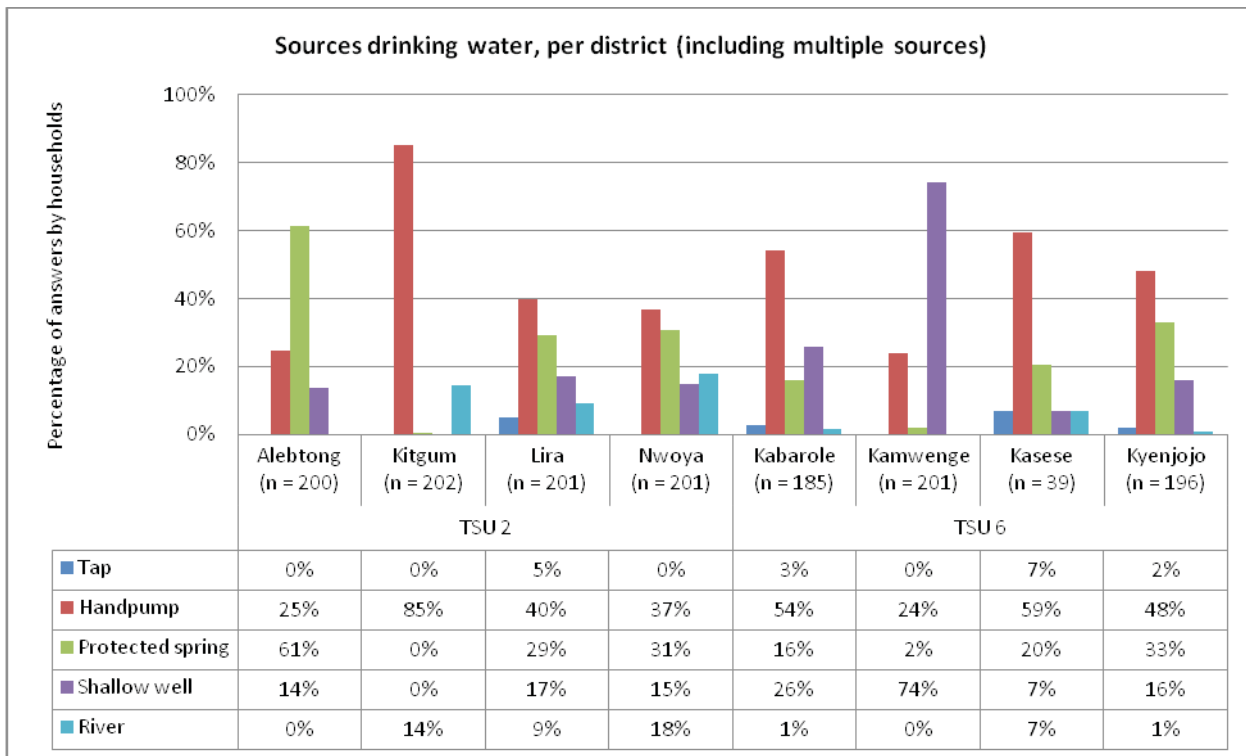


**Figure 4: Number of water sources used for drinking and washing**

As the household interviews were conducted only with users who already have access to water from either a handpump, a shallow well or a protected spring, these are not representative of the overall populations of the districts and sub-counties where the research took place. Nonetheless, it is interesting to note that even when users have access to an improved water service, about 10-20% still fetch water from other sources (improved or unimproved), even for drinking purposes.

The distribution of drinking water sources disaggregated by district shows great differences from one district to the other. Noticeable for instance is that users in Alebtong (TSU 2) fetch most of their drinking water from protected springs, while in Kitgum (TSU 2), as well as in districts of TSU 6, the main source of drinking water are handpumps, except in Kamwenge where drinking water is mostly fetched from shallow wells.

17 For bathing and other domestic purposes.



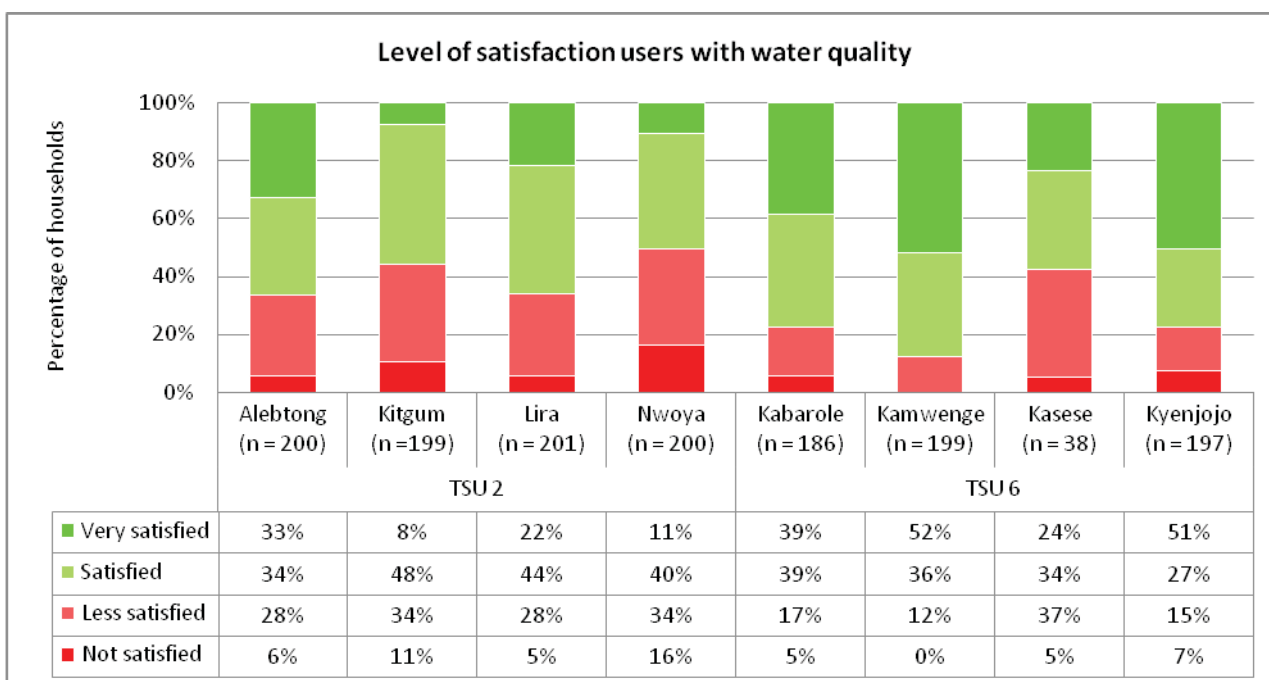
**Figure 5: Sources drinking water, per district (including multiple sources)**

#### 4.1.1.2 Service delivered

The levels of compliance with the set standards for each of the four parameters of the water service are first reviewed, followed by an analysis of the level of service achieved.

### Water quality

Water quality was measured by collecting users' perception about the water. Depending on the district, 51% (in Nwoya) to 88% (in Kamwenge) felt satisfied<sup>18</sup> with the quality of the water they access for drinking. Generally, level of satisfaction was higher in TSU 6 (except for Kasese district) than in TSU 2.



**Figure 6: Level of satisfaction users with water quality**

18 Adding up the percentages of the users that are "Very satisfied" and the ones that are "Satisfied".

Satisfaction about water quality was generally good. It can therefore be assumed that when users are satisfied with the quality of the water they have access to, they will value their water source more. However, it is possible that the actual quality of the water supplied to the households interviewed was not as good as perceived, as very few users had access to data on the bacteriological quality of the water they drink. In Kitgum district, the District water Officer mentioned that about 57 boreholes are not in use anymore, because the water they supply is too dirty.

Reasons for non satisfaction with water quality were mainly due to the appearance of the water – colour or presence of particles or worms. The frequency table below shows the main reasons for non satisfaction or satisfaction mentioned by the water user groups interviewed in the study districts:

TSU	District	% of household that mentioned this reason for non satisfaction / satisfaction				
		Bad colour / particles / worms	Salty	Hard	Bad smell	Very good all the time
TSU 2	Alebtong (n = 17)	41%	12%	6%	12%	18%
	Kitgum (n = 16)	50%	0%	0%	0%	44%
	Lira (n = 16)	75%	0%	0%	6%	13%
	Nwoya (n = 16)	69%	19%	0%	0%	19%
TSU 6	Kabarole (n = 10)	10%	10%	0%	10%	40%
	Kamwenge (n = 13)	46%	15%	8%	0%	38%
	Kasese (n = 8)	0%	13%	13%	0%	50%
	Kyenjojo (n = 15)	47%	0%	13%	13%	33%

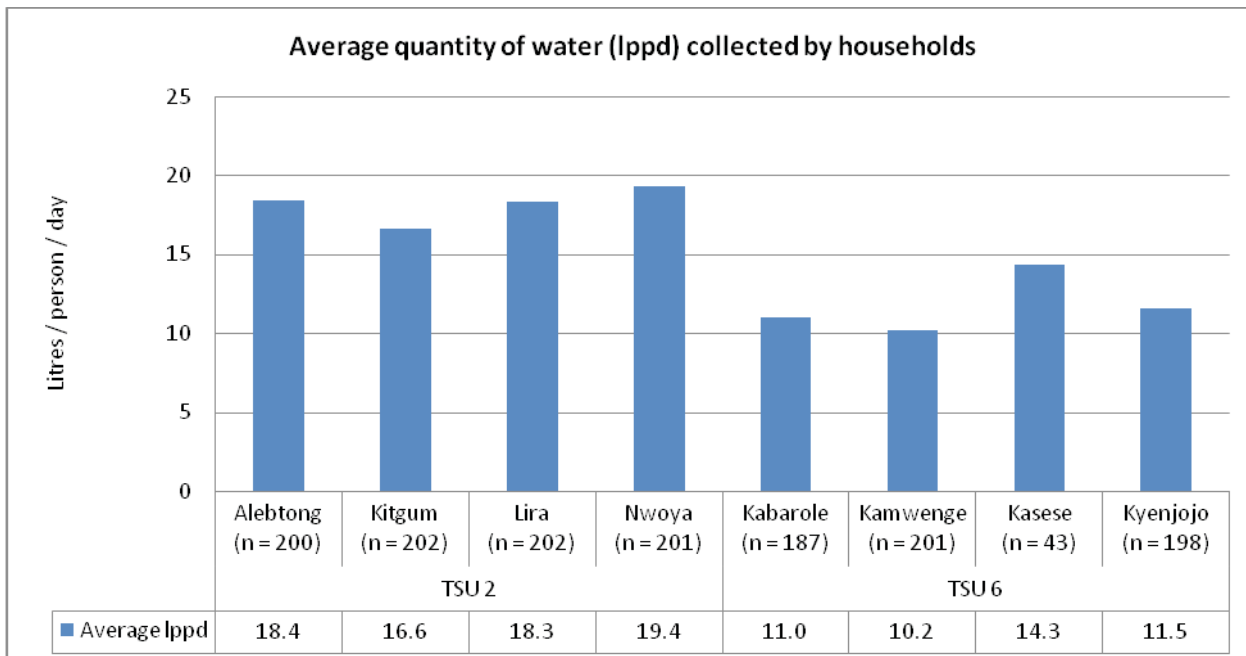
**Table 5: Main reasons for satisfaction / non satisfaction users with water quality**

In addition, discussions held with stakeholders at decentralised level during the data interpretation and validation meetings highlighted that, although important, good quality of water at the source does not guarantee that people will drink safe water. For instance in Kitgum, district staff carried out some water quality analysis from the sources to the drinking water storing containers in the households. They found out that 30% of the sources supplied water with bacteriological contamination, which in itself is not a very good development. Worse still, 100% of the drinking water containers kept in the households were contaminated. These findings highlight the importance of good hygiene behaviour in households, in particular with regard to handling drinking water.

## **Water quantity**

National standards have set the minimum quantity of water to which rural households should have access at 20 litres per person per day (lppd). Interviewed households were therefore asked about the number of water containers collected from the various water sources visited the previous day for the whole household. The average daily water collection in all districts was below the prescribed 20 lppd, as shown in Figure 7. A clear difference is observed between districts in TSU 2, where the average consumption is much higher than in TSU 6; for instance, people in Nwoya district fetch on average almost twice as much water (19.2 lppd) than inhabitants of Kamwenge district (10.2 lppd).

This strong difference can mainly be explained by the fact that TSU 2 is much drier than the TSU6 region. Some domestic activities such as laundry can be made directly at the water source in TSU 6, which certainly may be more convenient for the water users – carrying 20kg of water over a distance of 1 km being hard work. Also, TSU6 has a milder climate than TSU2, where the heat results into a higher consumption of water for bathing.



**Figure 7: Average quantity of water (lppd) collected by households**

As seen in figure 7, the average consumption, we also looked at the proportion of households that fetch at least 20 lppd of water. In Kabarole or Kamwenge, these represent only 12% of the households, while in Nwoya they are 58%.

TSU	District	Percentage of households fetching at least 20 lppd
TSU 2	Alebtong (n = 198)	52%
	Kitgum (n = 201)	38%
	Lira (n = 195)	50%
	Nwoya (n = 199)	58%
TSU 6	Kabarole (n = 180)	12%
	Kamwenge (n = 193)	12%
	Kasese (n = 36)	25%
	Kyenjojo (n = 195)	18%

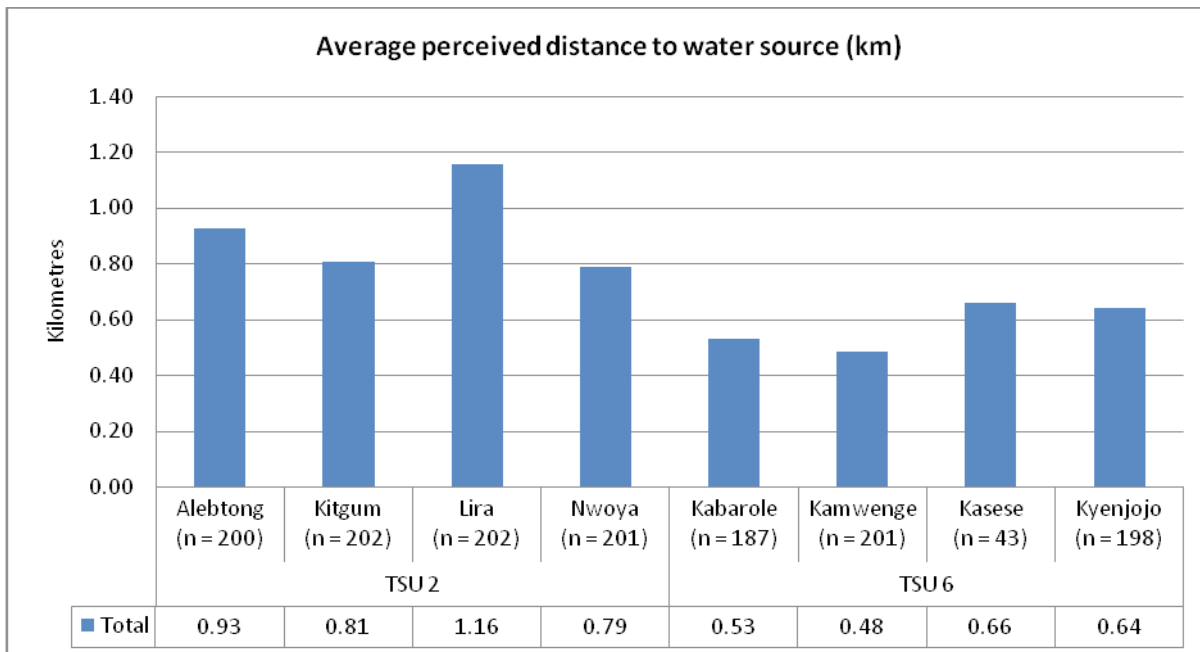
**Table 6: Percentage of households fetching at least 20 lppd**

### **Distance water point**

In Uganda, access to safe water in rural areas is defined by the percentage of people within 1 km of an improved water source. The vast majority of interviewed users, especially in TSU 6, perceive their water facility as being within 1 km. However, it should be noted that staff from some districts in TSU 2, such as Kitgum, were of the opinion that many facilities are further away than 1 km.

Figure 8 shows the average perceived distance to the water source. It is noticeable that the water sources are usually much closer in TSU 6 than in TSU 2 (a drier area). Only Lira district has an average distance above 1 km; still, household members that have their safe water facility 800 metres away from their home have to walk 1.6 km for a round trip each time they go and fill up a container of water.



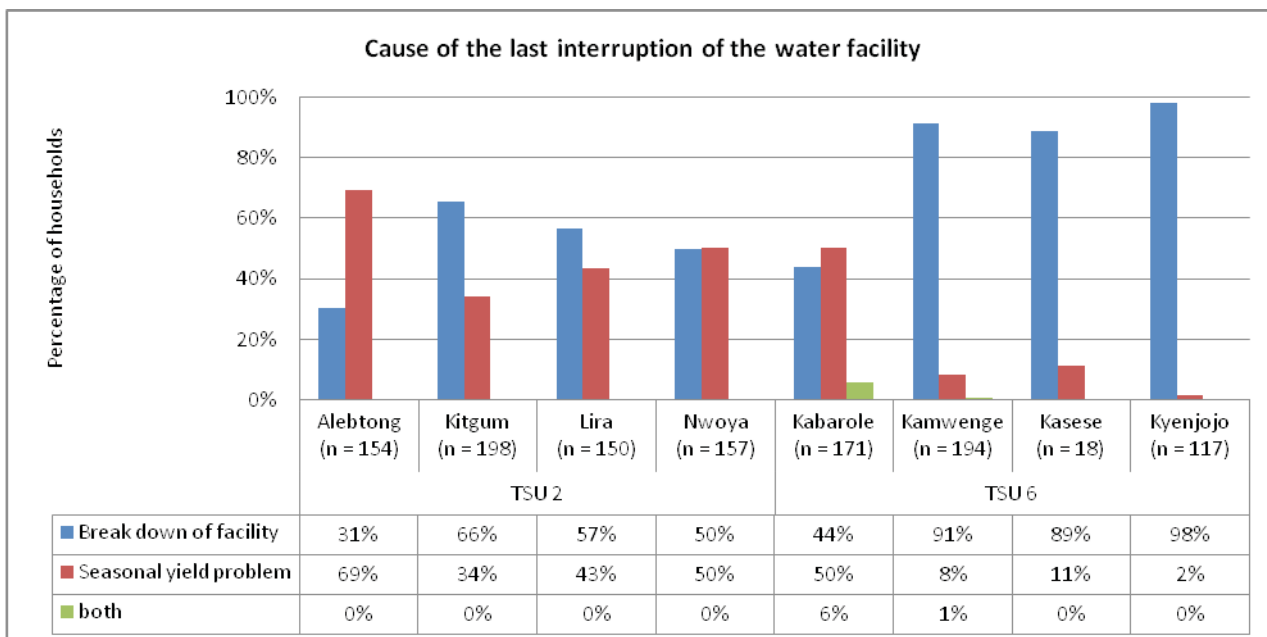


**Figure 8: Perceived average distance to water source**

### Reliability water points

National standards have not set a definition of what a reliable water source is, one hence had to be made for this research. It was considered that a water point providing water at 95% of the time (i.e. 347 days per year) is reliable.

As much as interviewed users could remember, the vast majority of water facilities ever experienced an interruption, be it due to a breakdown or to seasonal drying. When asked what was the cause of the last interruption of water, it was usually due to a breakdown; in TSU 2, nonetheless, about half of the interruptions were due to a seasonal yield problem (drying of the water source during the drier season).

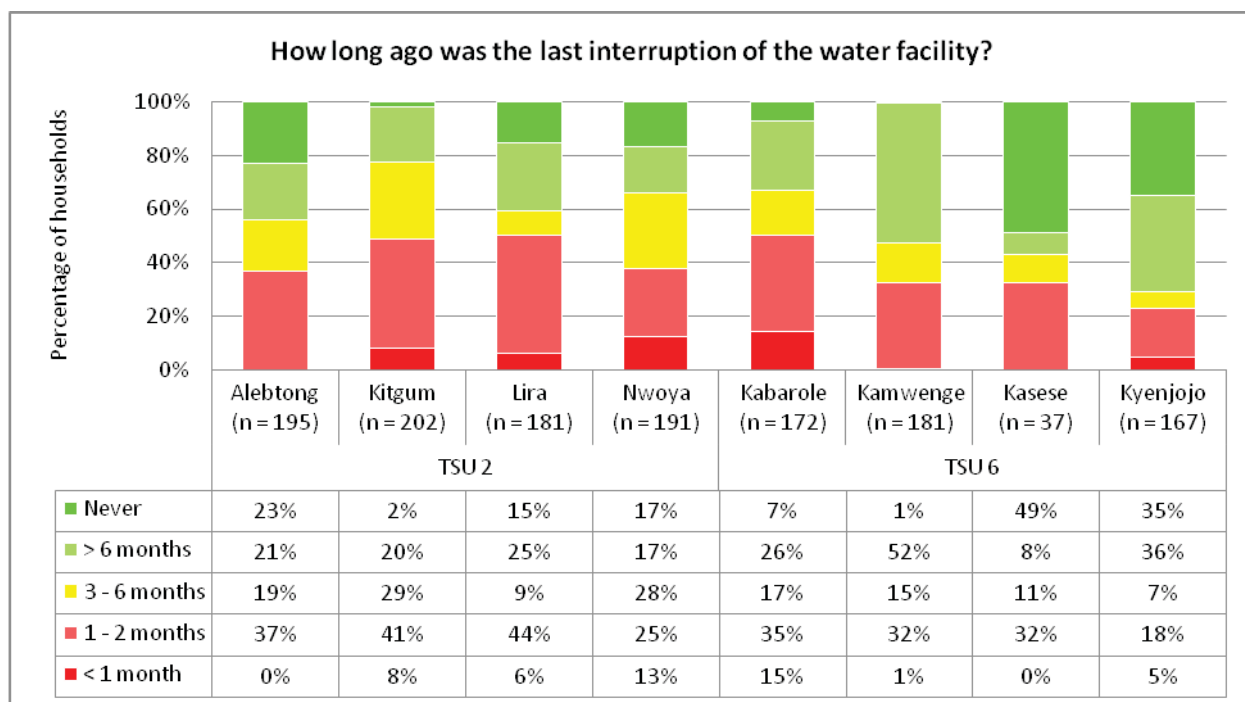


**Figure 9: Cause of the last interruption of the water facility**

As shown in Figure 9, for about 40% of the facilities, the last interruption occurred within the last 2 months. It therefore means that water facilities experience regular breakdowns over the year, which puts a serious strain on reliability. Participants of the data interpretation and validation meetings commented on this regards that

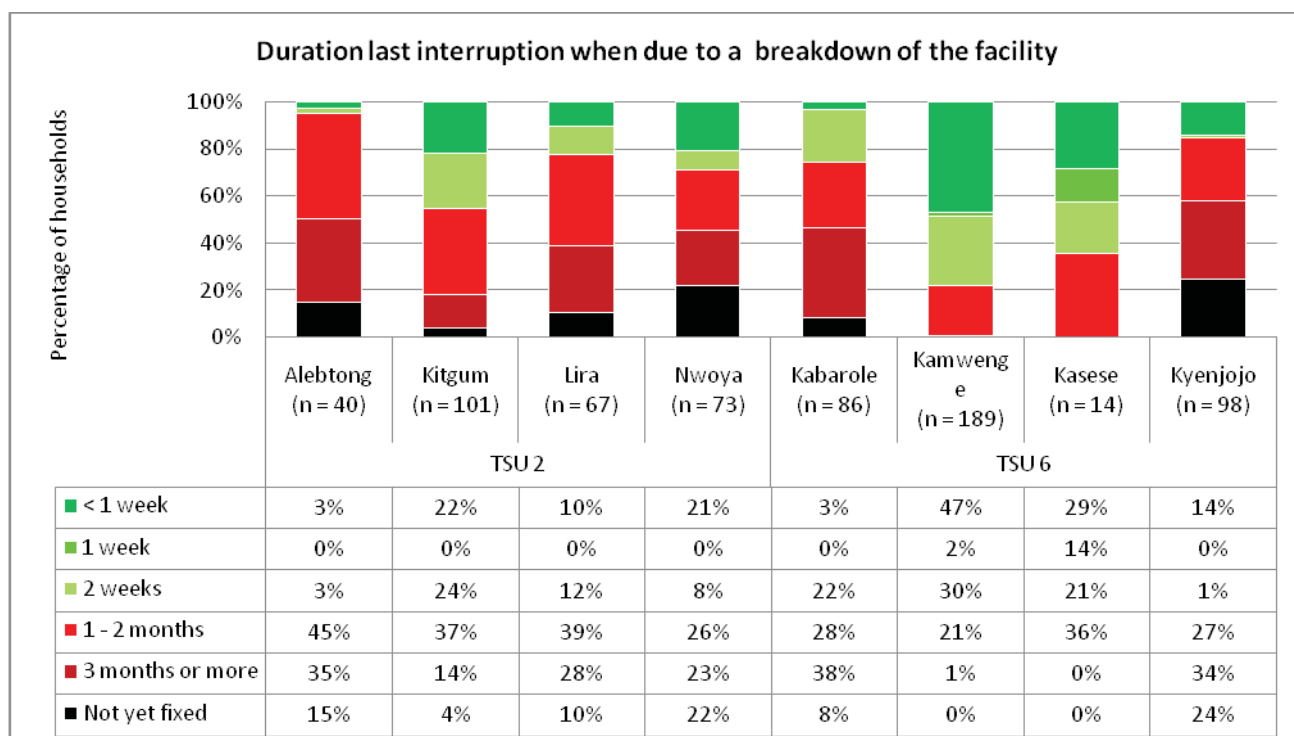


preventive maintenance is still not so much practiced by WSCs; they considered that more pro-activeness from WSCs and handpump mechanics would be required to ensure that technical problems are addressed before the water facility stops functioning at all.



**Figure 10: How long ago was the last interruption of the water facility**

When the interruption is due to the breakdown of the facility, the repair is usually performed within 2 months (see graph below). In Alebtong, Nwoya, Kabarole and Kyenjojo districts, it took more than 2 months to carry out the repair for about half of the facilities. It is noticeable that in Kamwenge district (where the Y-Y strategy is found) and Kasese district (where a handpump mechanics association has been in operation since 2008), the majority of breakdowns are addressed faster, within 2 weeks.



**Figure 11: Duration last interruption when due to a breakdown of the facility**



In figure 11, only households whose facility experienced a breakdown in the last year were shown. If we consider again the whole sample of the study, and take the proxy definition of reliability as presented earlier (i.e. facilities for which the last breakdown lasted 2 weeks or less), it appears that, except for Kamwenge and Kasese, a minority of water sources can be considered as reliable. Only a quarter of facilities in Alebtong (TSU 2) and Kabarole (TSU 6) districts are reliable, while in Kitgum, Lira and Nwoya (TSU 2) these represent only a third.

TSU	District	Percentage of households whose main water source is reliable
TSU 2	Alebtong (n = 186)	26%
	Kitgum (n = 169)	30%
	Lira (n = 141)	33%
	Nwoya (n = 157)	36%
TSU 6	Kabarole (n = 180)	26%
	Kamwenge (n = 184)	72%
	Kasese (n = 34)	82%
	Kyenjojo (n = 158)	46%

**Table 7: Percentage of households whose main water source is reliable**

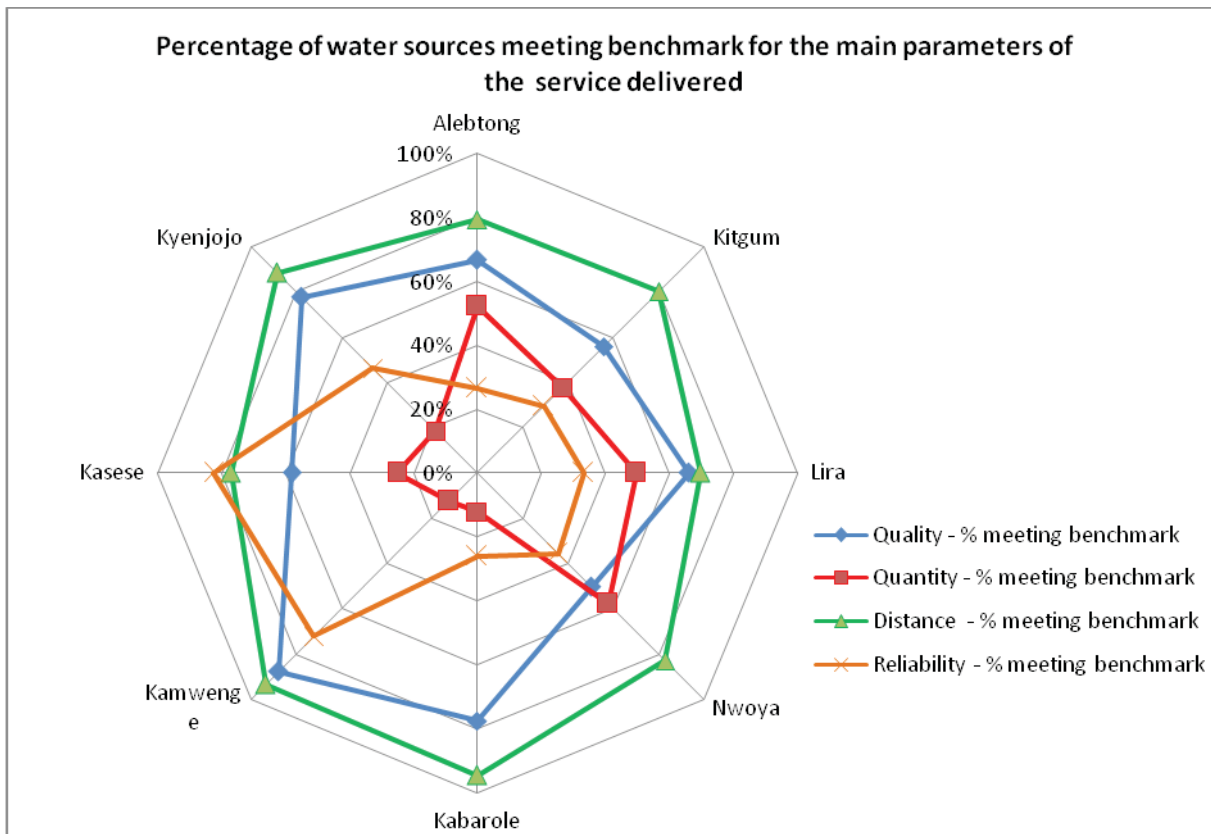
### Overall level of service accessed

After presenting the results for each parameter of the water service separately, it is interesting to compare the levels of compliance with the set standards for the four main water service parameters that were used to build the water ladder. The water service delivery ladder designed for this research is as follows:

Scenario	Score water service	Level water service
Good quality water supply of at least 40 lppd within a distance of 0.5 km from a water source that is reliable 95% of the time	1	Excellent
Good quality water supply of at least 30 lppd within a distance of 0.75 km from a water source that is reliable 95% of the time	0.75	Good
Good quality water supply of at least 20 lppd within a distance of 1 km from a water source that is reliable 95% of the time	0.5	Fair
Users access a service that doesn't meet one or more of the following standards: quality, quantity and reliability	0.25	Low
Community doesn't have an improved water source within a walking distance of 1 km.	0	Very low

**Table 8: Water service delivery ladder as designed for the Service Delivery Indicators**

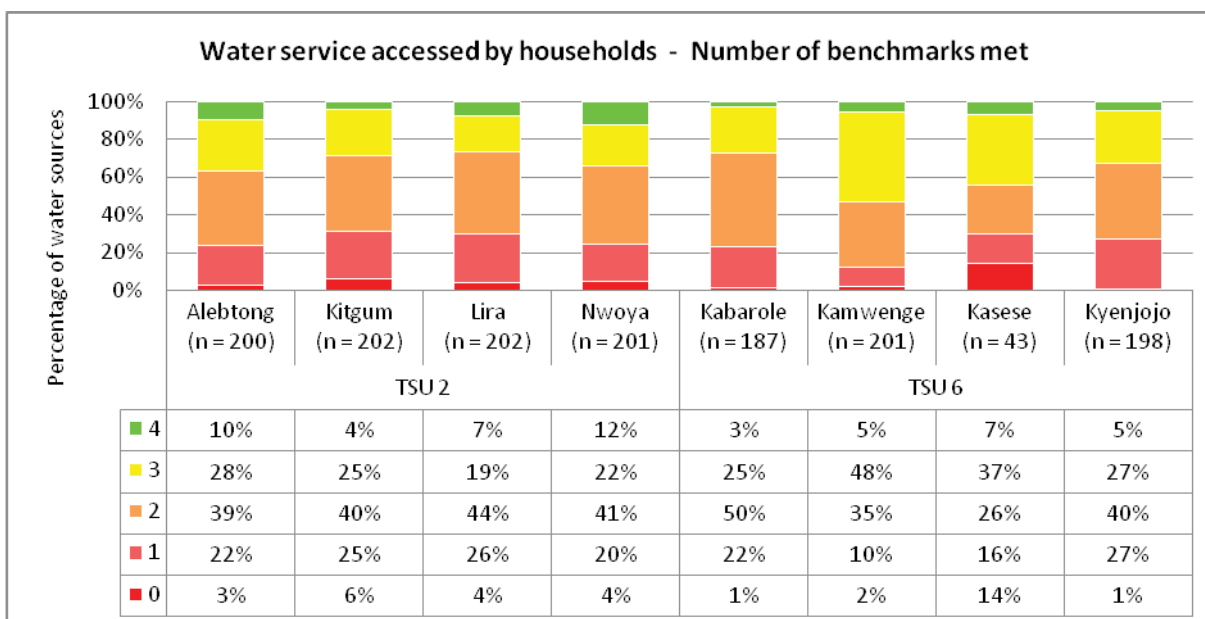
The analysis involved computing the percentage of water sources that comply with each of the four parameters that make the ladder (water quality, quantity, distance and reliability of the water source). Results are shown in figure 12.



**Figure 12: Percentage of water sources meeting benchmark for the main parameters of the service delivered**

In general, the parameters that are most complied with are distance and quality. In TSU 2 (Alebtong, Kitgum, Lira and Nwoya districts), reliability is the parameter least complied with, usually followed (except for Nwoya) by quantity. In TSU 6 (Kabarole, Kamwenge, Kasese and Kyenjojo districts), quantity is the parameter least complied with, usually followed (except for Kasese) by reliability.

Another way of looking at this is to calculate in each district the number of benchmarks met:

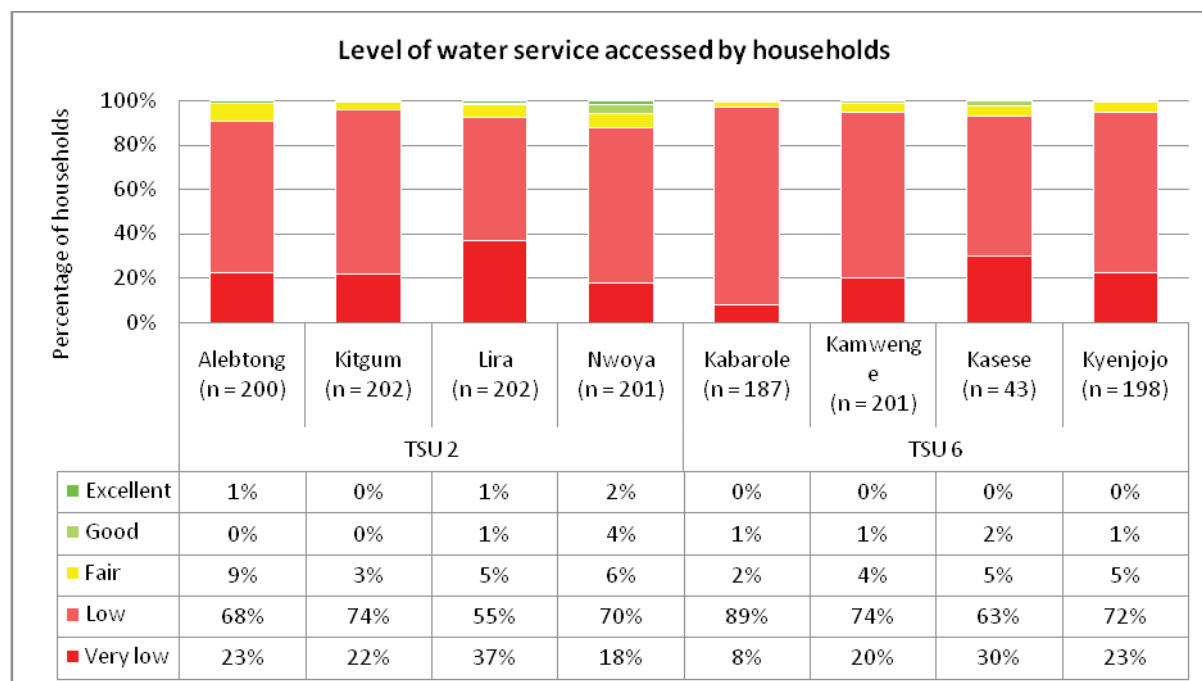


**Figure 13: Water service accessed by households - Number of benchmarks met**

Only a minority (7%) of facilities comply with all benchmarks; this therefore means that only a minority of facilities deliver a basic level of service, where all benchmarks are met.



Figure 14 shows the repartition of the levels of water service accessed by the interviewed households. Based on the designed water service delivery ladder, households whose water facility meets none of the benchmarks or that is further than 1 km away, access a very low service. Users who access a service that doesn't meet the standards on either quality, quantity or reliability are considered as accessing a low service. Only when all 4 service parameters meet the standard does a household access at least a fair level of service; good and excellent levels of service reflect water quantity exceeding 20 lppd and a distance from the water point that is less than 1 km. Figure 14 shows that the great majority of households (between 88% and 97%, depending on the district) access sub-standard service.



**Figure 14: Level of water service accessed by households**

#### 4.1.1.3 Other service parameters Analysed

In addition to water quality, water quantity, distance of the water facility and reliability of the service, crowding of water facilities and the time spent by users on fetching water were also analysed the following parameters .

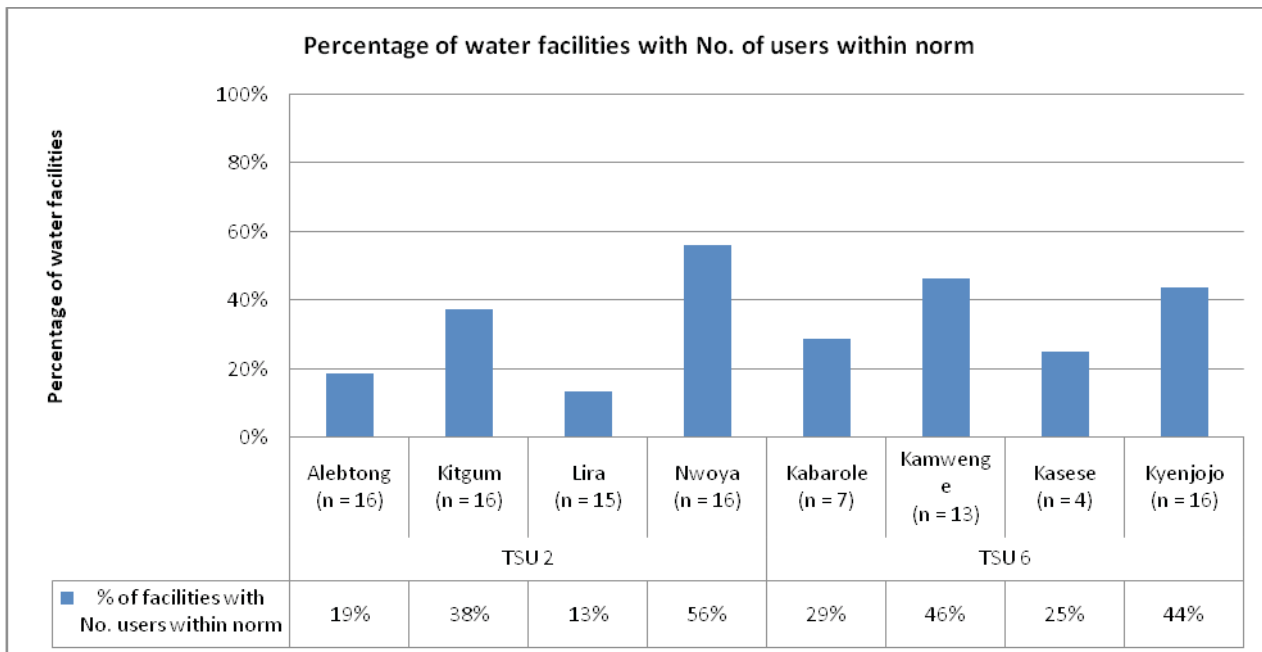
#### **Crowding of facilities**

The maximum number of users at a given water point are set by the national standards as follows:

- 300 persons (about 60 households) for a borehole
- 200 persons (about 40 households) for a shallow well or a spring
- 150 persons (about 30 households) for a tap<sup>19</sup>

The number of users at each water facility was obtained from Water Source Committees. It is striking that, with the exception of Nwoya district, only a minority of water sources have a number of users within the standard.

<sup>19</sup> These number of households were obtained by dividing the number of persons by the average household size in Uganda, i.e. 5.0 persons / household according to the Uganda National Household Survey Report 2009/2010.

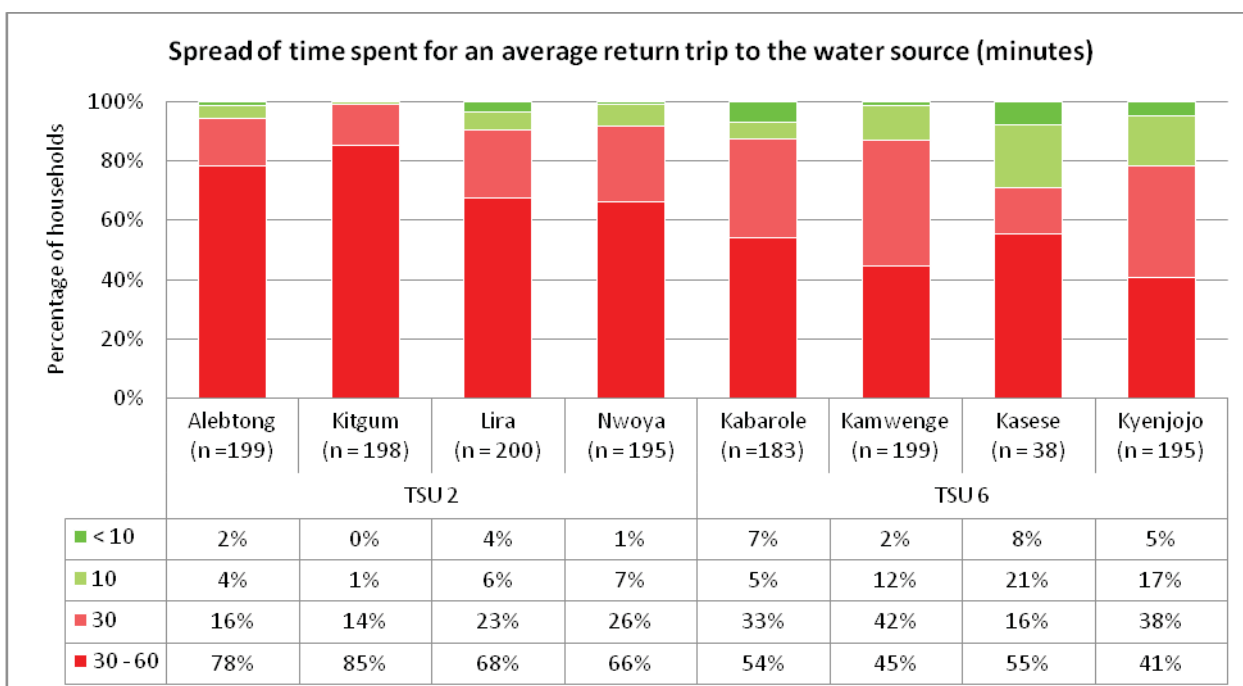


**Figure 15: Average No. of households per water source type**

### Time spent on fetching water

There are no standards in national policy documents regarding the time that is acceptable for users to spend getting water. It was nonetheless considered an important aspect to analyse during the research, as this time can be used as a proxy indicator for accessibility of the water facility. More specifically, the time spent walking to the water point can be a proxy indicator of the distance to the water point and of the terrain, while the time spent queuing can be proxy indicator of the crowding at the facility (although this also can in some instances be influenced by the yield of the water source).

Water users were therefore questioned on the time spent walking to the water source and on the time users spend queuing at the water point. These measures of time are just estimations by the users and should not be seen as necessarily fully accurate. They nonetheless provide an interesting indication of the perception of users on the time they allocate to water collection.



**Figure 16: Spread of time spent for an average return trip (walking time) to the water source (minutes)**



The vast majority of users estimated that a return trip to the water source takes them 30 minutes or more. 30 minutes is often considered as an acceptable time for a return trip, in case the water point is within 1 km in the literature<sup>20</sup> and the terrain is not hilly.

When asked whether they usually have to queue at the water point, the vast majority of people interviewed claim they do (see Table 9 below), which is in line with findings on crowding. Users from TSU 6, where water sources (including surface water) are more numerous, queue less. People were also asked to estimate the time they had to queue in the previous week, giving a time indication for both the longest and the shortest queues. Users had to wait on average between 35 and 79 minutes at the water point. Again, users from TSU 6 had to queue for a shorter time than users from TSU 2.

TSU	District	Percentage of respondents who have to queue at the water points	Average longest queue (min)	Average shortest queue (min)
TSU 2	Alebtong (n = 197)	73%	79	35
	Kitgum (n = 201)	76%	105	49
	Lira (n = 200)	96%	79	33
	Nwoya (n = 200)	66%	70	31
TSU 6	Kabarole (n = 181)	81%	70	27
	Kamwenge (n = 199)	43%	78	34
	Kasese (n = 41)	71%	78	35
	Kyenjojo (n = 195)	54%	66	27

**Table 9: Percentage of respondents who have to queue at the water points and time spent queuing**

A long queuing time is not always only due to crowding at the facility or a low yielding source. Fetching water is also an opportunity for women to socialise, and they probably also included in their estimations time spent on informal discussions at the water points. The time spent queuing at the water point may also be influenced by the establishment or not of water collection schedules by the source caretakers. Due to the scarcity and distance of safe water points, users in TSU 2 rather go and fetch water in the morning, while in TSU 6 they can go any time of the day.

#### 4.1.2 Users' satisfaction with the water service and participation in management of the water source

This sub-section offers first an analysis of the level of satisfaction of users with the service delivered, disaggregated for each parameter of the water service (quality, quantity, reliability, distance). For each of these parameters, the level of users' satisfaction is compared to the actual level of service. In addition to the four water service parameters, users' satisfaction with affordability was also analysed. The related results are presented, followed by discussions on overall users' satisfaction.

In addition to users' satisfaction, the level of participation of users in the management and maintenance of the water facility, including payment for water, was also analysed (part 4.1.2.2), as well as their hygiene and sanitation behaviour (part 4.1.2.3).

of analysis of the overall performance at users' level is then presented, while the last part focuses on the level of satisfaction of users with their service providers.

##### 4.1.2.1 Users' satisfaction with the service delivered

#### Users' satisfaction with the service delivered – individual parameters

- **Water quality**

Water quality was assessed by asking users about their perception and satisfaction in this respect. Results on users' satisfaction regarding water quality are already presented in section 4.1.1.2.

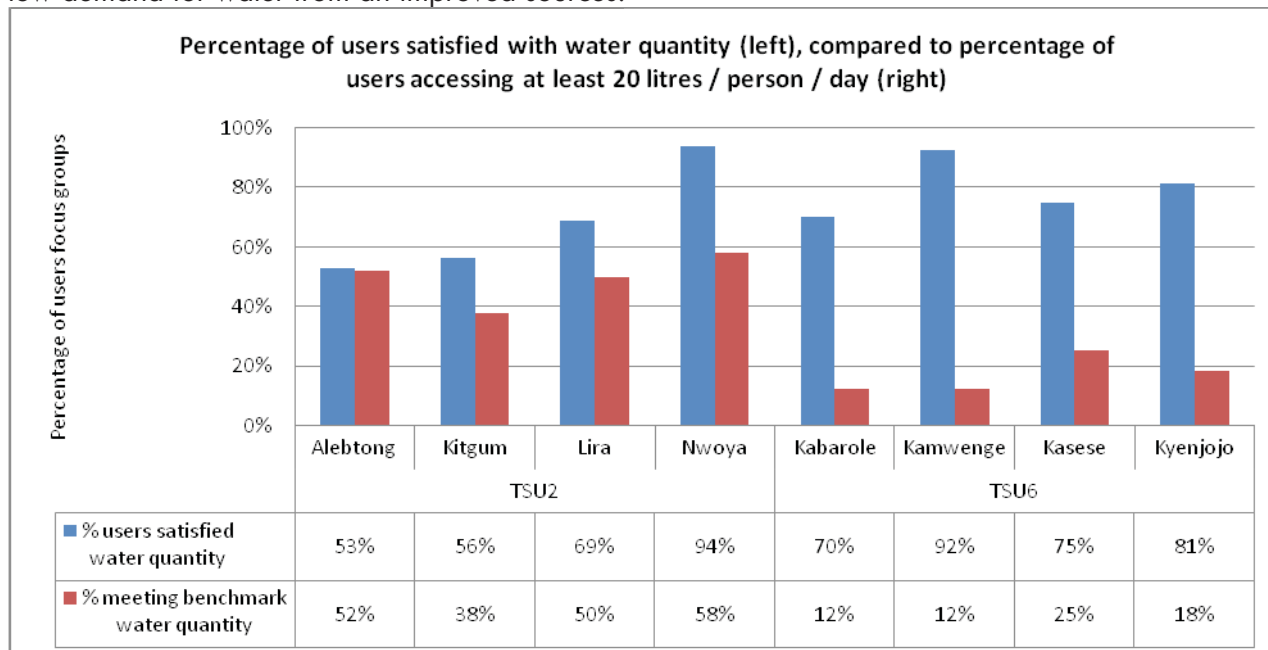
- **Water quantity**

Generally, although the majority of households fetch less than 20 litres per person per day, as shown in the previous section, users are quite satisfied about the quantity of water delivered by their facilities. Nwoya (TSU 2)

20 Nalubega, Maimuna and R. Seidelmann, 2007, *Implementation of JSR Undertaking No. 4. Definition, Criteria and Methodology for the Establishment of Access to / Use of Safe Water and Sanitation in Uganda*, <http://www.ruwas.co.ug/reports/Definition%20and%20Methodology%20for%20access%20-%20functionality.pdf>

and Kamwenge (TSU 6) are the two districts where users' satisfaction as regards to water quantity is the highest – respectively 94% and 92%. In Alebtong and Kitgum (both in TSU 2), this level of satisfaction drops to 53% and 56%.

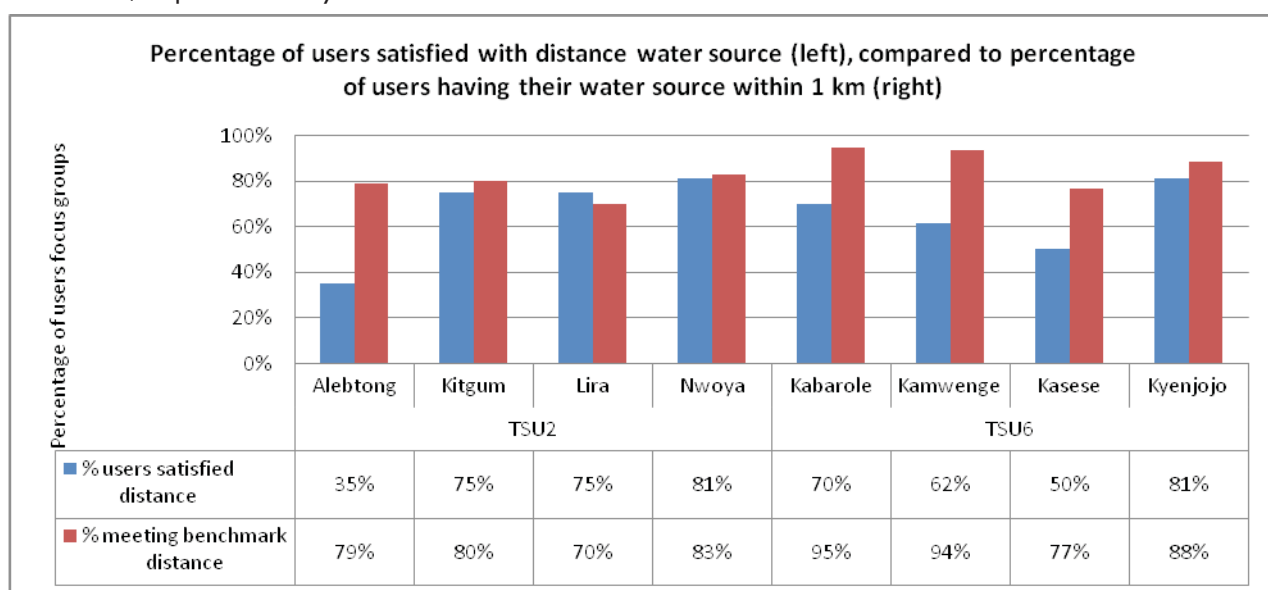
Figure 17 compares the proportion of users satisfied with the water quantity with the proportion of users that access at least 20 lppd. This highlights that the proportion of users satisfied with the water quantity is much higher than the proportion that actually fetch 20 lppd. This is the case for almost all districts, and very markedly TSU 6. This indicates that probably the low consumption is not because what is supplied is low, but people have a very low demand for water from an improved sources.



**Figure 17: Percentage of users satisfied with water quantity compared to users accessing at least 20 lppd**

- Distance to the water point**

The majority of water users are also satisfied with the distance of their water sources. Although in Alebtong district, only 35% of the interviewed users stated they are satisfied. This low satisfaction in Alebtong district as regards to distance of the water source seems to go hand in hand with a low satisfaction with water quantity. The proportion of users satisfied with the distance of the water points was found to be lower than the proportion of facilities within 1 km. This trend, which is stronger in TSU 6 districts, reveals that the distance of 1 km, although set in the national standards, is perceived by water users as still too far.

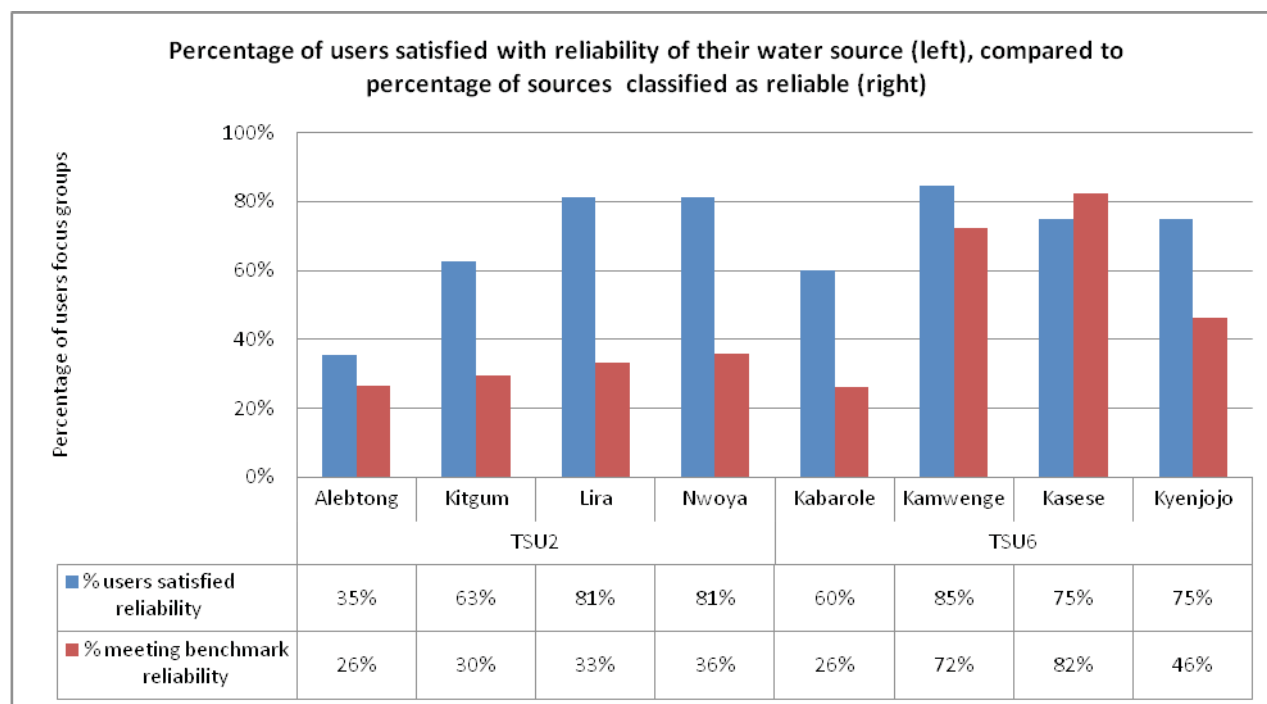


**Figure 18: Percentage of users satisfied with distance compared to users having their water source within 1 km**



- **Reliability of the water point**

Water users were also asked about their satisfaction with the reliability of their water sources. Although, as seen in the previous section, the majority of water facilities are not reliable (except in Kamwenge and Kasese districts), users' satisfaction does not really mirror this poor reliability. With the exception of Alebtong district, most users stated that they are satisfied with the reliability of their water facilities. The difference between the proportion of users satisfied with the reliability of their water source and the proportion of sources classified as reliable is quite striking: although, on average for the whole sample, only about 40% of the facilities are classified as reliable, users' satisfaction with regards to reliability is close to 70%. In Kamwenge and Kasese districts (TSU 6), where reliability of facilities is much higher, users' satisfaction is more in line with the actual reliability of the water sources. But in general findings show that users are not particularly unsatisfied about the poor reliability that the alarming picture offers by the actual breakdown time of facilities.

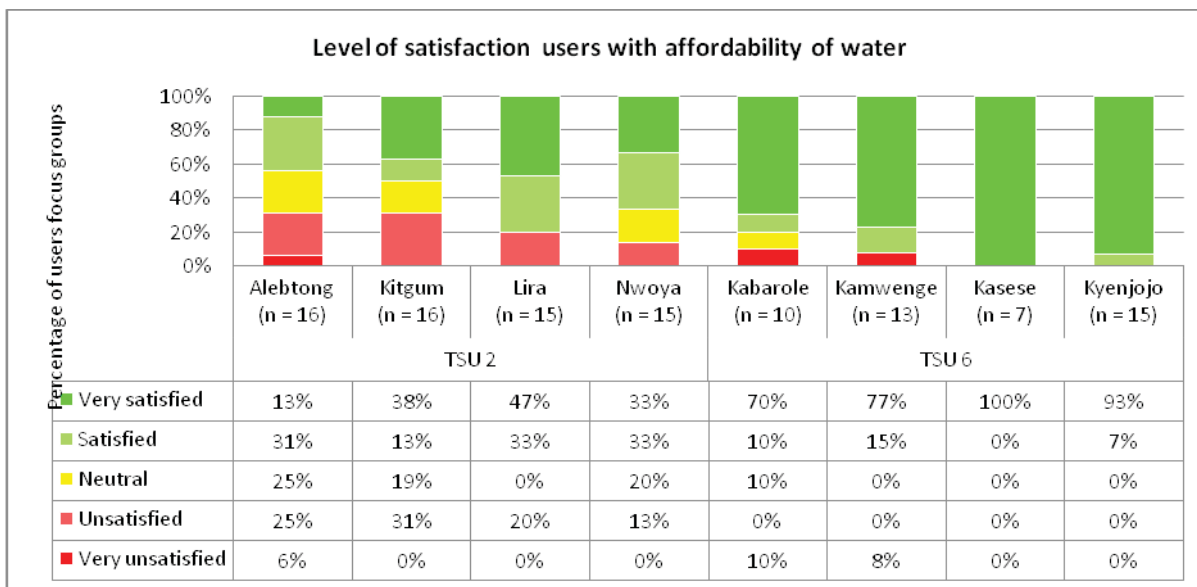


**Figure 19: Percentage of users satisfied with reliability of water sources, compared to sources classified as reliable**

- **Affordability of the water service**

When asked about affordability of the water service, the majority of users reported that they are satisfied with it. However, as it will be shown in the sub-section on users' participation in the management and maintenance of the water source, when looking at the aspects of payment for water, the majority of water users do not pay for the water they collect. Affordability therefore is not seen as an important issue, as free water indeed is affordable.

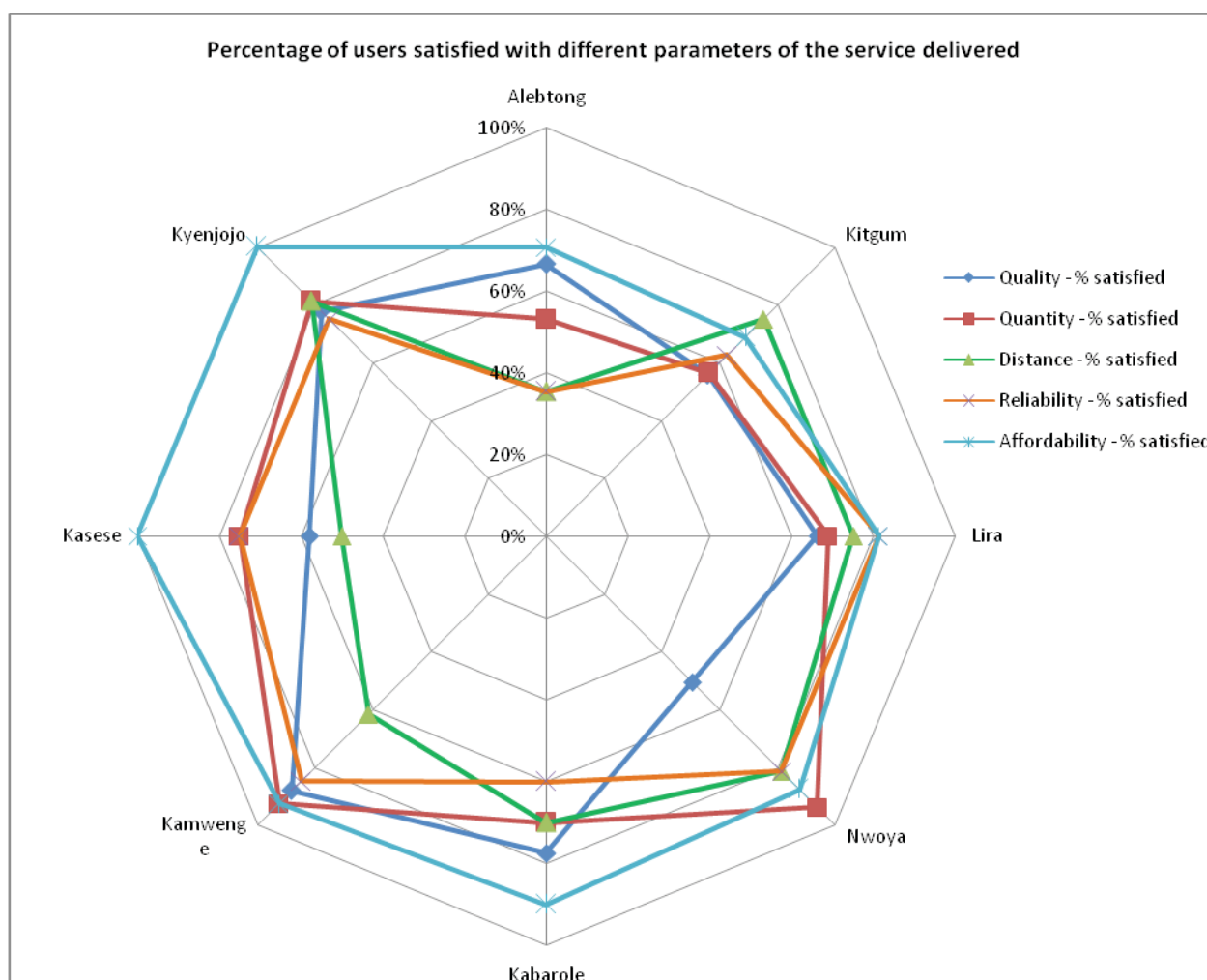




**Figure 20: Level of satisfaction users with affordability of water**

### Users' satisfaction with the service delivered – overall water service

Figure 21 offers a visual representation of users' satisfaction with regard to the various water service parameters (water quality, quantity, distance and reliability of the water source, as well as and affordability of the service) that are used in the calculation of the users' satisfaction indicator.



**Figure 21: Percentage of users satisfied with different parameters of the service delivered**

If we compare figure 21 with figure 12, we can note that there is less disparity between these parameters;



for all of them, the proportion of users satisfied is usually comprised in the range 60%-80%. Kamwenge and Alebtong districts show slightly different trends, with in Kamwenge users' satisfaction beyond 80% (except for distance), while in Alebtong users' satisfaction goes below 40% for two parameters (distance and reliability). As affordability, it is the parameter with the highest level of satisfaction in all four districts of TSU 6 (Kabarole, Kamwenge, Kasese and Kyenjojo) as well as in Alebtong and Lira districts, while it comes second in Nwoya district (behind water quantity) and Kitgum district (behind distance).

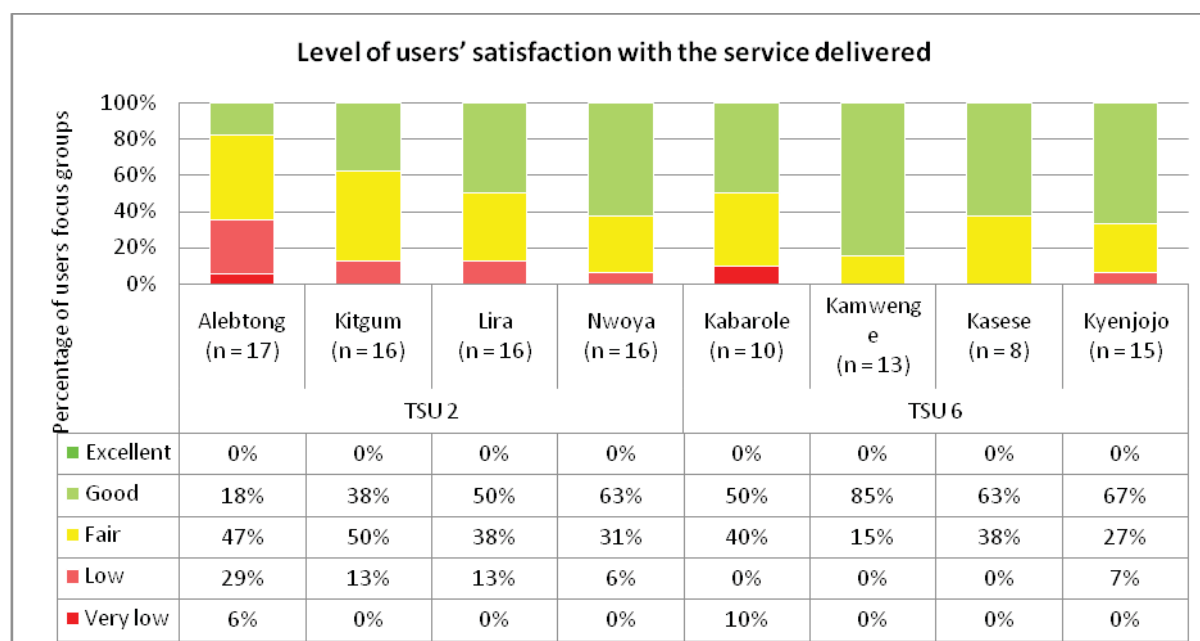
The values for the Service Delivery Indicator 2.1, that is users' satisfaction with the service delivered, were obtained by calculating the average of the scores for the 5 individual parameters. The values for indicator 2.1 and related levels of satisfaction were codified as follows:

Scenario	Score users' satisfaction	Level users' satisfaction
Average of level of satisfaction on the 5 parameters reaches 100%	1	Excellent
Average of level of satisfaction on the 5 parameters between 75% - 99%	0.75	Good
Average of level of satisfaction on the 5 parameters between 50% - 74%	0.5	Fair
Average of level of satisfaction on the 5 parameters between 25% - 49%	0.25	Low
Average of level of satisfaction on the 5 parameters between 0% - 24%	0	Very low

**Table 10: Levels of users' satisfaction with the water service (Indicator 2.1)**

If we consider the overall sample, 88% of the interviewed user groups were satisfied with their water service, with 52% displaying a good level of satisfaction and 36% being fairly satisfied. Only 12% stated that their level of satisfaction is low (10%) or very low (2%). None of the groups reported an excellent level of satisfaction, in other words none of the user groups rated the 5 parameters to the maximum.

However, the level of satisfaction with the service delivered varies significantly from one district to the other: Alebtong is the district where the level of satisfaction is the lowest (35% of the user groups are not satisfied, while only 18% have a "Good" level of satisfaction), whereas Kamwenge (where the Y-Y strategy is found) is the district where the level of satisfaction is the highest (15% "Fair" and 85% "Good"). Generally, users' satisfaction was higher in TSU 6 than in TSU 2.



**Figure 22: Level of users' satisfaction with the service delivered**

#### 4.1.2.2 Users' participation in the management and maintenance of the water source

The Service Delivery Indicator 2.2 focuses on users' participation in the management and maintenance of the water source, as an indicator of their sense of ownership. Two areas have been selected to measure users' participation in facilities' management and maintenance: the payment of water fee (usually to cover routine

maintenance and minor repairs) and users' contribution to keeping the water source clean. This sub-section therefore starts with an analysis of the financial contribution of users to cover O&M costs (through the payment of a water fee), but also in case of repairs; willingness and ability to pay are also scrutinised. Then, water users' involvement in the maintenance of water points' surroundings is looked at, followed by a presentation of the level of performance attained on indicator 2.2.

## Users' financial contribution to O&M (routine maintenance) and repairs

### • Proportion of users who pay a water fee

When asked whether they pay a fee for the water they collect, the majority of respondents answered that they don't. This is especially striking in TSU 6 districts, where only 5% of the interviewed households said they contribute something (against 42% in TSU 2).

Two districts in TSU 2 are standing out in terms of households paying water fees: Kitgum, with 62% of the households stating that they contribute to O&M, and Lira, with 53% of the households paying. In Alebtong and Nwoya, the two new districts in TSU 2, only a quarter of the households pay a water fee; this is still nonetheless more than in TSU 6.

TSU	District	Percentage of interviewed households that pay a water fee	Average amount paid monthly for water fee (UGX)
TSU 2	Alebtong	28% (n = 199)	597 (n = 37)
	Kitgum	62% (n = 200)	949 (n = 104)
	Lira	53% (n = 202)	1,167 (n = 66)
	Nwoya	24% (n = 201)	400 (n = 39)
TSU 6	Kabarole	4% (n = 151)	Not available
	Kamwenge	6% (n = 197)	Not available
	Kasese	0% (n = 38)	-
	Kyenjojo	7% (n = 1)	643 (n = 7)

**Table 11: Percentage of interviewed households that pay a water fee and average monthly amount paid**

Interestingly, in Kamwenge district, where the Y-Y strategy (savings and credit schemes) is found, the majority of households stated that they do not pay a water fee. It seems that the money that is collected from them, i.e. usually between UGX 1,000 and UGX 2,000 (USD 0.42 to USD 0.83) per household per month, is not seen by water users as a contribution to the operation and maintenance of their water facilities. Although part of the money collected is reserved to meet repair costs for the water facility, as the rest of the money is used as soft loans for lending out to households who contributed, this later purpose seems to have overshadowed in people's mind the one of securing an O&M fund. Water users in Kamwenge now consider to be mainly contributing to a savings and credit scheme from which they can borrow when they need cash.

When they pay, the vast majority of water users (97.1%) pay for their water on a monthly basis, with the exception of Kamwenge district, where the collection of money for the saving and credits scheme is done quarterly. The average monthly amount paid is comprised between UGX 400 (about USD 0.17) and UGX 1,167 (about USD 0.49).

### • Payment for repairs of broken down facilities

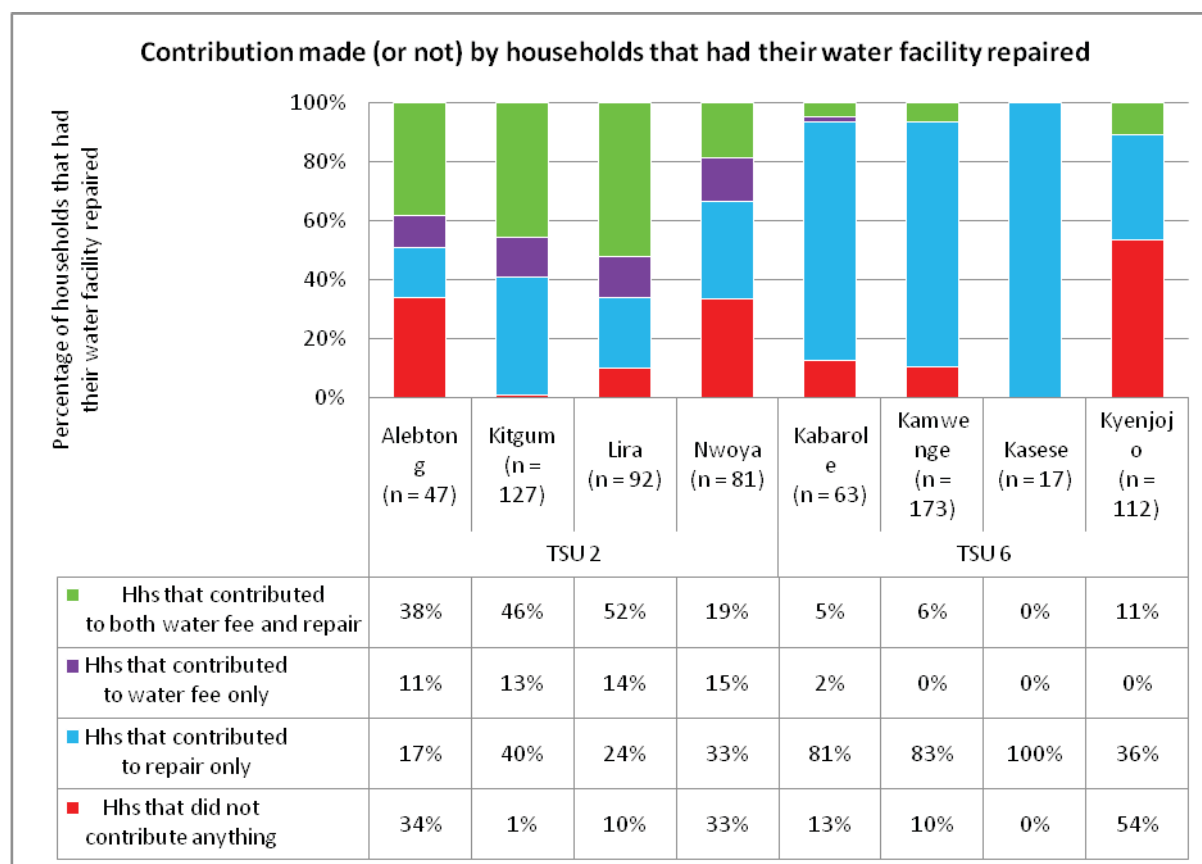
Users who were interviewed at household level were also asked whether they were requested to contribute towards the repair of the last interruption of their water facility. Although water users usually do not pay a regular water fee, payment for repairs is reported by three quarters of the interviewed households.

TSU	District	Percentage of interviewed households who were asked to contribute money for the repair of their water facility
TSU 2	Alebtong (n = 47)	55%
	Kitgum (n = 127)	86%
	Lira (n = 92)	76%
	Nwoya (n = 81)	52%
TSU 6	Kabarole (n = 87)	90%
	Kamwenge (n = 176)	90%
	Kasese (n = 17)	100%
	Kyenjojo (n = 113)	46%



**Table 12: Percentage of interviewed households who were asked to contribute money for the repair of their water facility when it broke down**

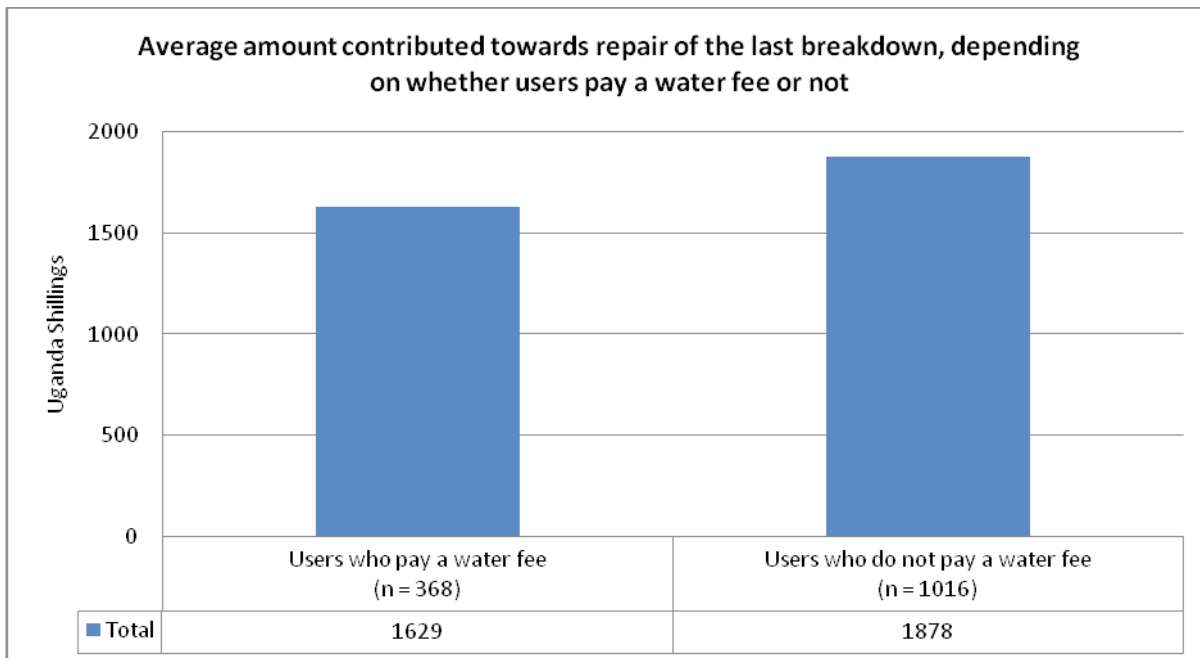
Figure 23 shows the proportion of households that both pay a water fee and contributed towards the repair of their facility (green), households that only pay a water fee (purple), households that only contributed towards the repair of their facility (blue), and households that neither pay a water fee nor contributed towards the repair of their facility (red).



**Figure 23: Contribution made (or not) by households that had their water facility repaired**

A majority of households in TSU 6 contribute money only when there is an interruption of service; in Kyenjojo district, many households that were interviewed did not even contribute towards repair of the last breakdown. In TSU 2 (to a lesser extent in Nwoya district) about a third of the households both pay a water fee and contributed towards the repair of their facility; as payment of a water fee is more widespread, a significant number of households (about 15%) did not have to contribute money for the last repair, probably because the O&M fund contained enough money to cater for the repair.

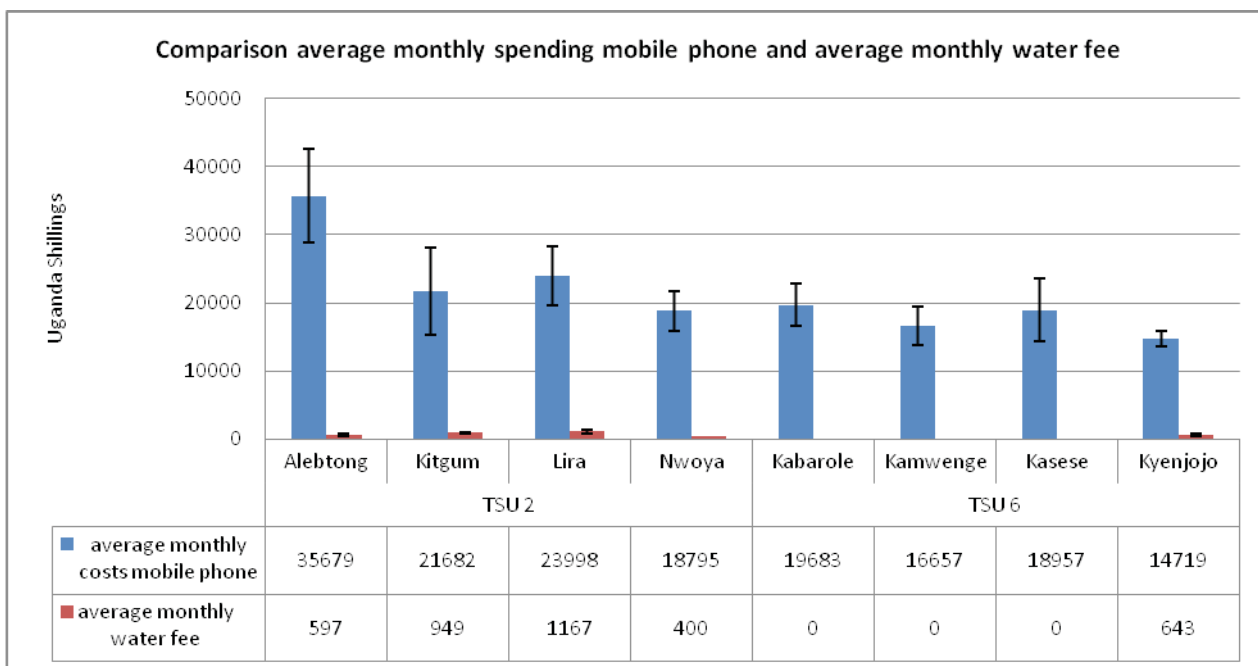
When users pay a water fee, they had to spend less towards repair of the last breakdown, as shown in Figure 24. However, the difference is not so significant with users that do not pay a water fee (only about UGX 250 difference), which means that even when money is collected on a regular basis, this is often not enough for covering costs incurred by repairs. This is not really offering a high incentive for water users to pay a regular water fee.



**Figure 24: Average amount contributed towards repair of the last breakdown, depending on whether users pay a water fee or not**

- **Users' willingness and ability to pay**

Users' satisfaction as regards to the affordability of the water service was analysed in section 4.1.2.1. Although consumers usually find the water affordable, the great majority do not pay a water fee. A comparison was made between what users pay for their water and what they pay for their mobile phones when they have one, as a proxy indicator for ability to pay. Among the households interviewed, 52% own a mobile phone (49% in TSU 2 and 56% in TSU 6), while only 27% pay a water fee (42% in TSU 2 and 5% in TSU 6). Households that pay a water fee were asked how much they spend monthly on airtime and charging of their phones. The difference between what people spend on water and on their mobile phones is striking: depending on the district, between UGX 400 and UGX 1,350 on average on water, and between UGX 15,000 and UGX 45,000 on mobile phones. Figure 25 clearly shows that the current water fees are within the financial ability of at least half of the households (the ones owning mobile phones), and even probably the majority of them.



**Figure 25: Comparison average monthly spending mobile phone and average monthly water fee<sup>21</sup>**

Mobile phones are certainly seen by users as having a monetary and social added-value; a phone call can for

21 Note: For Kabarole, Kamwenge and Kasese, the average monthly water fee is either unknown, or water users do not contribute monthly



example allow someone to earn money when used for business, and it is a means to keep contact with relatives and possibly mobilise their support when need arises. However, putting in parallel expenditures on water and on the ones on mobile phones still very clearly demonstrates that users' ability to pay for water is not the issue. The observed trend rather suggests that access to reliable water may not be such a high priority for users, that the demand for water from an improved sources is not so high, or that users believe that it is not their responsibility to ensure that water points are in working order at all times.

This is supported by the figures obtained when looking at the amounts of money spent by people who claim that the monthly water fee is **too high**:

- People who pay UGX 500 for water and claim that it is too much, spend between UGX 10,000 and UGX 49,800 on their mobile phones;
- People who pay UGX 1,000 for water and claim that it is too much, spend between UGX 1,000 and UGX 155,000 on their mobile phones;
- People who pay UGX 2,000 for water and claim that it is too much, spend between UGX 5,000 and UGX 30,000 on their mobile phones, etc.

As ability to pay doesn't seem to be the issue, the low payment rate of water fees by users needs to be explained by other arguments than the usual "people are too poor".

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### **Maintenance of water point surroundings**

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Apart from their financial contribution to O&M and repairs of their facility, users' interest and participation in keeping their water source clean was also selected as a proxy indicator of their sense of ownership. In the majority of cases, the surroundings of the water points were recorded as being maintained, as shown in the graph below:

<b>TSU</b>	<b>District</b>	<b>Percentage of households whose water point's surroundings are maintained</b>
TSU 2	Alebtong (n = 200)	83%
	Kitgum (n = 199)	80%
	Lira (n = 202)	89%
	Nwoya (n = 200)	85%
TSU 6	Kabarole (n = 186)	92%
	Kamwenge (n = 198)	100%
	Kasese (n = 37)	81%
	Kyenjojo (n = 195)	97%

**Table 13: Percentage of households whose water point's surroundings are maintained**

However, the data collection form did not contain a very clear definition of what was meant by well maintained (e.g. surroundings swept, no stagnant water in the soak away), so these figures of well-maintained water points may be overrated. It is not certain either that the enumerators really checked visually that the answers given by individual households members indeed reflected the reality.

In the majority of cases, the water point surroundings are kept tidy by water users and/or WSC members.

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### **Overall users' participation in the management and maintenance of the water source**

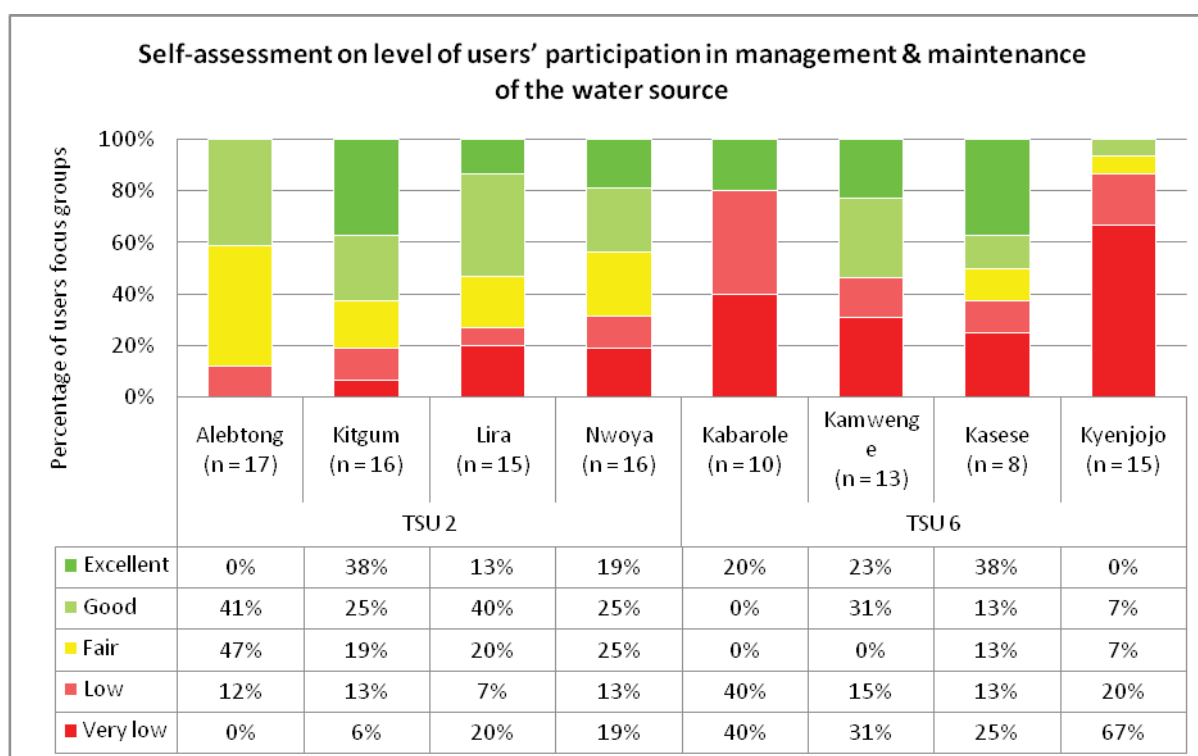
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For each interviewed water user group, the value for indicator 2.2 was set through a self-assessment during a focus group discussion, using the following scale:

Scenario	Score user's participation in the management and maintenance	Level users' participation in the management and maintenance
100% water users are registered and willingly participate in its management and maintenance	1	Excellent
80% of the registered water users willingly participate in its management and maintenance	0.75	Good
At least 60% of the registered water users are actively involved in its management and maintenance	0.5	Fair
Less than 60% of the registered water users actively participate in the management and maintenance activities	0.25	Low
Water user groups not clearly defined and there is no community involvement in the management and maintenance of the water source	0	Very low

**Table 14: Performance levels users' participation in the management and maintenance (Indicator 2.2)**

User groups assessed their own levels of participation in the management and maintenance of their water sources as shown in Figure 26 .



**Figure 26: Self-assessment on level of users' participation in management & maintenance of the water source**

Generally, users in TSU 2 consider that they perform better in terms of participation in the management and maintenance of their water sources than users from TSU 6 . Users' participation and sense of ownership is perceived lower in Kabarole and Kyenjojo districts, where only respectively 20% and 14% of user groups consider their performance in this area as fair or good.

This is in accordance with the fact that payment of water fees is much more widespread in TSU 2 than in TSU 6, as seen in the preceding part. It is also likely to be easier to mobilise communities with scattered water sources (like in TSU 2) than communities with a diversity of water sources as in TSU 6; this applies both for financial contribution and maintenance of surroundings of a water point.

Only 60% of the user groups that were interviewed (78% in TSU 2 and 35% in TSU 6) consider that they are managing and maintaining their water facility well (i.e. levels on indicator 2.2 from fair to excellent). Water users themselves therefore acknowledge that they could do better in terms of upkeep of their water facilities.



Although not part of the scoring indicator, users' attendance to meetings organised by the WSC was also recorded. Users interviewed at households were asked whether they attended the last meeting organised by their Water Source Committee. About a third of water users in both TSUs stated that they did not attend them. These proportions are above 40% in Alebtong and Lira in TSU 2, and in Kasese and Kyenjojo in TSU 6. Districts where the proportion of users attending meetings organised by the WSCs is highest are Nwoya in TSU 2 and Kamwenge in TSU 6 (where the Y-Y strategy is found).

TSU	District	Percentage of water users who attended the last meeting organised by the WSC
TSU 2	Alebtong (n = 173)	56%
	Kitgum (n = 183)	73%
	Lira (n = 148)	59%
	Nwoya (n = 91)	89%
TSU 6	Kabarole (n = 48)	67%
	Kamwenge (n = 139)	79%
	Kasese (n = 20)	55%
	Kyenjojo (n = 37)	54%

**Table 15: Percentage of water users who attended the last meeting organised by the WSC**

#### 4.1.2.3 Users' hygiene and sanitation behaviour

The last indicator under Users' satisfaction and sense of ownership focuses on hygiene and sanitation behaviour, i.e. whether they have access to a toilet with a proper hand-washing facility (i.e. a container with water inside, next to the toilet, and with soap). The results of the observations made in the households where interviews were conducted are summarised in the following table.

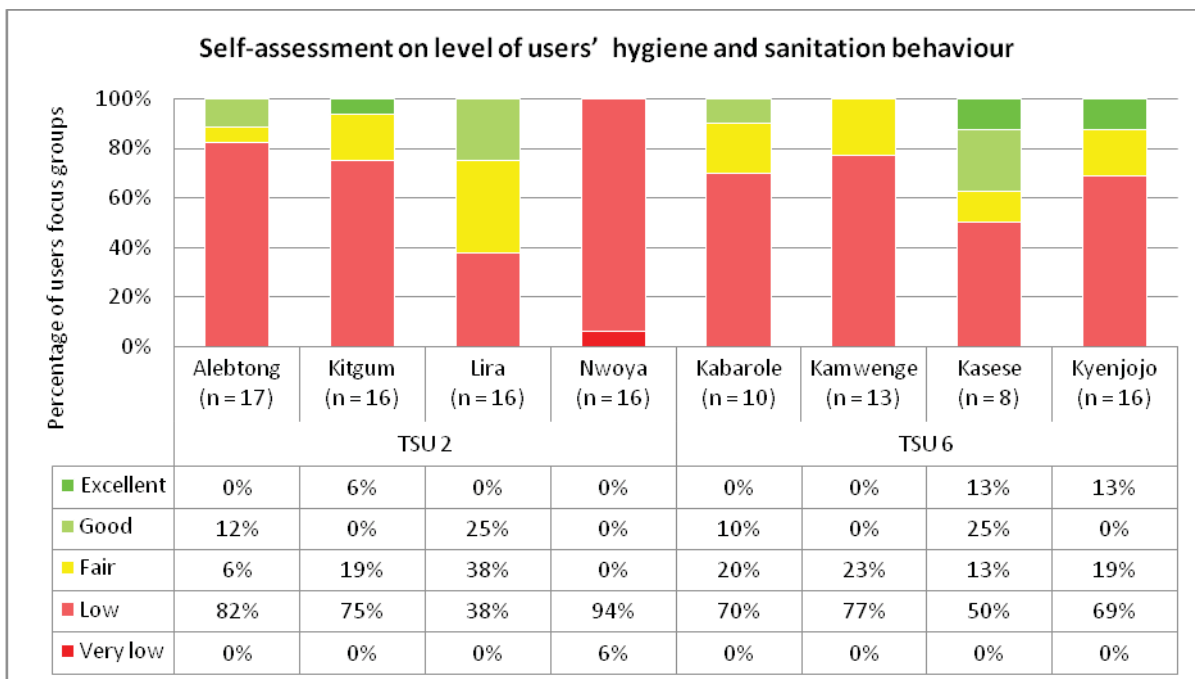
In focus group discussions, water users were asked to assess the hygiene and sanitation situation in their communities as a whole, based on the following scale:

Scenario	Score user's hygiene and sanitation	Level users' hygiene and sanitation
100% of the users have access to a toilet with proper hand washing facilities	1	Excellent
75% of the users have access to a toilet with proper hand washing facilities.	0.75	Good
60% of the users have access to a toilet with proper hand washing facilities.	0.5	Fair
Less than 50% of the users have access to a toilet	0.25	Low
Water users do not have access to toilet facilities.	0	Very low

**Table 16: Performance levels users' hygiene and sanitation behaviour (Indicator 2.3)**

Results from assessments made during focus group discussions are presented in figure 27.





**Figure 27: Self-assessment on level of users' hygiene and sanitation behaviour**

The hygiene and sanitation behaviour in the communities covered by this research was found to be generally low. In TSU 2, the situation is better in Lira district, while in TSU 6 Kasese district stands out as having more hygienic communities.

#### 4.1.2.4 Analysis of the overall users' satisfaction with the water service and sense of ownership

After analysing separately the three indicators at users' level<sup>22</sup>, the three indicators are aggregated together, adding up the individual scores and qualifying them as follows:

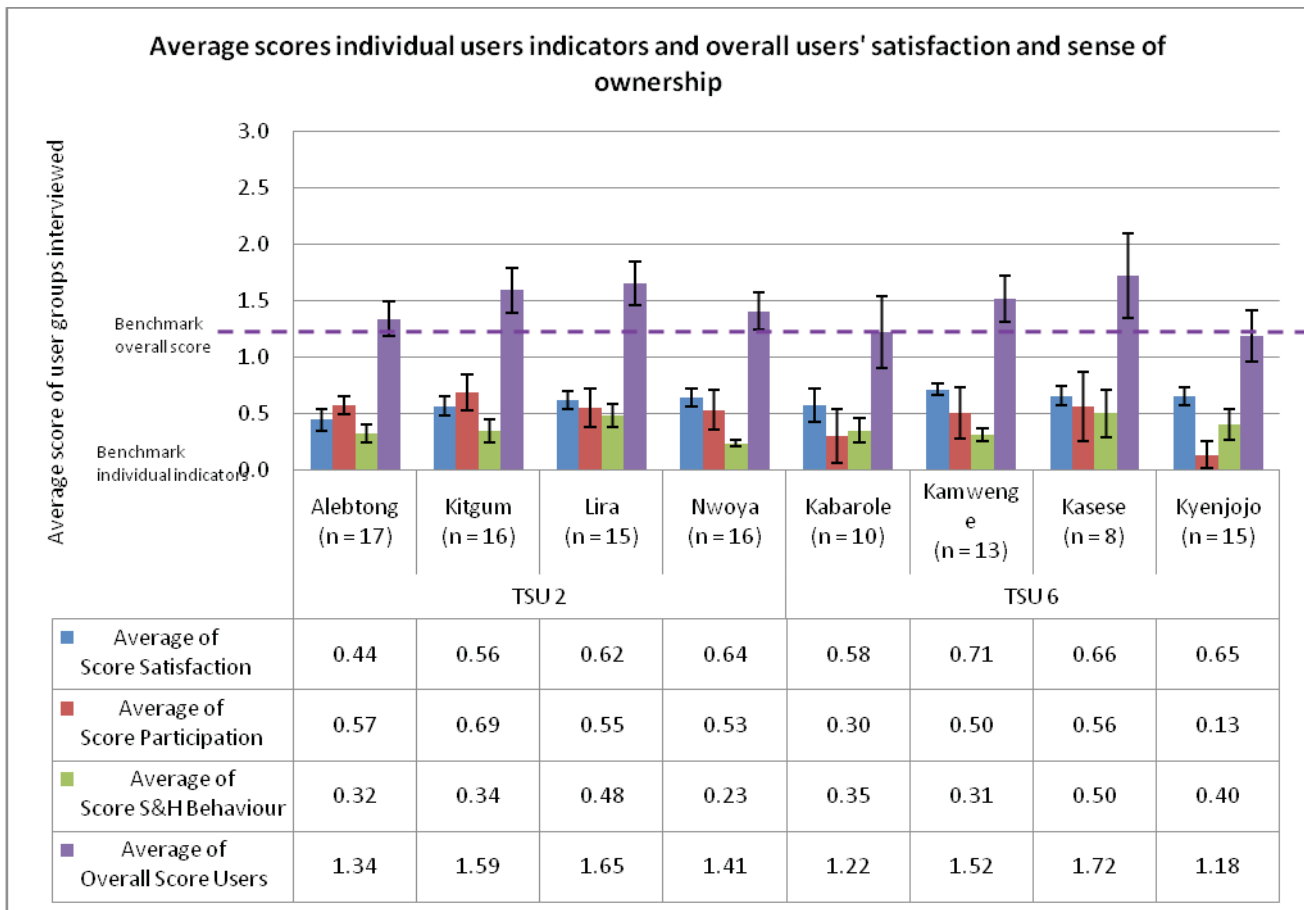
Score overall users' satisfaction and sense of ownership	Level overall users' satisfaction and sense of ownership
Equals 3	Excellent
Higher than 2.25 and lower than 3	Good
Higher than 1.5 and lower than 2.25	Fair
Higher than 0.75 and lower than 1.5	Low
Below 0.75	Very low

**Table 17: Qualification overall users' satisfaction and sense of ownership**

Figure 28 shows the score achieved by each district for each of the indicators at users' level, as well as the overall score for satisfaction and sense of ownership:

<sup>22</sup> Users' satisfaction with the service delivered, Users' participation in the management and maintenance of the water source, and Users' hygiene and sanitation behaviour.





**Figure 28: Average scores individual users indicators and overall users' satisfaction and sense of ownership**

For each individual indicator, the benchmark is 0.5 and the maximum score that can be reached is 1, while for the overall users' satisfaction and sense of ownership, the benchmark is 1.5 and the maximum score that can be reached is 3.

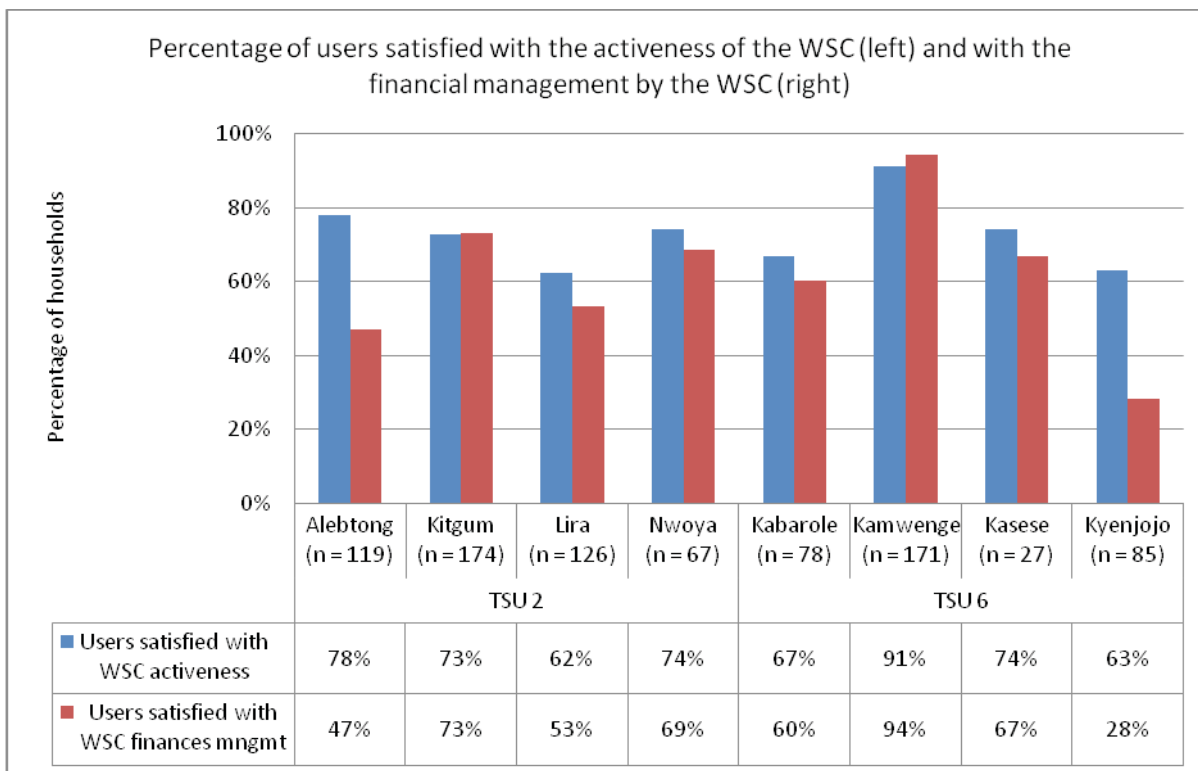
It is noticeable that for only for 4 districts (Kitgum and Lira in TSU 2, and Kamwenge and Kasese in TSU 6) the average score for overall users' satisfaction and sense of ownership is above the benchmark. Alebtong (TSU 2) and Kabarole (TSU 6) districts are below average (scores below 1.50). Even in Kasese, where the average score is highest, the score is only 1.83 out of 3. The districts with highest overall users' satisfaction and sense of ownership in TSU 6 are Kasese and Kamwenge, both districts where innovations within the management system are found.

Usually, the indicator on hygiene and sanitation behaviour is the lowest among the three users' indicators. In Alebtong and Kitgum districts (TSU 2), the indicator where the highest scores are reached is Users' participation in the management and maintenance of the water source. In Lira and Nwoya districts (TSU 2), as well as in all districts of TSU 6, the highest scores are reached for users' satisfaction with the service delivered. Users' participation in the management and maintenance of the water source is notably low in Kyenjojo district.

These various scores reached at users' level will be later on put in perspective with the performance achieved at service provider and service authority levels (see bivariate analysis in section 4.2).

#### *4.1.2.5 Users' satisfaction with the activeness of the WSC and the way it manages finances*

Finally, we analysed satisfaction of water users with their service providers. Generally, users are satisfied with the way their WSC functions: depending on the district, 62% to 91% of the user groups stated they are satisfied. Highest levels of satisfaction are reached in Kamwenge (91%) for TSU 6 and Alebtong (78%) for TSU 2. However, participants of the interpretation and validation meetings noted that usually water users are only aware of a few roles of the WSC; usually a few key roles of the chairman, the treasurer or the secretary are known to the users.



**Figure 29: Percentage of users satisfied with the activeness of the WSC and the way it manages finances**

The levels of users' satisfaction with respect to the financial management by the water source committee are usually of the same order of magnitude except for Alebtong and Kyenjojo districts where it is significantly lower. In Kamwenge district, where the Y-Y strategy is found, the percentage of users satisfied with the financial management by the WSC (94%) exceeded the percentage of users satisfied with the functionality of the WSC (91%).

### 4.1.3 Service provider level

This sub-section focuses on the Water Source Committees (WSCs), first on the composition of the committees that were interviewed during this research, and then at their performance in three main areas:

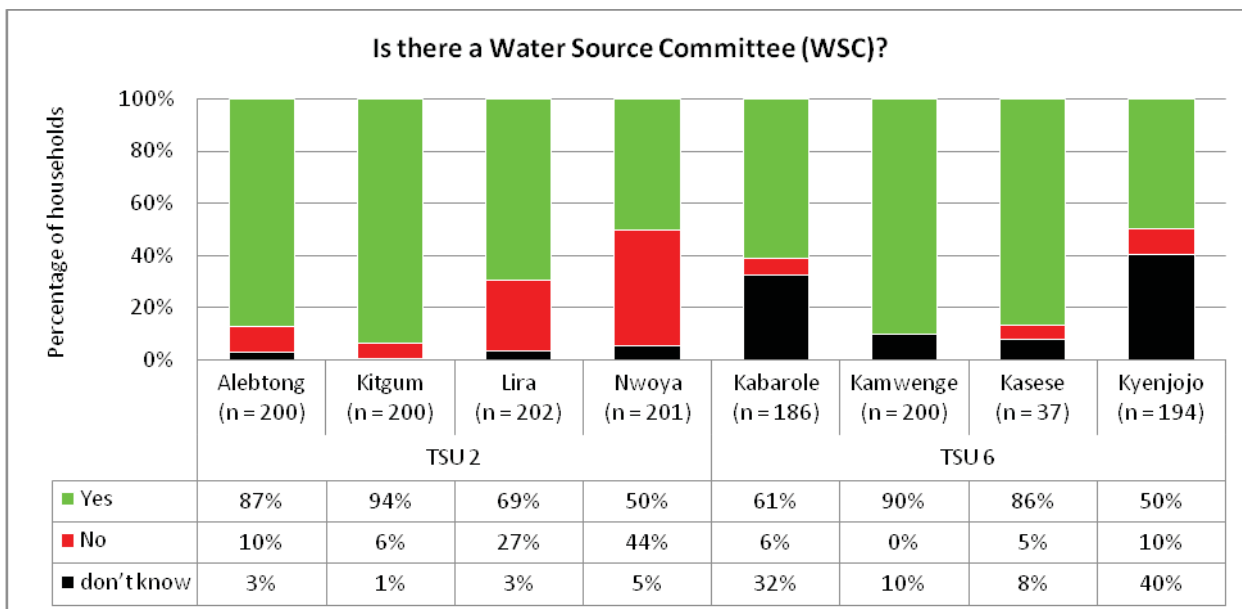
- Institutional capacity of the WSC and decision-making process (Indicator 3.1)
- Performance of administrative tasks by the WSC (Indicator 3.2)
- WSC involvement in O&M of the water services (Indicator 3.3)

For each of these three indicators, the degree of compliance with the benchmark is analysed and compared between districts. The levels of compliance between the three indicators of performance are also compared.

#### 4.1.3.1 Water Source Committees presence and composition

Water users interviewed at household level were asked whether their water source is managed by a WSC. Although the majority of water sources did have a committee, it doesn't mean that all these committees are actively performing their tasks; this aspect is further analysed in more details in section 4.1.3.2, that focuses on the actual performance of the committees.



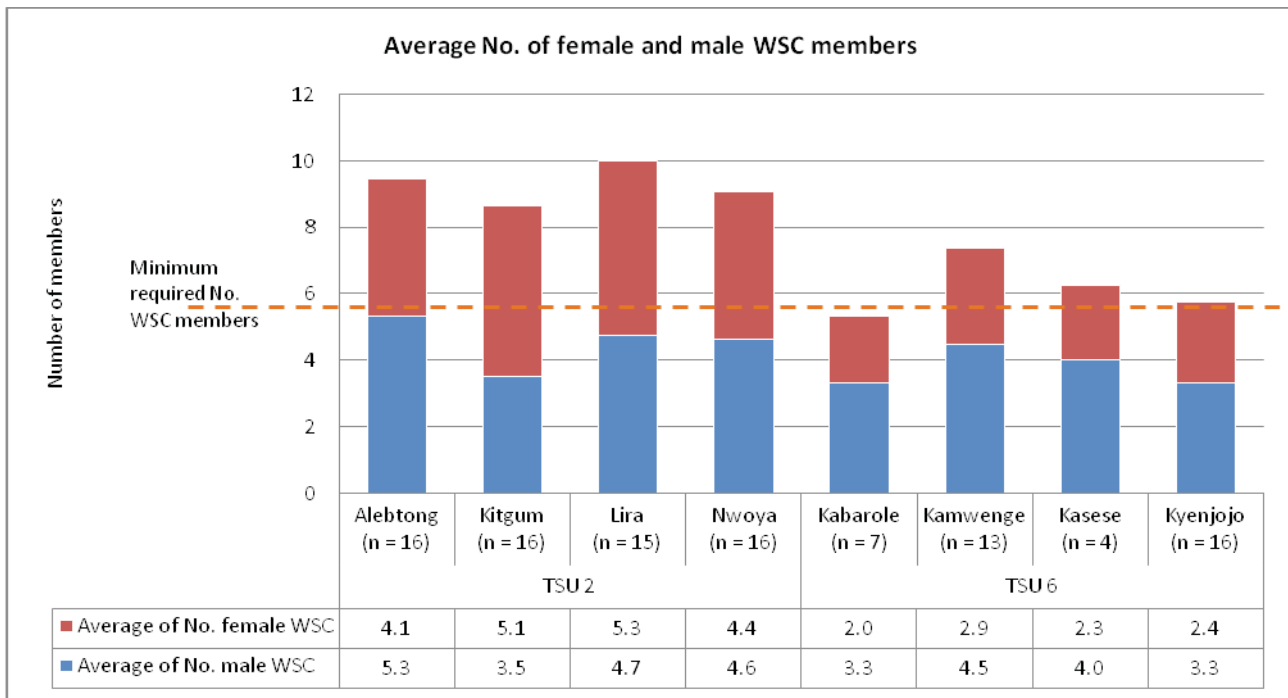


**Figure 30: Presence of Water Source Committees**

A significant proportion of water users, in particular in Kabarole and Kyenjojo districts (TSU 6) stated that they do not know whether there is a WSC. These answers most probably mean that there is no committee, or that if there is one it is nonfunctional. In TSU 2, 75% of the households interviewed stated that their water source has a WSC, while in TSU 6 these were 69%. In Nwoya (TSU 2) and Kyenjojo (TSU 6) districts, only 50% of the interviewees answered that their water sources are managed by a WSC. Quite some variations can be observed from one district to the other, with for example Kitgum or Kamwenge having the highest proportion of interviewees who knew their water points had a WSC (respectively 94% and 90%), while in Kyenjojo only 50% of the households mentioned that there is a committee. There are no rules for elections of WSCs, and after election members can stay on board for many years, even when they are not active. Some stakeholders considered the opportunity of appointing WSC members for a set length of time, together with regular retraining and training of newly elected committee members, as possible ways to ensure that WSCs remain more functional over time.

As outlined in the Rural Water Supply and Sanitation Handbook (2001)<sup>23</sup>, when there is a WSC, it should comprise at least 6 members, with at least 50% of women and one woman holding an executive post (chairperson, treasurer or secretary). As shown in figure 31, in TSU 2 Water Source Committees comprise on average 8 to 10 members. In TSU 6, however, the average number of committee members is below 6 in Kabarole and Kyenjojo districts.

<sup>23</sup> The Rural Water Supply and Sanitation Handbook For Extension Workers, Volume 1 – Community Management (Carl Bro International; Uganda, Ministry of Gender, Labour and Social Development, 2001)

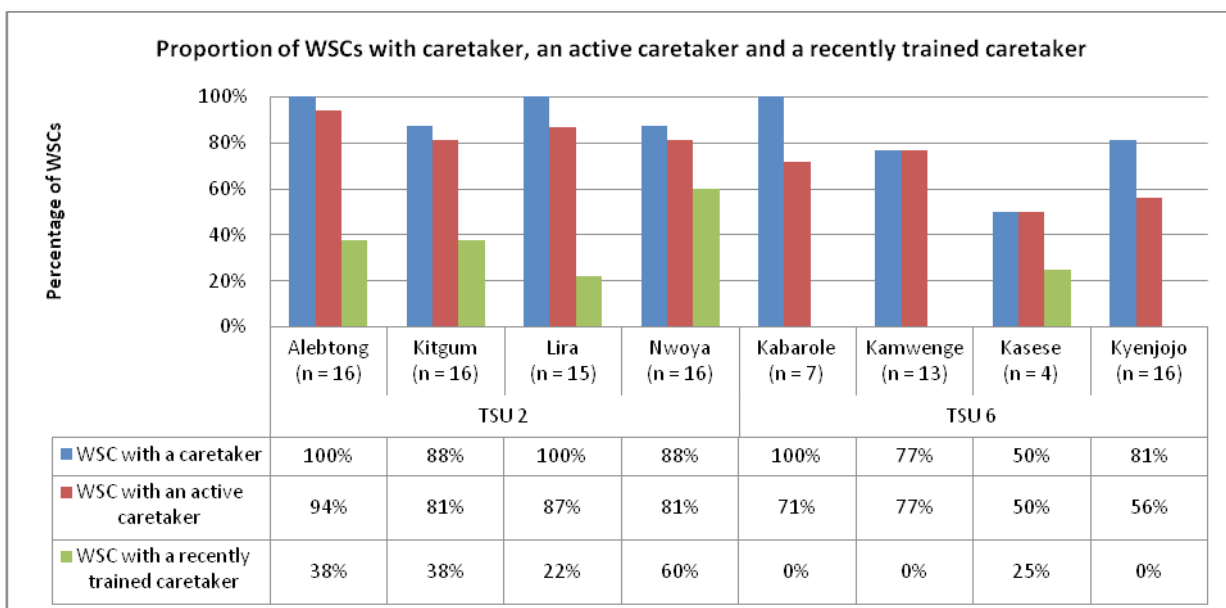


**Figure 31: Average No. of female and male WSC members**

The guideline of at least 50% women in the WSC is also often not really respected; only Lira and Kitgum districts have an average number of female WSC members higher than the average number of male members.

The presence of caretakers, whether these caretakers are active and whether they have been trained in the last 2-3 years<sup>24</sup>, are issues that were also covered. Results are presented in figure 32. With the exception of Kasese district (TSU 6), the great majority of the WSCs that were interviewed have a caretaker. However, not all caretakers are active, so the percentage of WSCs with an active caretaker is lower, or even significantly lower for Kabarole and Kyenjojo districts.

If we look at the WSCs with a caretaker who was trained in the last 2-3 years, the proportion even goes further down. Generally, the proportion of WSCs with trained caretakers is higher in TSU 2 than in TSU 6. None of the WSCs interviewed in Kabarole, Kamwenge and Kyenjojo districts have a caretaker who was trained recently.



**Figure 32: Percentage of WSCs with caretaker, an active caretaker and a recently trained caretaker**

<sup>24</sup> Assuming that any caretaker who was trained more than 2-3 years before the study would need some refresher training to be able to effectively perform his/her duties.

#### 4.1.3.2 Performance of Water Source Committees

The performance of the WSCs has been measured through three indicators that focus on (3.1) the institutional capacity of the WSC, (3.2) the performance of administrative tasks by the WSC, and (3.3) the involvement of the WSC in O&M of the water services. For all these three indicators, Water Source Committees were asked during focus group discussions to assess their level of performance using QIS tables.

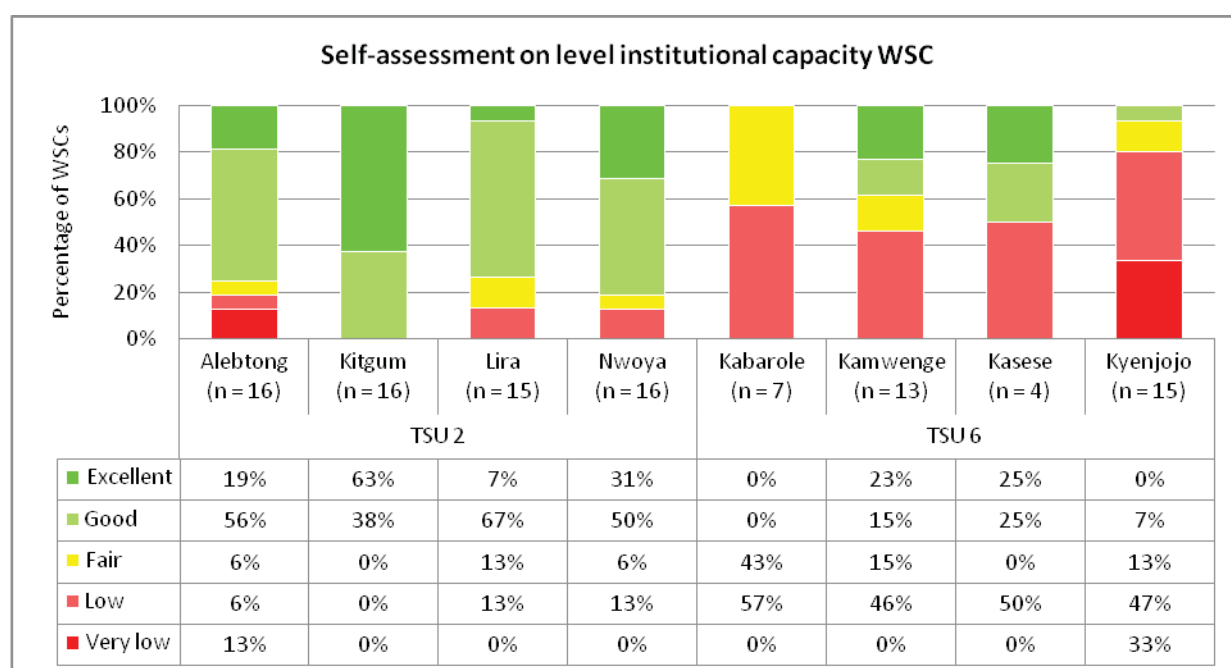
#### Institutional capacity of the WSC (Indicator 3.1)

This indicator focuses on the WSC composition, capacity and internal decision-making processes. The self-assessment by the interviewed WSC was done using the following scale/table.

Scenario	Score WSC's institutional capacity	Level WSC's institutional capacity
An elected, trained and active WSC is in place, composed of 6 members with 3 women and at least one in an executive post. WSC members take decisions based on consensus. WSC receives refresher training, is re-elected every two years & orients new members	1	Excellent
An elected, trained and active WSC is in place, composed of 6 members with 3 women and at least one in an executive post. WSC members take decisions based on consensus.	0.75	Good
An elected, trained and active WSC is in place, composed of 6 members with 3 women but with none in an executive post	0.5	Fair
An elected WSC is in place, composed of less than 6 members or less than 3 women	0.25	Low
There is no WSC in place (or the WSC is inactive)	0	Very low

**Table 18: Performance levels WSC's institutional capacity (Indicator 3.1)**

Results of the self-assessment by the interviewed committees are shown in Figure 33. In TSU 2, more than 80% of WSCs interviewed evaluated their institutional capacity as good or excellent. In Kitgum, even all WSCs did consider that their performance in this area is good or excellent. This contrasts strongly with TSU 6, where only 21% of the WSCs stated that their level of performance as regards to institutional capacity is good or excellent. Still in TSU 6, it is noticeable that the proportion of committees that consider their institutional system capacity to be good and excellent are bigger in the two districts where innovations within the management system are found: Kamwenge (with 48%) and Kasese districts (with 50%).



**Figure 33: Self-assessment on level institutional capacity WSC (Indicator 3.1)**

Some WSCs may have however overrated their institutional capacity; it is for example unlikely that such an important proportion of committees in TSU 2 is re-elected and receives refresher training every two years. On the other hand, many of these committees are still very new (e.g. 50% of the WSCs in Kitgum district were established in 2010 or later), and before this there was no WSC, as people were living in refugee camps. Nonetheless, the clear contrast between TSU 2 and TSU 6 districts is indisputable.

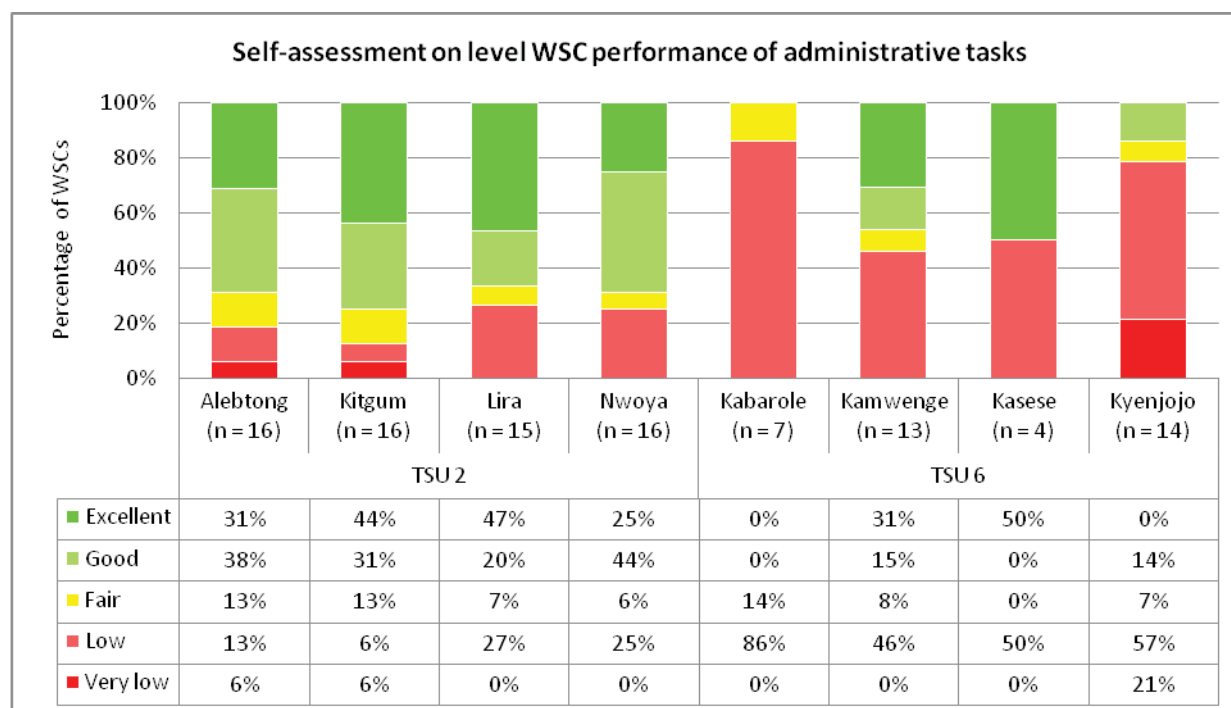
### WSC administrative tasks (Indicator 3.2)

After looking at the composition of the WSC, their capacity and the way decisions are taken, the performance of key administrative tasks such as holding executive meetings and meetings with users, keeping and displaying financial and management reports, and formulating local water user rules, was reviewed, using the scale presented in the next table.

Scenario	Score WSC's administrative tasks	Level WSC's administrative tasks
WSC holds monthly executive meetings & quarterly meetings with users, keeps up to date record, formulates local water user rules, keeps and displays financial & management reports at key strategic points	1	Excellent
WSC holds monthly executive meetings & quarterly meetings with users, keeps up to date records and formulates local water user rules	0.75	Good
WSC holds quarterly meetings with the executive & users, and keeps records	0.5	Fair
WSC holds at least 1 executive meeting in a year but has no records	0.25	Low
There is no WSC in place (or the WSC is inactive)	0	Very low

**Table 19: Performance levels WSC's administrative tasks (Indicator 3.2)**

As shown in figure 34, the contrast between TSU 2 and TSU 6 districts is still striking:



**Figure 34: Self-assessment on level WSC performance of administrative tasks (Indicator 3.2)**

The trends already observed for indicator 3.1. are found again for indicator 3.2.:

- A majority of WSCs in TSU 2, close to 70%, evaluated their performance of administrative tasks as good



- or excellent, while these were only 26% in with TSU 6;
- Kitgum also performed better on this indicator among the districts in TSU 2 (and even overall);
- In TSU 6 Kabarole and Kyenjojo are the weakest, with in both cases about 80% of the interviewed WSCs rating their performance on indicator 3.2 as low or very low

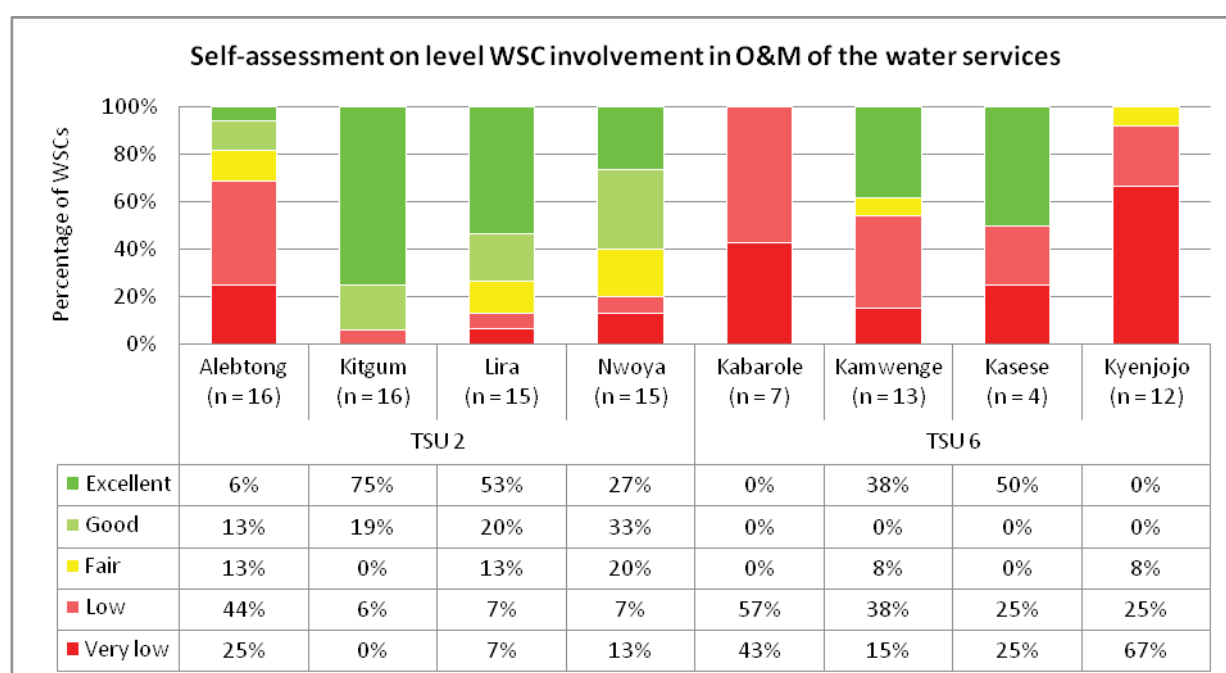
### WSC involvement in O&M of the water services (Indicator 3.3)

The last of the three indicators at service provider focuses on the fulfilment of key O&M activities by the WSC: collection of user fees and providing feedback to users on O&M funds, carrying out preventive maintenance and calling a Hand Pump Mechanic to carry out minor repairs. Table 20 shows the classification of levels of involvement of the WSC in O&M, and the related scores.

Scenario	Score WSC's involvement in O&M	Level WSC's involvement in O&M
WSC ensures continuous collection of user fees, organises HPs to carry out minor repairs, has mechanism of providing feedback to users on O&M funds, and carries out preventive maintenance	1	Excellent
WSC ensures continuous collection of user fees, organises HPs to carry out minor repairs, has mechanism of providing feedback to users on O&M funds but does not carry out preventive maintenance	0.75	Good
WSC ensures continuous collection of user fees, organises HPM to carry out minor repairs, but has no mechanism of providing feedback to users on O&M funds and does not carry out preventive maintenance	0.5	Fair
WSC ensures users fees are collected in case of a breakdown and organises HPM to carry out minor repairs, but has no mechanism of providing feedback to users and does not carry out preventive maintenance	0.25	Low
No WSC in place, or a WSC in place that has not taken the responsibility for O&M	0	Very low

**Table 20: Performance levels WSC's involvement in O&M (Indicator 3.3)**

Results of the self-assessment by the WSCs that were interviewed are as follows:



**Figure 35: Self-assessment on level WSC involvement in O&M of the water services (Indicator 3.3)**

The levels of performance of the WSCs in O&M follow similar trends as for the previous indicators at service



provider level:

- WSCs in TSU 2 are performing better than in TSU 6: 61% of WSCs in TSU 2 and only 19% in TSU 6 rated their performance as good or excellent;
- Kitgum is the better performing district in terms of involvement in O&M;
- Kabarole and Kyenjojo are the districts with the highest proportion of poorly performing committees: 100% of the WSCs in Kabarole and 92% in Kyenjojo rated their performance on indicator 3.3 as low or very low

The low performance of WSCs in TSU 6 with regard to O&M activities may be partly explained by the low proportion of committees that have a trained and active caretaker (as illustrated in Figure 32).

Through this self-assessment, WSCs, especially in TSU 6, also acknowledge that they do have appropriate mechanism of providing feedback to users on O&M funds, which is not encouraging water users to pay water fees. The enforcement / collection of water fee by the WSC is an issue, as already discussed in part 4.1.2.2, when analysing payment for water by users. As WSC members are volunteers, they may have other priorities than chasing water users for payment.

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### **Overall performance of WSCs**

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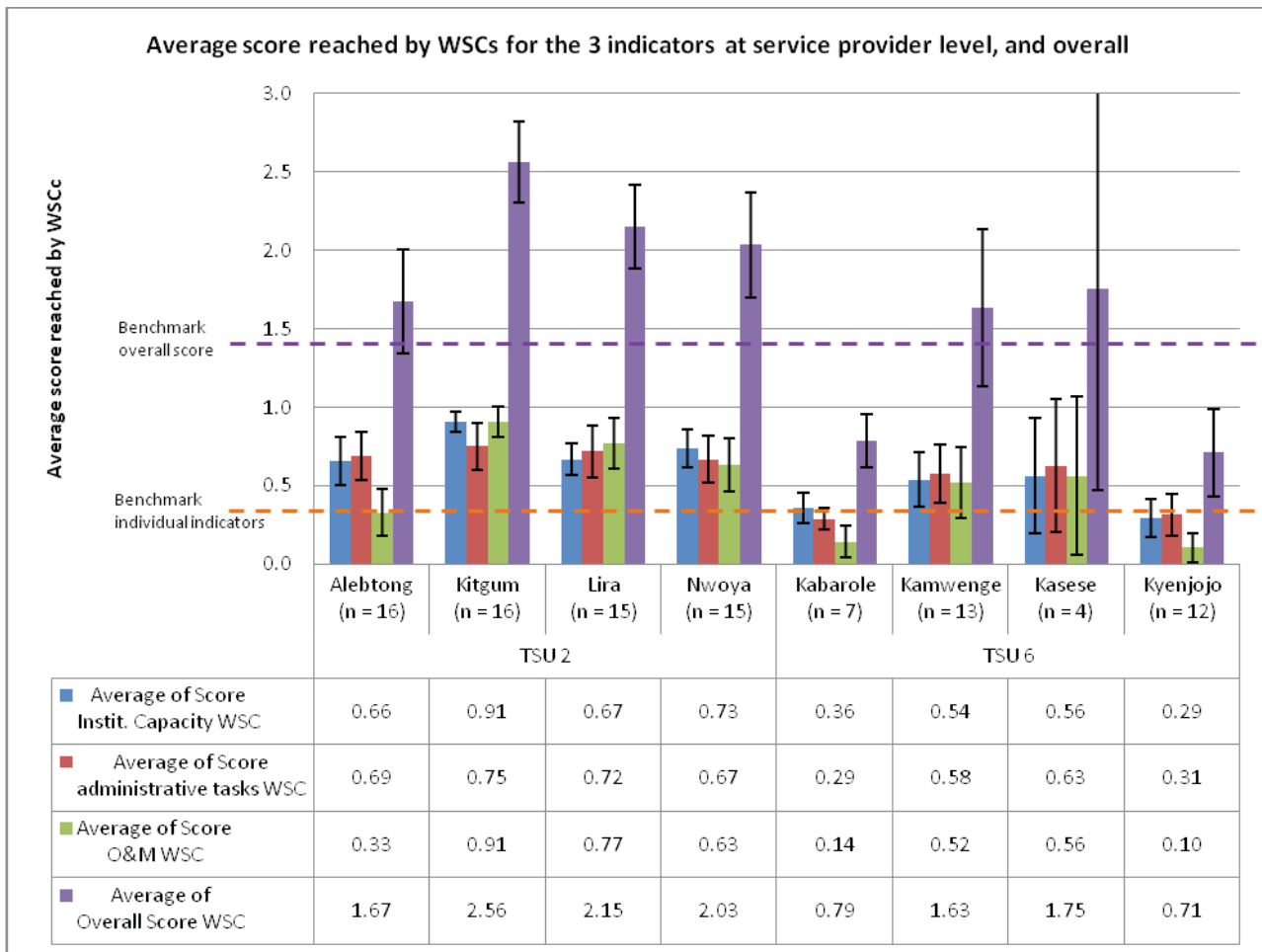
After analysing separately the three indicators at service provider level<sup>25</sup>, we can now aggregate them together, adding up the individual scores and qualifying them as follows:

<b>Score overall performance of WSCs</b>	<b>Level overall performance of WSCs</b>
Equals 3	Excellent
Higher than 2.25 and lower than 3	Good
Higher than 1.5 and lower than 2.25	Fair
Higher than 0.75 and lower than 1.5	Low
Below 0.75	Very low

**Table 21: Qualification overall performance of WSCs**

Figure 36 summarises the average scores reached for each of the 3 SDIs at service provider level, as well as overall, allowing a detailed comparisons between districts. For each individual indicator, the benchmark is 0.5 and the maximum score that can be reached is 1, while for the overall performance of the WSC, the benchmark is 1.5 and the maximum score that can be reached is 3.





**Figure 36: Average score reached by WSCs for the 3 indicators at service provider level, and overall**

For two districts, Kabarole and Kyenjojo, the average overall score of the WSCs is below the benchmark of 1.5, while in Kitgum the average overall score reached is three times as much.

WSCs in TSU 2 generally have a higher average overall score than the ones of TSU 6. In TSU 2, Kitgum district is outstanding, while in TSU 6 there is a clear contrast between Kabarole and Kyenjojo on one hand, and Kamwenge and Kasese on the other hand. In the latter 2 districts, where innovations within the management system are found, the overall performance of WSCs is remarkably better.

#### 4.1.4 Service authority and support functions

The last level of analysis using service delivery indicators relates to the service authority (districts, sub-counties) and related support functions (1) to the service providers, by service authorities but also other entities such as handpump mechanics, and (2) to the service authorities, by the regional Technical Support Units (TSUs).

This sub-section starts with the analysis of performance of first the sub-counties, then the districts; the degree of compliance with the benchmark for each service delivery indicators is looked at, and the levels of compliance compared between indicators. Then the performance of the TSU is briefly discussed.

##### 4.1.4.1 Service authority level - Sub-county

Among the nine indicators at service authority level, as listed in sub-section 2.2.2, two are specific of the sub-county: "Community mobilisation by sub-county during the provision of the water facility" (Indicator 4.3.) and "Post-construction management support & supervision by sub-county to WSCs" (Indicator 4.6.). However, when collecting data in the field, additional information was also gathered on the following aspects which are more specific of the work done by sub-counties during the provision of water infrastructures and the establishment of related service management structures:

- Mobilisation of communities during the construction phase
- Training of WSCs
- Training of source caretakers in preventive maintenance
- Commissioning water sources

Although no specific service delivery indicator had been designed on the involvement of sub-counties (S/Cs) during the construction phase, as the above data was collected, it was then aggregated into an additional indicator: "Support by S/C during construction". Scores obtained for this additional indicator were also included in the calculation of the overall performance of visited S/Cs. For all these three indicators, S/C staffs were asked during focus group discussions to assess their level of performance using QIS tables.

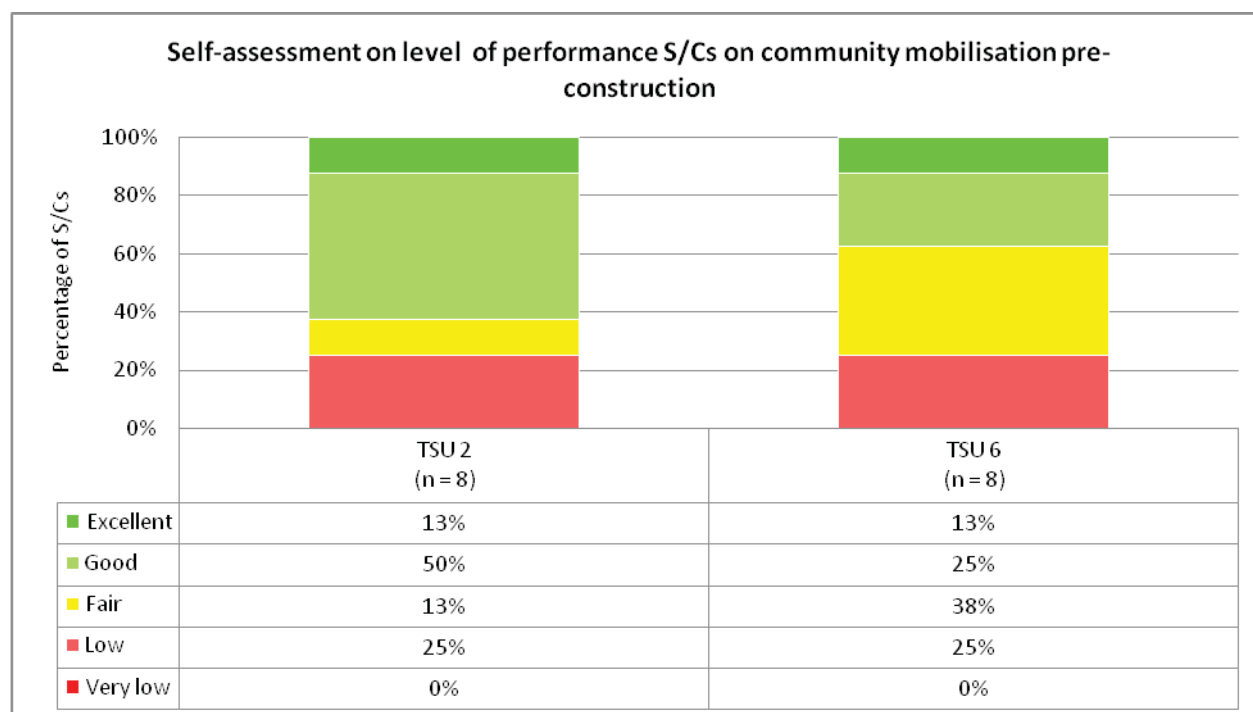
### Indicator 4.3. - Community mobilisation by S/C during the provision of the water facility

This indicator looks at the extent to which community mobilisation and participation is done applying the 6 critical requirements contained in the OP-5 (listed in part 3.3.2.1). This process being mainly facilitated by S/C staff, the level of performance of the S/C in this area has been assessed using the following scale:

Scenario	Score S/C community mobilisation pre-construction	Level S/C community mobilisation pre-construction
All 6 critical requirements have been met.	1	Excellent
4 or 5 critical requirements are met.	0.75	Good
3 critical requirements are met.	0.5	Fair
Less than 3 critical requirements are met.	0.25	Low
None of the critical requirements are met.	0	Very low

**Table 22: Performance levels S/C for community mobilisation during provision of the water facility (Indicator 4.3)**

Figure 37 shows that the majority of S/Cs staffs consider that their performance in this area ranges between fair to excellent. In both TSUs, only a quarter of the S/Cs considered that they are doing poorly. Also noticeable is that S/Cs in TSU 2 see themselves as performing better than S/Cs in TSU 6: 63% of good or excellent performance in TSU 2, against 38% in TSU 6.



**Figure 37: Self-assessment on level of performance S/Cs on community mobilisation pre-construction (Indic. 4.3)**

However, enumerators who collected the data for this research reported that quite often S/C staff tended to overestimate their performance, and that some discussions were required to cross-check whether their statements were really reflecting the reality. Still, the proportion of S/Cs that has a good (4 or 5 critical requirements met) or excellent (all 6 critical requirements met) performance on indicator 4.3 seems probably higher than the reality, as



the following three critical requirements often are hard to meet:

- Settlement of land and ownership conflicts with formal agreements in place;
- Preparation of a realistic and viable 3 year O&M plan;
- Hygiene promotion and sanitation [...] targeting latrine coverage of 30% during mobilisation and 95% four years after completion of the water facility.

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### Indicator on support by S/C during construction

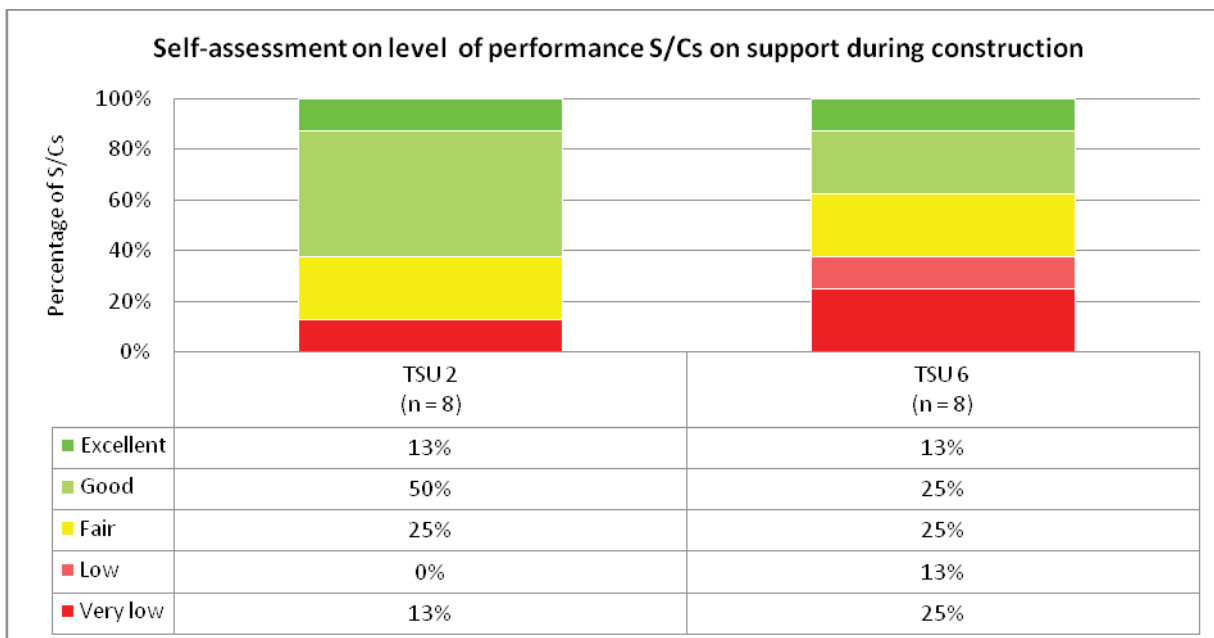
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As stated earlier, initially, no specific service delivery indicator had been designed on the involvement of sub-counties during the construction phase and related training of WSCs; as data had been nonetheless gathered on these aspects, an additional indicator, "Support by S/C during construction", was designed, as follows.

Scenario	Score S/C support during provision water facility	Level S/C support during provision water facility
S/C involved in all 4 of the following construction support activities: community mobilisation during construction, training of caretaker, training of WSC in O&M, commissioning	1	Excellent
S/C involved in 3 of the following construction support activities: community mobilisation during construction, training of caretaker, training of WSC in O&M, commissioning	0.75	Good
S/C involved in 2 of the following construction support activities: community mobilisation during construction, training of caretaker, training of WSC in O&M, and commissioning	0.5	Fair
S/C involved in 1 of the following construction support activities: community mobilisation during construction, training of caretaker, training of WSC in O&M, and commissioning	0.25	Low
S/C involved in none of the construction support activities	0	Very low

**Table 23: Performance levels S/C support during provision of the water facility**

As for the previous indicator presented in figure 37, 63% of S/C staff in TSU 2 estimated that their performance during construction is good or excellent, while 28% stated the same in TSU 6. Generally, S/Cs felt that they perform less well on during construction than during the mobilisation phase pre-construction, as 13% in TSU 2 and even 25% in TSU 6 rated their performance during construction as very well, whereas none had done so for indicator 4.3.



**Figure 38: Self-assessment on level of performance S/Cs on support during construction**

#### **Indicator 4.6. - Post-construction management support & supervision by S/C to WSCs**

When initially developing the SDI on post-construction activities in which the S/C is supposed to engage, the indicator was covering the following areas:

- Provision of software information on behaviour change and environmental issues, sanitation & hygiene promotion
- Retraining of WSCs
- Monitoring of records and finances
- Conflict resolution

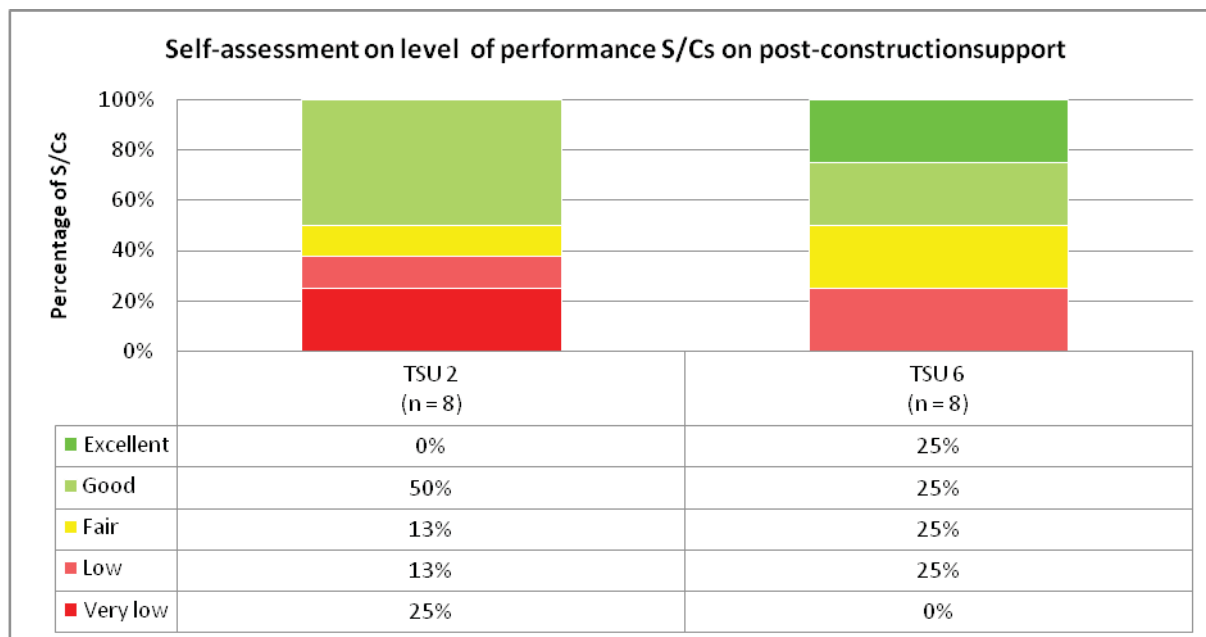
However, the indicator was reviewed just before data collection and limited to only some aspects of the involvement of the S/C in post-construction support to the WSCs. The QIS table used during data collection therefore was built as follows:

Scenario	Score S/C post-construction support to WSCs	Level S/C post-construction support to WSCs
The sub-county provides support to WSCs to mobilise communities on Operation & maintenance and has mechanism for continuously following up the performance of WSC, retrains WSCs that disintegrate & has documentation of support provided to WSCs & Communities	1	Excellent
The sub-county technical & political staff work together to support WSCs to mobilise communities on Operation & maintenance, Sub-county has mechanism for continuously following up the performance of WSCs, and retrains WSCs that disintegrate	0.75	Good
The sub-county provides support to WSCs to mobilise communities on Operation & maintenance and has mechanism for continuously following up the performance of WSC, and retrains WSCs that disintegrate	0.5	Fair
The sub-county provides support to WSCs to mobilise communities on operation & maintenance and has mechanism for continuously following up the performance of WSC.	0.25	Low
Sub-county does not provide management support & supervision to WSCs.	0	Very low

**Table 24: Performance levels S/C post-construction support to WSCs (Indicator 4.6)**



Contrarily to the previous indicators at sub-county level, S/Cs in TSU 6 seem to be doing more or less similar in post-construction activities than TSU 2, with 25% of the S/Cs in TSU 6) having rated their performance as excellent (against 0% in TSU 2) and 25 % as good. Altogether, based on self-assessment, 63% of the S/Cs in TSU 2 have a fair to good level of performance, and 75% in TSU 6 have a fair to excellent level. 25% of the S/Cs in TSU 2 estimated that their performance is very low.



**Figure 39: Self-assessment on level of performance S/Cs on post-construction support (Indic. 4.6)**

### Overall performance of S/Cs

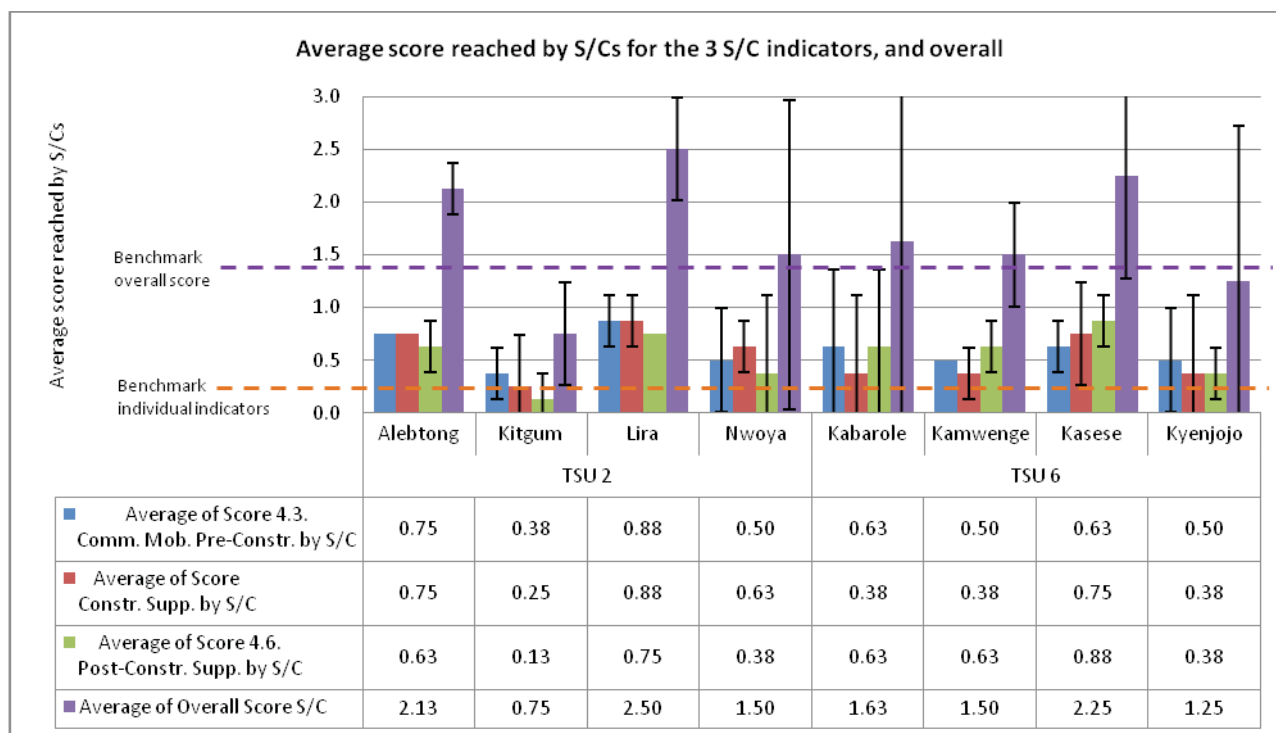
After analysing separately the three indicators for the S/C, these have been aggregated, adding up the individual scores and qualifying them as follows:

Score overall performance of S/Cs	Level overall performance of S/Cs
Equals 3	Excellent
Higher than 2.25 and lower than 3	Good
Higher than 1.5 and lower than 2.25	Fair
Higher than 0.75 and lower than 1.5	Low
Below 0.75	Very low

**Table 25: Qualification overall performance of S/Cs**

Figure 40 shows the average scores reached in each TSU for the 3 S/C indicators. Again, for each individual indicator, the benchmark is 0.5 and the maximum score that can be reached is 1, while for the overall performance of the S/C, the benchmark is 1.5 and the maximum score that can be reached is 3.

Lira and Alebtong (in TSU 2) and Kasese (in TSU 6) are particularly standing out as having better performing S/Cs, while Nwoya, Kabarole and Kamwenge are more in the average. Sub counties in Kitgum are particularly weak, a finding which was also acknowledged by stakeholders of this district during the data interpretation and validation meeting. The District Water Officer of Kitgum explained that he works quite a lot with the Health Assistants and Community Development Officers in his area, but while some are very active, others are not. The highest performance of the sub-counties in Lira was attributed to the fact that in this district S/Cs formed Sub-County Water and Sanitation Coordinating Committees (SCWSCCs) that are functioning well.



**Figure 40: Average score reached by S/Cs for the 3 S/C indicators, and overall**

#### 4.1.4.2 Service authority level - District

This section focuses on districts, with first a brief analysis of the levels of performance reached in each TSU on each of the 6 indicators specific to the districts. For all 6 indicators, the district water officer was asked to assess the level of performance of his office using QIS tables. After this, the overall performance of the districts is presented, and scores achieved by the districts are compared.

#### Indicator 4.1 - Resources of the District Water Office (DWO)

It is assumed that in order to be in a position to deliver appropriate services, a district water office needs to be well resourced in terms of staff (see list in part 3.1.2) and equipment (cars, computers, GPS handsets, software), while copies of key sector documents (conditional grant guidelines, the District Implementation Manual / DIM and the O&M Framework) should be available in the office for easy reference. Table 26 shows a breakdown of staff available in each water office of the eight districts surveyed. It shows that none of the DWOs has the required 5 key staff members, and that a district such as Alebtong was critically understaffed at the time of the data collection.

TSU	District	Senior Engineer	Hygiene Education / Sanitation Officer / Planner	Assistant DWO Mobilisation	Technical Officer	Borehole maintenance Supervisor	Total Staff District Water Office
TSU 2	Alebtong			√			1
	Kitgum	√	√	√		√	4
	Lira	√	√	√	√		4
	Nwoya	√	√		√		3
TSU 6	Kabarole	√	√		√		3
	Kamwenge	√	√	√	√		4
	Kasese	√	√	√	√		4
	Kyenjojo	√	√		√	√	4

**Table 26: Staff composition for each District Water Office**

As regards to key sector documents, only three districts (Kitgum, Lira and Kabarole) had the DSWCG guidelines, the DIM (with annexes) and the O&M Framework at hand. Three other districts (Alebtong, Nwoya and Kasese) had two key documents out of three in their DWO, while Kamwenge and Kyenjojo districts only had one

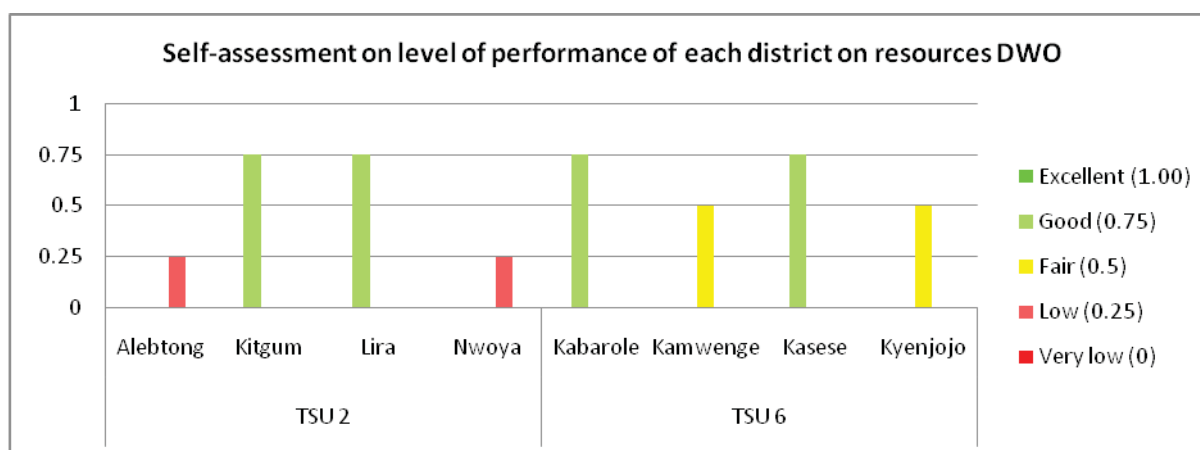
Table 27 shows how indicator 4.1 on resources of the District Water Offices has been built and related scores and performance levels allocated:

Scenario	Score district resources DWO	Level district resources DWO
The District Water office consists of at least 5 members, in line with the water sector guidelines. They have equipment in order to do their job (transport (car and multiple motor cycles + fuel), computer, GPS handset). They have a copy of the of the conditional grant guidelines, the DIM (including annexes) & the O&M Framework.	1	Excellent
The District Water office consists of at least 3 members (engineer, community mobilise and one other person), in line with the water sector guidelines. They have equipment in order to do their job (transport (car and one motor cycle + fuel), computer, GPS handset). They have a copy of the of the conditional grant guidelines, the DIM (including annexes) & the O&M Framework.	0.75	Good
The District Water office consists of at least 3 members (engineer, community mobilise and one other person). They have some equipment in order to do their job (transport (car + fuel), computer, GPS handset). They have a copy of the conditional grant guidelines, the DIM (including annexes) & the O&M Framework.	0.5	Fair
The District Water office consists of 1 or 2 (engineer, and one other person).	0.25	Low
The District Water office does not have substantive members or the water officer has multiple roles beyond his / her role in the DWO.	0	Very low

**Table 27: Performance levels resources of the DWO (Indicator 4.1)**

The results of the self-assessment by the various districts are shown in Figure 41. In each TSU, the districts are distributed in two groups:

- In TSU 2, two districts (Kitgum and Lira) have a good level of performance, while the two other (Alebtong and Nwoya) have a low level;
- In TSU 6, two districts (Kabarole and Kasese) have a good level of performance, while the two other (Kamwenge and Kyenjojo) have a fair level.



**Figure 41: Self-assessment on level of performance of each district on resources DWO (Indic. 4.1)**

#### **Indicator 4.2 - District planning, procurement and contract management**

District Water Offices are expected to perform planning, procurement and contract management in accordance with guidelines set by the Public Procurement and Disposal of Public Assets Authority (PPDA). Three key areas of work by the DWO were initially selected to be included in the indicator:

- The generation of annual procurement plans for investments and major repairs for water services
- The monitoring of investments and major repairs for water services and the submission of quarterly reports
- Procurement and contract management procedures (including construction supervision)

A complete scale for the indicator on district planning, procurement and contract management was developed (see page 174). However, this scale was not applied during data collection, and instead staffs from the District Water Offices were asked to rate their satisfaction with regards to their performance in the following two broad



areas:

- fulfilling procurement requirements in the last financial year
- supervision of contracts works

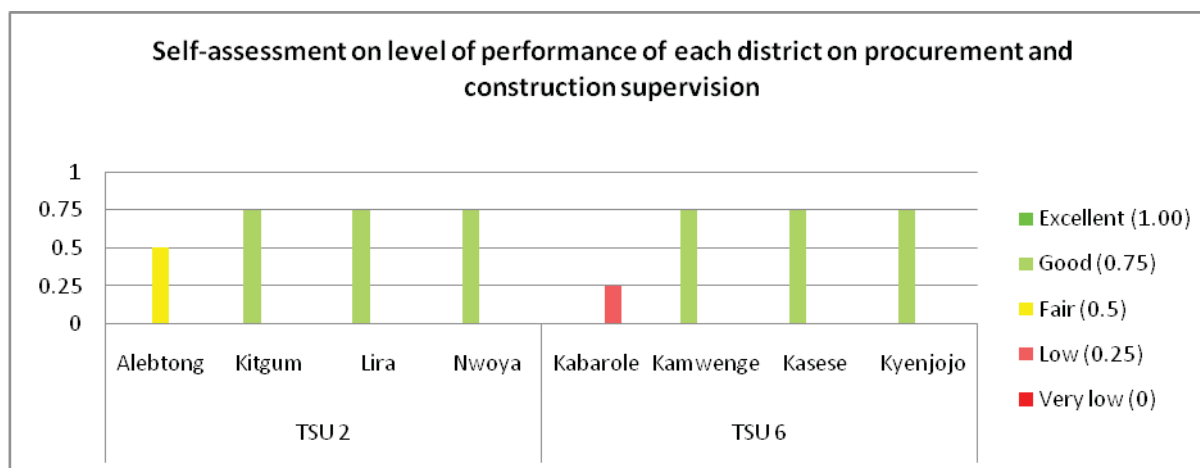
The indicator used in this analysis therefore only concerns procurement and contract management, performance in planning activities having been left out.

Based on the answers by DWO staff, each of these two broad areas received a score that ranged between 0% and 100%, and the average of the 2 marks was used to obtain the score on district planning, procurement and contract management. Table 28 shows the allocations of scores and levels:

Scenario	Score district procurement and contract management	Level district procurement and contract management
Average satisfaction DWO with fulfilling procurement requirements and supervision of contracts works = 1	1	Excellent
Average satisfaction DWO with fulfilling procurement requirements and supervision of contracts works above 0.75 and below 1	0.75	Good
Average satisfaction DWO with fulfilling procurement requirements and supervision of contracts works above 0.5 and below 0.75	0.5	Fair
Average satisfaction DWO with fulfilling procurement requirements and supervision of contracts works above 0.25 and below 0.5	0.25	Low
Average satisfaction DWO with fulfilling procurement requirements and supervision of contracts works below 0.25	0	Very low

**Table 28: Performance levels district procurement and contract management (Indicator 4.2, adapted)**

Generally, districts considered that their performance in procurement and contract management was good. Only Alebtong district in TSU 2 rated its performance as fair, while Kabarole district in TSU 6 rated its level of performance as low.



**Figure 42: Self-assessment on level of performance of each district on procurement and construction supervision (Indic. 4.2)**

#### Indicator 4.4 - Utilisation of District Water and Sanitation Conditional Grant (DWSCG)

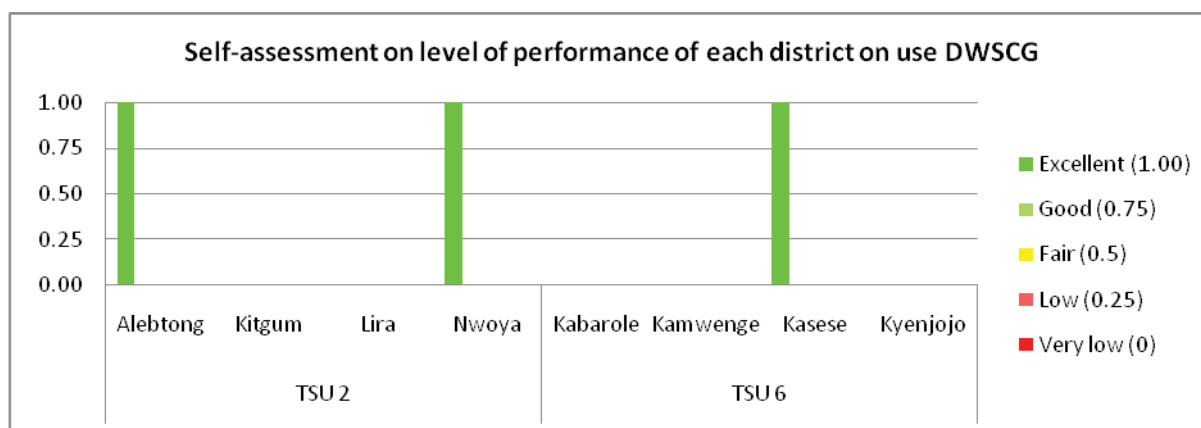
Each district was asked whether it had respected the previous year the allocation formula prescribed in the 2009/10 Water and Sanitation Sectoral Specific Schedules when spending the DWSCG. The scoring system was then as follows:



Scenario	Score district utilisation of DWSCG	Level district utilisation of DWSCG
Utilisation of DWSCG is spent according to sector guidelines	1	Excellent
Utilisation of DWSCG is <u>not</u> spent according to sector guidelines.	0	Very low

**Table 29: Performance levels districts utilisation of DWSCG (Indicator 4.4)**

As shown in the figure below, the majority of districts did not follow the guidelines for allocation of the DWSCG: half of the districts in TSU 2 and three quarters of the districts in TSU 6 score "0" (or Very low), meaning they spent the grant differently from what was prescribed.



**Figure 43: Self-assessment on level of performance of each district on use DWSCG (Indic. 4.4)**

Most districts that did not follow the DWSCG allocation formula used a different percentage for management costs, as 4% is seen as quite low; Kyenjojo district had a different allocation to software costs. When asked about suggested changes to the allocation formula, district staff reported that investments in O&M should be more than 8%, and that management cost should in their view, also be increased.

One important conclusion of the Value for Money Audit Report on the water sector prepared in 2009 by the Office of the Auditor General<sup>26</sup>, was that the release of the DWSCG to districts is usually delayed, leading to district annual work plans being implemented neither on time nor in full, with as a consequence only 68% on average of planned facilities being constructed at the end of the year. Surveyed district water offices were therefore also asked whether they had received the full amount of the requested grant. Only two districts (Alebtong and Kabarole) received the full grant; nonetheless, all districts received at least 85% of the requested amount.

TSU	District	Percentage of DWSCG received?
TSU 2	Alebtong	100%
	Kitgum	90%
	Lira	85%
	Nwoya	95%
TSU 6	Kabarole	100%
	Kamwenge	85%
	Kasese	97%
	Kyenjojo	85%

**Table 30: Percentage of the requested DWSCG received by districts**

## Indicator 4.5 - Support, supervision & monitoring to service providers by the district

<sup>26</sup> Office of the Auditor General, 2009, *Value for Money Audit Report on Provision of Water and Maintenance of Water Facilities in District Local Governments by the Directorate of Water Development, Ministry of Water and Environment*, Kampala

Although when a water facility is completed, the District Water Office transfers to the S/Cs most of the responsibility for post-construction support to WSCs. Nonetheless, the responsibility for planning post-construction support still lies with the districts. The following were seen as crucial areas of involvement of district water offices in post-construction support and used to design the related service delivery indicator.

- The DWO has a plan in place for providing technical support to WSCs
- The DWO provides technical support in line with the plan
- The DWO monitors the performance of water services and updates the Management Information System (MIS):
  - Update water atlas
  - Water quality monitoring twice a year
  - Annual monitoring of functionality

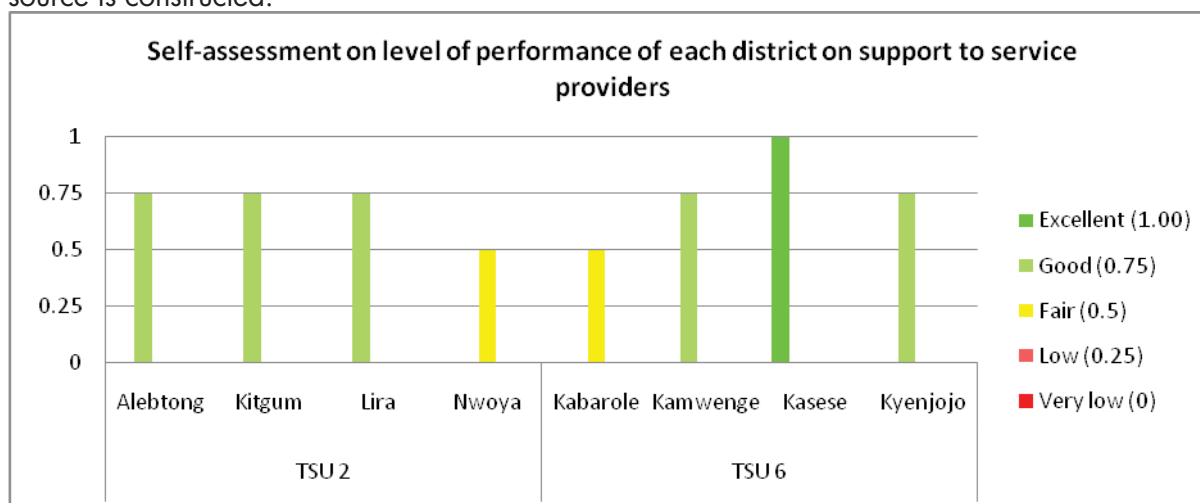
The next table shows the structure of the SDI on post-construction support to service providers by districts.

Scenario	Score district support to service providers	Level district support to service providers
The DWO has a plan in place for providing technical support to WSC and provides technical support accordingly. The DWO monitors the performance of the water service: annual functionality monitoring, water quality monitoring twice a year, update of water atlas. The DWO updates MIS on a regular basis.	1	Excellent
The DWO has a plan in place for providing technical support to WUG and provides technical support accordingly. The DWO monitors the performance of the water service: annual functionality monitoring, annual water quality monitoring.	0.75	Good
The DWO has a plan in place for providing technical support to WUG and provides technical support accordingly. The DWO monitors the performance of the water service: annual functionality monitoring, some water quality monitoring is done, but not on frequent basis.	0.5	Fair
The DWO does not have a plan in place, but does provide some technical support to WSCs and does some monitoring.	0.25	Low
The DWO does not have a plan in place, and does not provide technical support to WSCs and does not monitor.	0	Very low

**Table 31: Performance levels support districts to service providers (Indicator 4.5)**

Scores for this indicator are solely based on self-assessment by the districts; no triangulation was attempted by asking WSCs to rate the support provided by DWOs.

In both TSUs, three quarter of the interviewed districts assessed their performance during the post-construction phase as good or excellent. Districts that considered that they perform fairly are Nwoya (in TSU 2) and Kabarole (in TSU 6). Kasese district even rated its performance in this area as excellent; however, when cross-checking for example how often this district updates the MIS (see table 32), it appears that it is only done when a new water source is constructed.



**Figure 44: Self-assessment on level of performance of each district on support to service providers**



**(Indic. 4.5)**

The frequency of updating the MIS indeed varies significantly from one district to the other (some doing it quarterly, other annually), while the percentage of water points where water quality testing was performed ranged from 4% (in Nwoya) to 90% (in Kitgum).

TSU	District	How often update MIS	Percentage of water points monitored for water quality
TSU 2	Alebtong	Quarterly	85%
	Kitgum	Quarterly	90%
	Lira	Annually	70%
	Nwoya	Quarterly	4%
TSU 6	Kabarole	Missing data	Missing data
	Kamwenge	Annually	Sampled a few at sub-county level including the new and old ones
	Kasese	When a new water source constructed	60 % - 70%
	Kyenjojo	Annually	19%

**Table 32: Frequency of updating of the MIS by districts and proportion of water points tested for water quality**

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### Indicator 4.7 - Support, supervision & monitoring to HPMs/local artisans by the district

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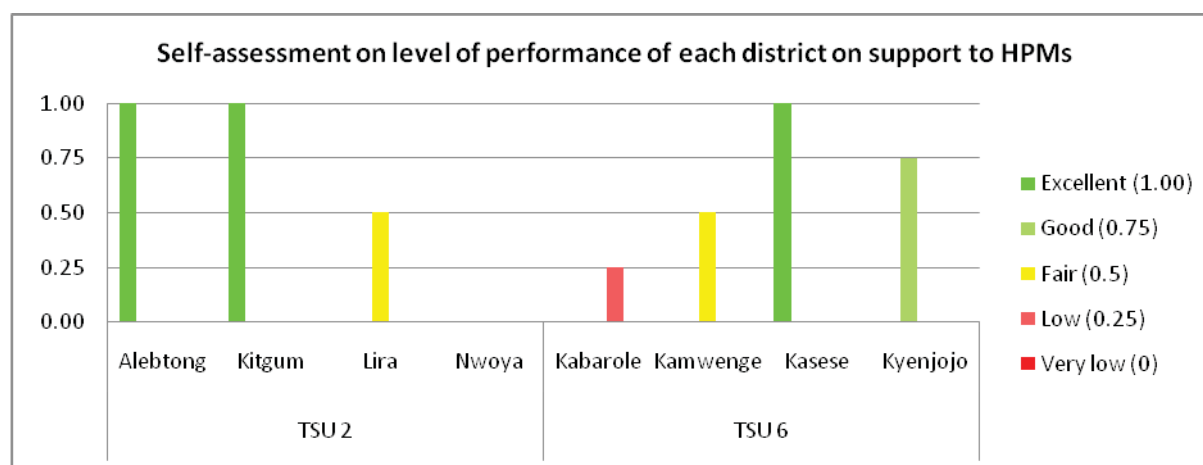
In addition to support to WSCs after construction, District Water Offices also support and supervise hand pump mechanics and local artisans. The indicator on support, supervision and monitoring to HPMs/local artisans by the district was developed and data collected before handpump mechanic associations (HPMAs) were fully established as part of their nationwide roll out by the Ministry of Water and Environment. Its current formulation therefore may be considered as outdated. Its analysis nonetheless provides useful information in terms of performance of the districts in this area before the wider promotion of HPMAs. Parameters included in the indicator were; the presence at the DWO of an inventory of trained artisans and HPMs, reporting by HPMs and local artisans to the service authority, level of organisation of the HPMs (e.g. in an association) and existence of spare parts supply mechanisms.

The indicator on support, supervision and monitoring to HPMs/local artisans by the district was designed as shown in the next table.

Scenario	Score district support to HPMs	Level district support to HPMs
The DWO has an inventory of trained artisans and HPMs, which is up-to-date and updated on an annual basis. HPMs/Local artisans quarterly report to the Sub County & DWO on services provided and issues. There is information on availability of spare parts at the sub county level. There is an association of HPM/ artisans at district level which supports the DWO in O&M.	1	Excellent
The DWO has an inventory of trained artisans and HPMs, which is up-to-date and updated on an annual basis. HPMs/Local artisans quarterly report to the Sub County & DWO on services provided and issues. There is information on availability of spare parts at the sub county level.	0.75	Good
The DWO has an inventory of trained artisans and HPMs, but it is not up-to-date. HPMs/Local artisans report from time to time to the Sub County & DWO on services provided and issues. There is information on availability of spare parts at the district level.	0.5	Fair
The DWO has an inventory of trained artisans and HPMs. HPMs/Local artisans do not report to the Sub County & DWO on services provided and issues. There is no information on availability of spare parts at the district level.	0.25	Low
The DWO has no inventory of trained artisans and HPMs	0	Very low

**Table 33: Performance levels districts support to HPMs (Indicator 4.7)**

As shown in figure 45, the various districts had very varying opinions regarding their own performance in supporting and supervising HPMs: three districts (Alebtong, Kitgum and Kasese) rated their performance as excellent, one (Kyenjojo) as good, two (Lira and Kamwenge) as fair, one (Kabarole) as low and one (Nwoya) as very low.



**Figure 45: Self-assessment on level of performance of each district on support to HPMs (Indic. 4.7)**

Also worth noting, the District Water Officer of Kitgum narrated that he works more with the HPMs than with the health assistants (HAs) whenever a WSC requires support, because in his view, the HPMs have better knowledge of the situation than HAs.

#### **Indicator 4.8 - Coordination and harmonising of DLG Departments, NGOs & CBOs**

The last service delivery indicator at district level focuses on the effectiveness of coordination and harmonisation of the various stakeholders involved in the provision of WASH services: District Local Government (DLG) Departments, NGOs & CBOs. As the District Water and Sanitation Coordinating Committee (DWSCC) is considered as an instrumental body here, its existence, functionality and composition (representativeness of stakeholders and involvement of key individuals) are looked at, as well as the way plans and reports are discussed during DWSCC meetings, and agreed actions followed and reported upon. Ideally, DWSCC meetings should also provide opportunities for learning, and lead to the formation of synergies and partnerships between government and other stakeholders, resulting in more efficient use of resources.

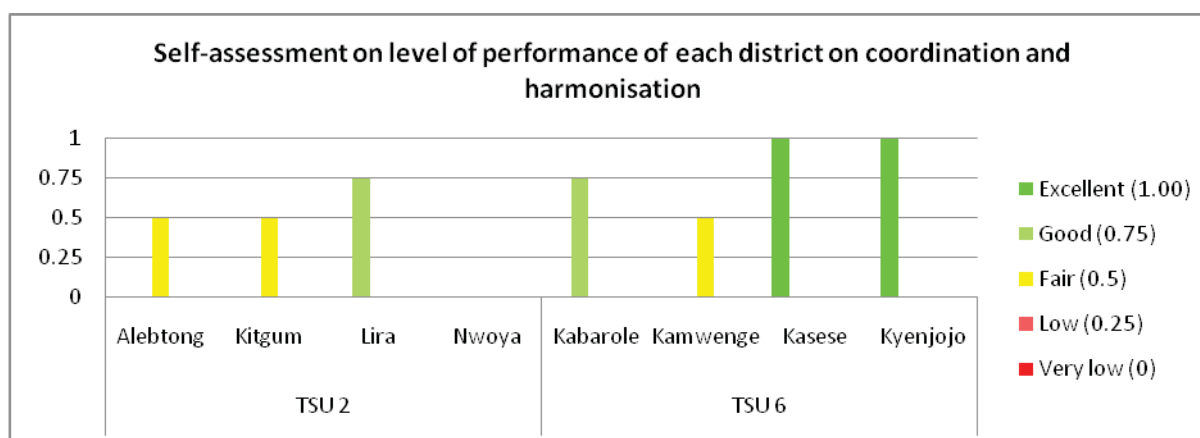
Scenario	Score district coordination and harmonisation	Level district coordination and harmonisation
<p>There are quarterly DWSCC meetings, in which all stakeholders participate.</p> <p>Quality of attendance</p> <p>Plans and reports from the different stakeholder are presented and discussed at the DWSCC.</p> <p>Decisions and action plans developed during DWSCC meeting are followed up and reported upon during subsequent meetings.</p> <p>Synergies and partnerships are formed between government and other stakeholders that result in more efficient use of resources (e.g. joint implementation of activities).</p> <p>DWSCC provides structural opportunities for reflection of experiences in order to improve the situation or future action and possible scaling up (learning).</p> <p>DWSCC reports issues to the works sub-committee.</p> <p>A field visit is conducted prior to DWSCC meetings.</p>	1	Excellent



Scenario	Score district coordination and harmonisation	Level district coordination and harmonisation
There are quarterly DWSCC meetings. Most (> 75%) but not all stakeholders in the provision of WASH services in the district participate. Quality of attendance Plans and reports from some (not all) stakeholder are presented and discussed at the DWSCC. Decisions and action plans developed during DWSCC meeting are not followed up and reported upon during subsequent meetings. Some synergies and partnerships are formed between government and other stakeholders that result in more efficient use of resources (e.g. joint implementation of activities). Presentation of monitoring reports	0.75	Good
There are at least 2 DWSCC meetings a year, in which some (<75%) of stakeholders involved in the provision of WASH services in the district are members. Plans and reports from some (not all) stakeholder are presented and discussed at the DWSCC. Decisions and action plans developed during DWSCC meeting are not followed up and reported upon during subsequent meetings. Some synergies and partnerships are formed between government and other stakeholders that result in more efficient use of resources	0.5	Fair
There are irregular DWSCC meetings, but there is no required or stipulated representation of all the stakeholders in the district.	0.25	Low
No DWSCC meetings.	0	Very low

**Table 34: Performance levels districts coordination and harmonisation (Indicator 4.8)**

Generally, districts of TSU 6 felt that they are doing better in coordination and harmonisation than TSU 2 districts: half of TSU 6 districts (Kasese and Kyenjojo) rated their performance as excellent, a quarter (Kabarole) as good and a quarter (Kamwenge) as fair. In contrast with this, 1 district in TSU 2 (Nwoya) rated its performance as very low, 2 (Alebtong and Kitgum) as fair and only 1 (Lira district) as good. These results may be explained by the fact that districts of TSU 2 have a shorter history of having functional DWSCCs, only since the end of the insurgency. Nwoya being a new district with, at least at the time of the survey, a critically understaffed DWO, it is logical that coordination and harmonisation are still very poor.



**Figure 46: Self-assessment on level of performance of each district on coordination and harmonisation (Indic. 4.8)**

Participants of the data interpretation and validation meeting in TSU 6 however felt that districts may have overrated their performance as regards coordination and harmonisation. Some stakeholders acknowledged that decisions agreed during DWSCC meetings are rarely followed up.

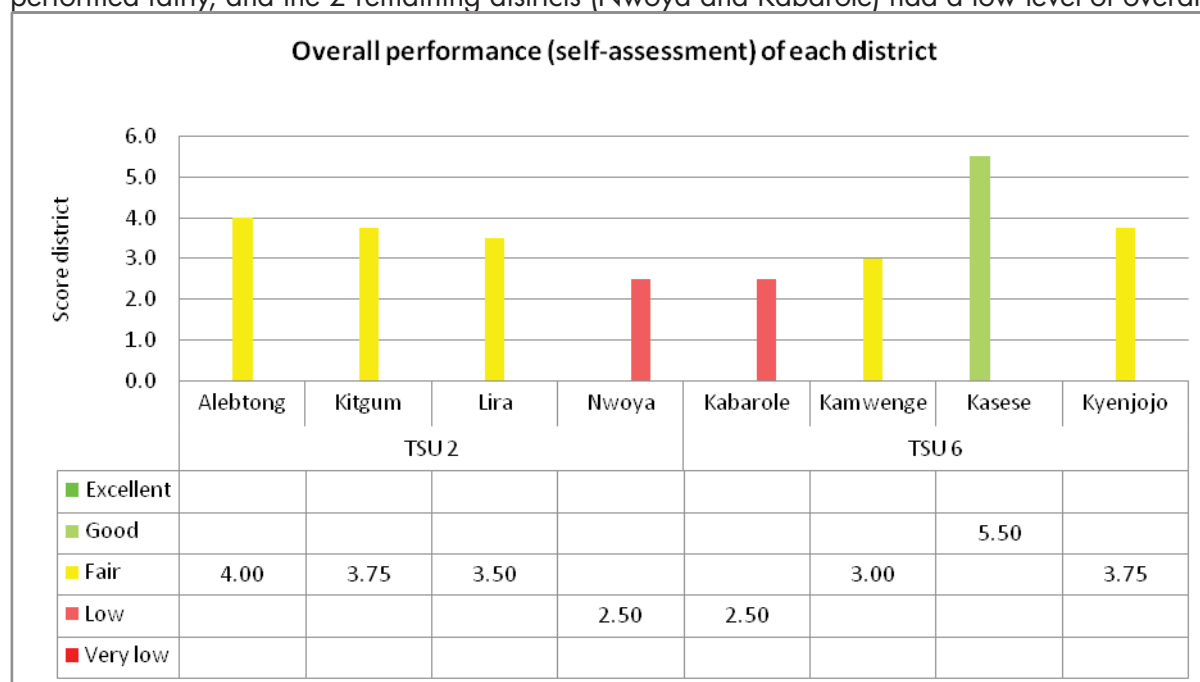
## Overall performance of districts

After analysing separately the six district-specific SDIs, these have been aggregated, adding up the individual scores and qualifying them as follows:

Score overall performance of districts	Level overall performance of districts
Equals 6	Excellent
Higher than 4.5 and lower than 6	Good
Higher than 3 and lower than 4.5	Fair
Higher than 1.5 and lower than 3	Low
Below 1.5	Very low

**Table 35: Qualification overall performance of districts**

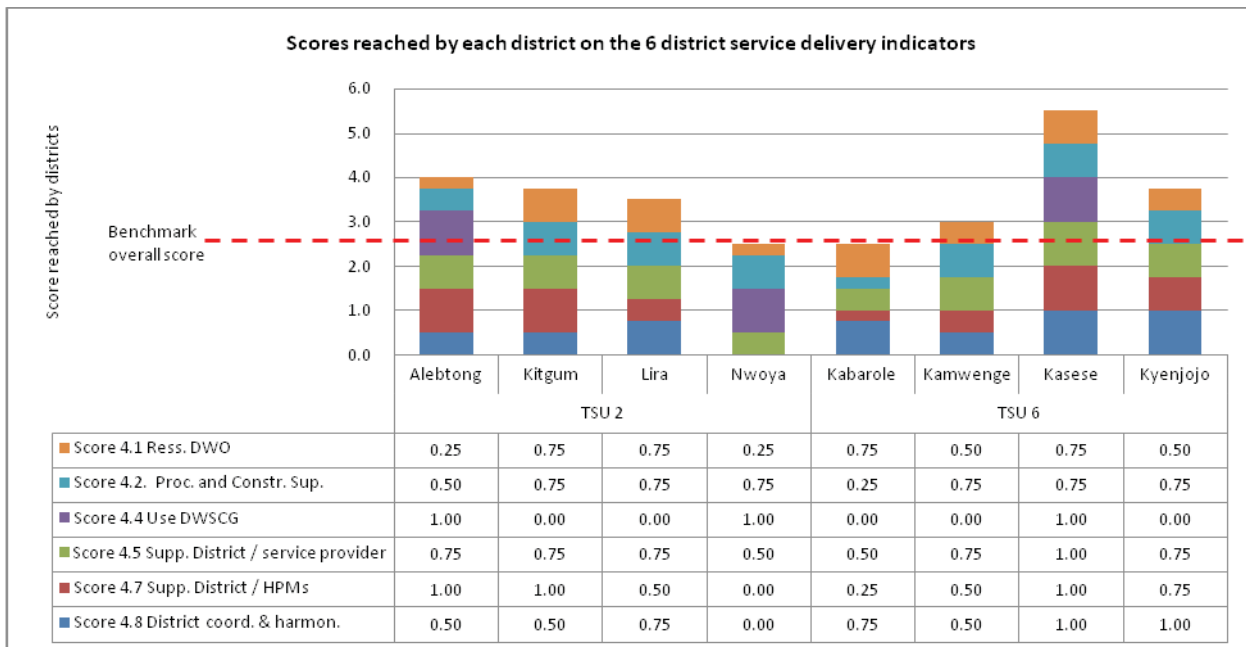
As shown in figure 47, only one district (Kasese) out of the four in TSU 6 displayed a good level of overall performance, while 5 districts (Alebtong, Kitgum and Nwoya in TSU2, and Kamwenge and Kyenjojo in TSU 6) performed fairly, and the 2 remaining districts (Nwoya and Kabarole) had a low level of overall performance.



**Figure 47: Overall performance (self-assessment) of each district**

With a good overall performance, Kasese (in TSU 6) stands out as performing particularly better than other districts. As previously shown on Figure 40, S/Cs of Kasese were also among the better performing sub-counties. Overall performance of districts in TSU 6 varies quite a lot. Kasese's overall performance (5.5) is more than twice as much as the one of Kabarole district (2.5). In TSU 2, districts (except Nwoya) have similar levels of overall performance. Nwoya being a new district, with fewer resources, its overall performance is the lowest.

Figure 48 shows the scores reached by each district on each of the six indicators, and overall (as the sum of each small "block").



**Figure 48: Scores reached by each district on the 6 district service delivery indicators**

It can be noted that districts in TSU 2 have been performing better than TSU 6 districts on procurement and construction supervision, and use of the DWSCG, while districts in TSU 6 have been performing better than TSU 2 districts on resourcing of their water offices, post-construction support to WSCs, as well as coordination and harmonisation.

#### 4.1.4.3 Service authority level – Technical Support Unit (TSU)

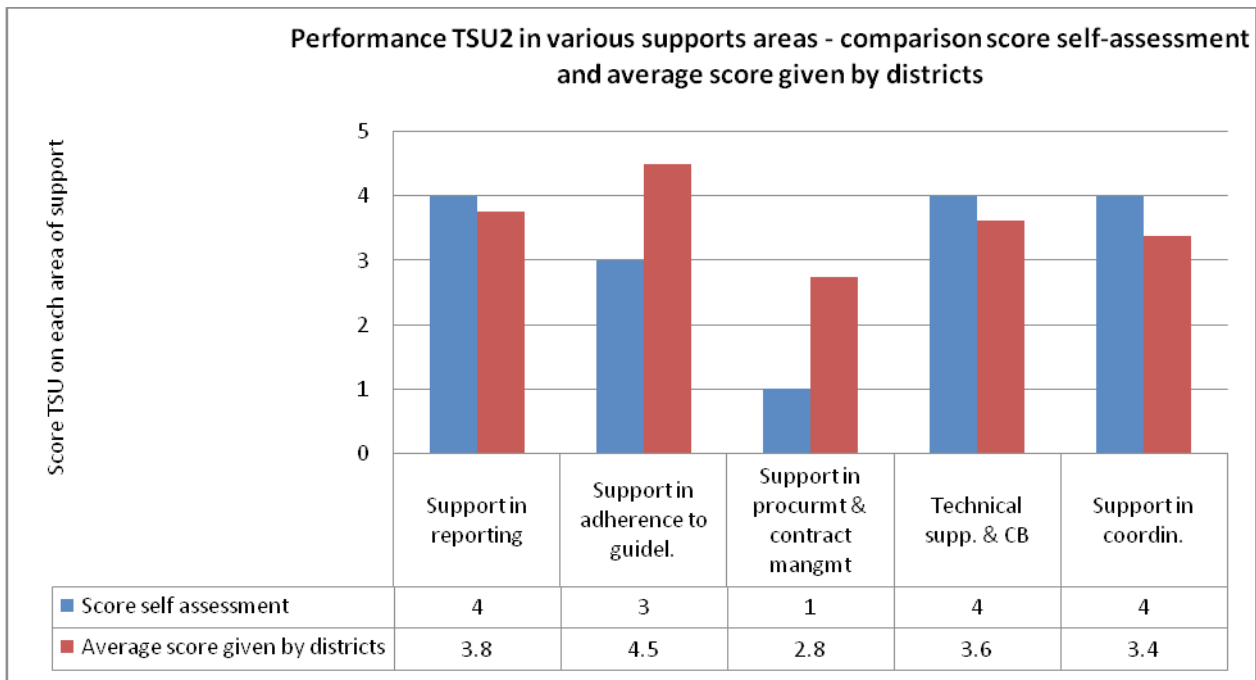
The last level of service authority concerns the TSUs. Based on discussions with TSU staff, it was agreed that TSUs can provide support to districts and sub-counties around the following main broad areas (on a demand-driven basis):

- Support in reporting, mapping and monitoring
- Ensuring adherence to government policy guidelines and standards
- Support in timely and transparent procurement of services, and contract management
- “Ad-hoc” technical support and capacity building
- Support in coordination at district and inter-district levels

Only TSU 2 staffs were asked to rate their performance in the above areas of support, on a scale from 1 to 5; at the time of data collection, no one from TSU 6 was available for the interview.

TSU 2 staffs considered that they are performing satisfactorily (score of 3 or above) on 4 out of the 5 support areas; they estimated that they perform better in the areas of support in reporting, mapping and monitoring, “Ad-hoc” technical support and capacity building, and support in coordination at district and inter-district levels. The four districts of TSU 2 covered by this research were also asked to evaluate the performance of their technical support unit. They usually reported similar scores as the self-assessment by TSU 2 staff, except for “Ensuring adherence to government policy guidelines and standards” and “Support in timely and transparent procurement of services, and contract management”, where they actually gave higher scores than the self-assessment.





**Figure 49: Performance TSU2 in 5 supports areas - comparison score self-assessment and score given by districts**

The indicator on TSU performance in support and supervision to districts and S/Cs was developed as follows:

Scenario	Score TSU support and supervision	Level TSU support and supervision
TSU provides support to the district / sub-county in all of the areas above.	1	Excellent
TSU provides support to the district / sub-county in 4 out of the 5 areas above.	0.75	Good
TSU provides support to the district / sub-county in 3 out of the 5 areas above.	0.5	Fair
TSU provides support to the district / sub-county in 1 or 2 out of the 5 areas above.	0.25	Low
TSU does not provide support to the district / sub-county in any of the areas above.	0	Very low

**Table 36: Performance levels support and supervision to districts and S/Cs by TSU (Indicator 4.9)**

Based its self-assessment, TSU 2 is therefore having a good performance; this is in line with the level of performance awarded to the TSU by the four districts interviewed in the region.

Although the obtained level of performance by TSU 2 seems quite high, there is still room for improvement. TSU 2 staff acknowledged for example that they do not provide much support in procurement and contract management (as pointed both in the self-assessment and rating by districts).

#### 4.2 Bivariate analysis – Analysis of linkages between the various levels

The purpose of this further analysis was to establish any potential correlations between some of the parameters analysed at various levels. Possible correlations between the quality of the service delivered and other parameters are first assessed, followed by an analysis of possible correlations between users' satisfaction and sense of ownership and other parameters, to conclude on possible correlations between the performance of service providers and other parameters. As the majority of the data for this research is made of non-continuous variables, a regression analysis could not be done. Instead, the analysis of the possible correlations, a number of hypotheses have been made on possible links between parameters, and these assumptions then tested.



#### 4.2.1 Parameters that may influence the level of the service delivered

Being the “product” of the involvement and practices of a wide range of stakeholders, it is expected that the level of the service delivered can be influenced by various parameters: payment of a water fee by users, level of performance of the service provider, level of performance of the service authority. All these possible links are scrutinised in this sub-section, after which, for each of these, a short explanation of the rationale behind the hypotheses tested.

There is an unlimited number of correlations that can be tested. However, the study has focused on those we considered potentially most relevant.

##### 4.2.1.1 Correlations between payment of water fee and level of the service

It is assumed that when water users pay a regular water fee, this should have a positive influence on the level of the service delivered/accessed. Not all parameters of the water service are however expected to be impacted by the availability of more substantial O&M funds: water quality or distance of the water points are parameters that have been to a great extent set already during the actual provision of the facility, therefore the assumption was that if there is any correlation between the payment of water fees by users and the level of the service delivered, only the quantity of water collected and the reliability of the facility could be influenced.

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#### Correlation between payment of water fees and water quantity

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A positive correlation was found between the quantity of water fetched by households and the payment of water fees, as shown in Table 37: At least 44% of the households that pay a water fee collect 20 litres per person per day, while this proportion goes down to 32% for households that do not pay for the water they fetch.

	% of households reaching benchmark water quantity
Users not paying a water fee (n = 994)	32%
Users paying a water fee (n = 360)	44%

**Table 37: Compliance with water quantity benchmark depending on whether a water fee is paid or not**

It is however difficult to interpret this correlation without additional in-depth interviews with some water users. One possible explanation would be that, when they pay a water fee, users usually pay a fixed monthly contribution as seen in section 4.1.2.2. Once they have paid, they can collect as many containers of water as they wish for domestic purposes. On the other hand, some households that do not pay a water fee may go less regularly to the point source, as each visit to the water facility may be an opportunity to be reminded by a committee member or another user about the outstanding payments.

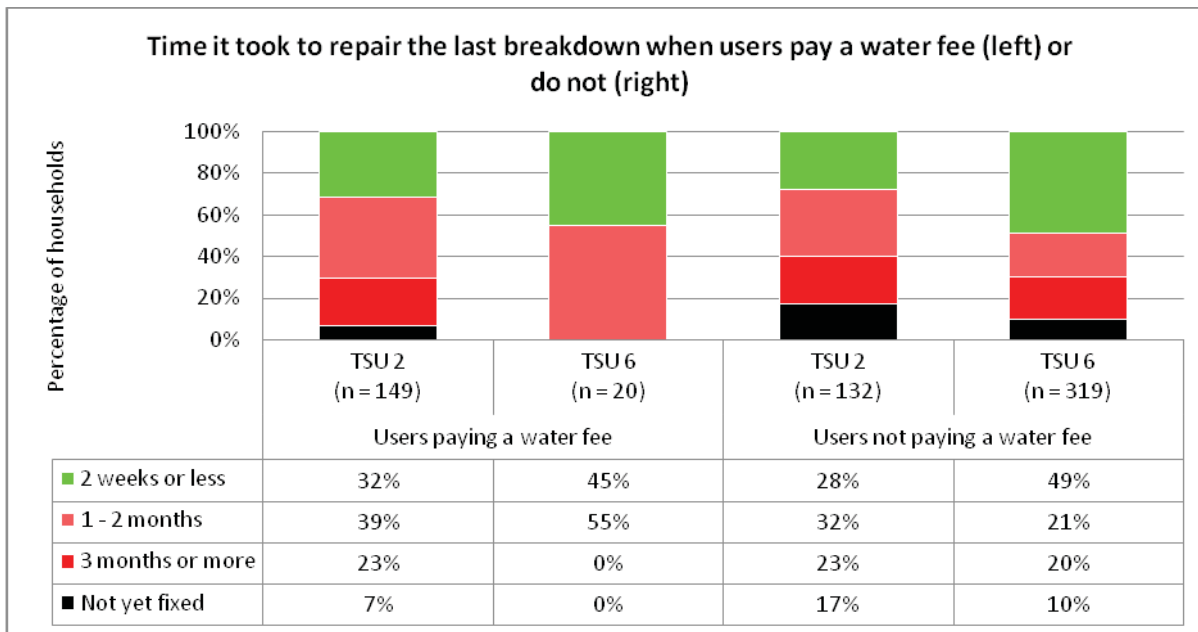
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#### Correlation between payment of a water fee and reliability

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The correlation between payment of a water fee and reliability of the concerned water facility suggests a straightforward relationship; the assumption here is that if money is regularly collected by the WSC for O&M, whenever a breakdown is experienced, the funds necessary to have the facility repaired can be mobilised faster. Spare parts can then be purchased swifter, and a handpump mechanic hired if required.

Figure 50 shows how fast the last facility breakdowns were repaired for the users who pay a water fee and users that do not. As the analysis for TSU 2 and TSU 6 were showing slightly different results, the results for the two regions are presented separately.



**Figure 50: Time it took to repair the last breakdown when users pay a water fee or do not**

In TSU 2, the proportion of water users who saw the last breakdown of their water facilities repaired within 2 weeks or less (hence facilities considered as reliable) is only marginally higher among households that pay a water fee than households that do not: e.g. in TSU 2, 32% of the breakdowns were repaired within 2 weeks when the household pays a water fee, against 28% for the ones that do not. Payment of a water fee doesn't significantly speed up repairs, although the proportion of water facilities not fixed at the time of the interviews was found higher in communities where users do not pay a water fee.

#### 4.2.1.2 Correlations between level of performance of the WSC and level of the service

Here, the idea was to establish to what extent the performance of the service provider has an influence on the level of the service delivered. Given the multidimensional nature of both the service delivered (overall service, quality, quantity, distance and reliability) and the performance of the WSC (overall performance, institutional capacity of the WSC, WSC administrative tasks and WSC involvement in O&M), the assumption that the level of the service can be influenced by the performance of the WSC had to be broken down in smaller, workable hypotheses. For example, it is expected that the performance of the WSC can mainly have an influence on two parameters of the service delivered: water quantity (e.g. by ensuring the pump is in good order and delivers a satisfactory flow of water) and reliability of the facility (e.g. by undertaking adequate O&M activities). A parameter such as distance of the water point was for example already set at the time of the provision of the facility.

The matrix below summarises the possible correlations between the level of performance of the WSC and the level of the service delivered that have been tested:

Performance WSC \ Level of the service	Overall performance WSC	Institutional capacity of the WSC (Indic. 3.1)	WSC administrative tasks (Indic. 3.2)	WSC involvement in O&M of the water services (Indic. 3.3)
Overall level of service delivered	√	√	√	√
Water quality				
Water quantity	√			
Distance water source				
Reliability facility	√	√	√	√

**Table 38: Tested possible correlations between performance of the WSC and level of the service**

### Correlation between performance of the WSC and overall level of the service



No explicit correlation was found between the level of overall performance of the WSC and the overall level of the service. Similarly, no correlation was found between the individual service delivery indicators for the WSC and the overall level of the service.

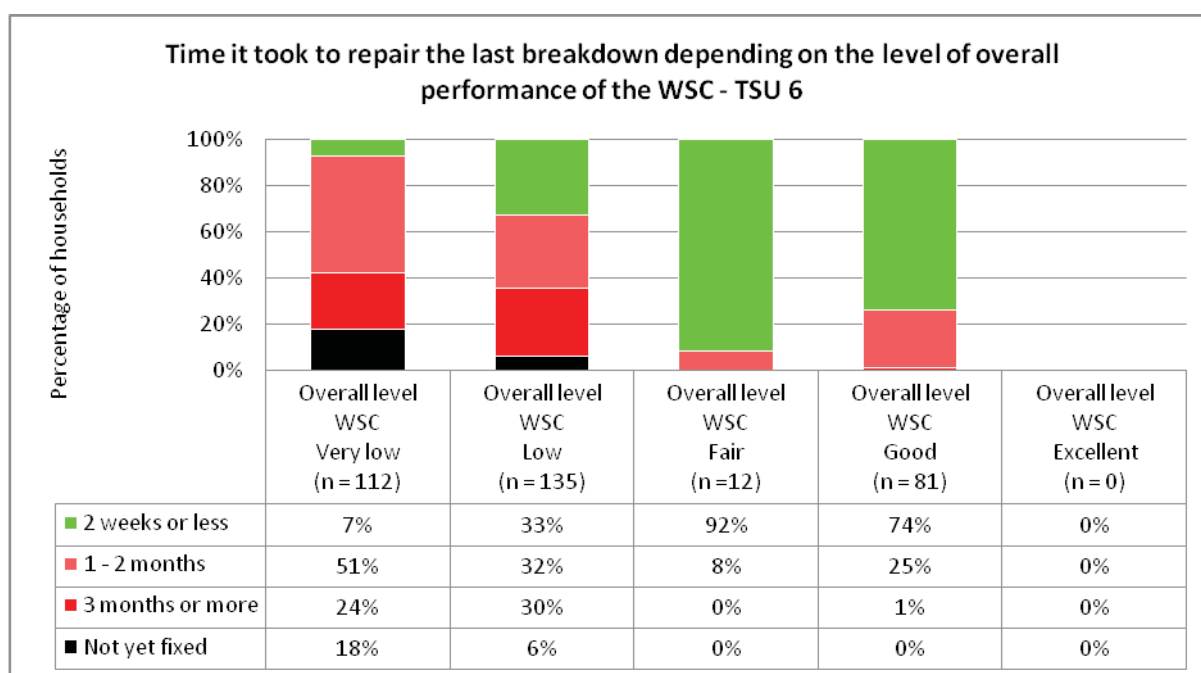
### **Correlation between performance of the WSC and water quantity**

No correlation was found between the performance of the WSC and water quantity (proportion of households using at least 20 lppd or less).

### **Correlation between performance of the WSC and reliability of the facility**

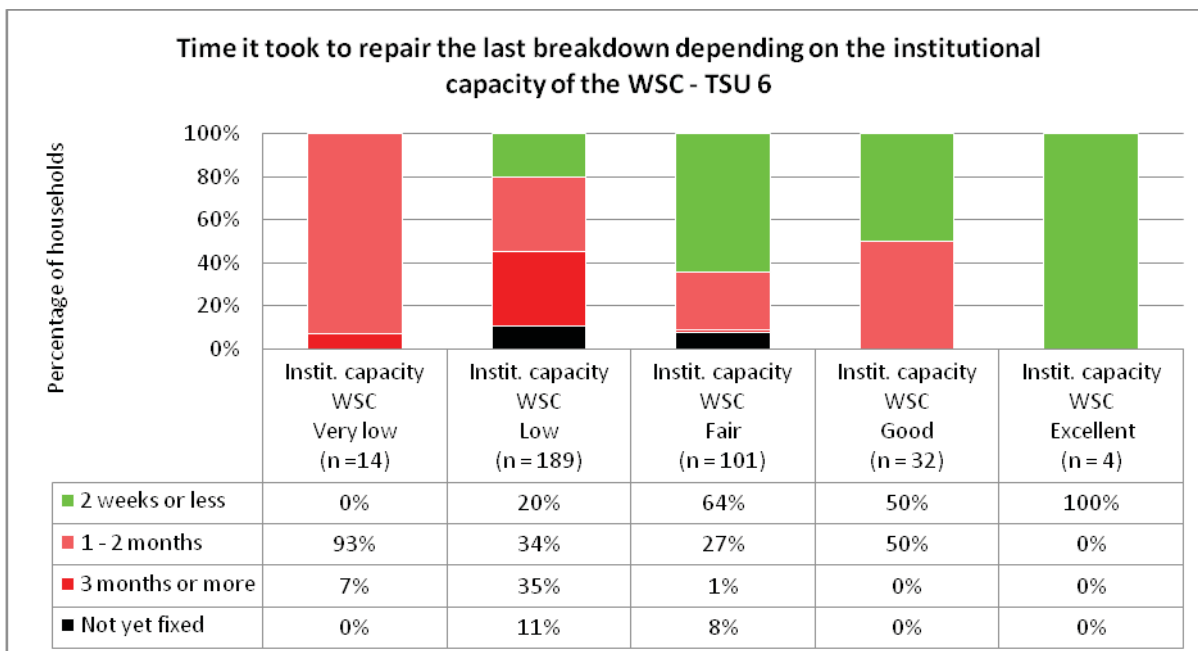
First, correlations were assessed between the overall performance of the WSCs and the reliability of the facilities. When crossing the two parameters for the whole sample, no real correlation was detected.

The same analysis was therefore undertaken for TSU 2 and TSU 6 separately, to see whether any regional differences existed. The graph obtained for TSU 2 facilities again did not show any correlation. However the graph for TSU 6 facilities shows a strong correlation between the overall performance of the WSC and the reliability of the facilities: the better the WSCs are performing in general, the more reliable facilities are.



**Figure 51: Time it took to repair the last breakdown depending on the level of overall performance of the WSC - TSU 6**

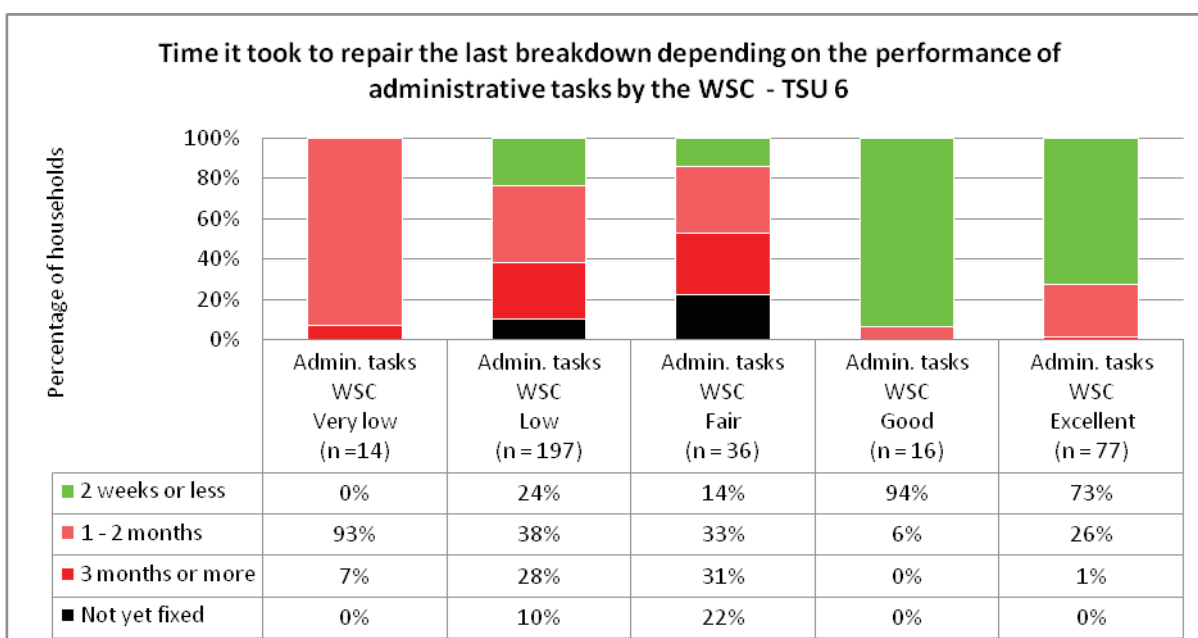
When looking for correlations between the institutional capacity of the WSCs and the reliability of the facilities, again the analysis at the level of the whole sample did not yield any interesting results, neither did the analysis for TSU 2. Only for TSU 6 do water points seem to be more reliable when the institutional capacity of the WSC increases:



**Figure 52: Time it took to repair the last breakdown depending on the institutional capacity of the WSC - TSU 6**

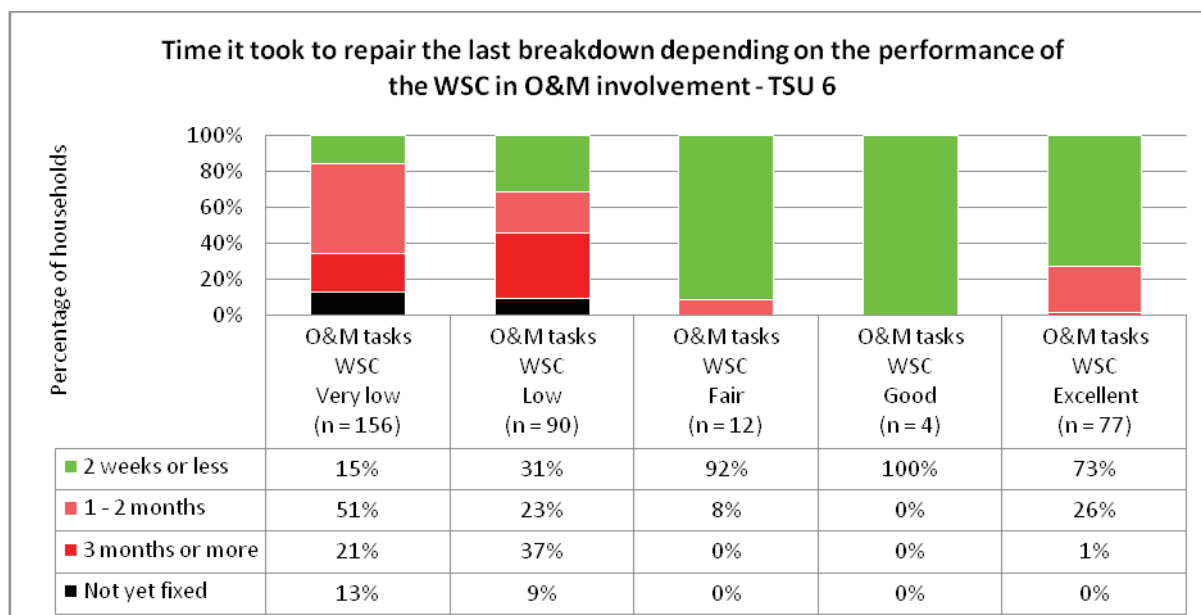
The same analysis for the other two individual service delivery indicators for the WSC (Indicator 3.2 - performance of administrative tasks by the WSC, and Indicator 3.3 - involvement of the WSC in O&M) shows similar trends:

- No correlation between the reliability of the facility and the indicator at the level of the whole sample
- No correlation between the reliability of the facility and the indicator for TSU 2 water points only
- Existence of correlation between the reliability of the facility and the indicator for TSU 6 water points only



**Figure 53: Time it took to repair the last breakdown depending on the performance of administrative tasks by the WSC - TSU 6**





**Figure 54: Time it took to repair the last breakdown depending on the performance of the WSC in O&M - TSU 6**

The assessment for correlations between the level of performance of the WSC and the level of the service therefore only showed in TSU 6 a positive correlation between the performance of the WSC in O&M and the reliability of the water facilities.

#### 4.2.1.3 Correlations between level of performance of the sub-county and level of the service

##### **Correlation between performance of the S/C and level of the service**

This focuses on possible relations between the performance of the S/C and the level of the service delivered. Again, given the multidimensional nature of both the service delivered and the performance of the S/C (overall performance, community mobilisation pre-construction, support during construction and post-construction support), only a smaller definite number of assumptions was tested, as shown in Table 39 below. For example, a correlation might be expected between reliability of the water service and post-construction support by the sub-county, while a correlation between distance of the water point (already set at the time of the provision of the facility) and post-construction support by the sub-county is not to be expected.

Performance S/C Level of the service	Overall performance S/C	Community mobilisation by S/C pre-construction (Indic. 4.3)	S/C support during construction	Post-construction support by S/C (Indic. 4.6)
Overall level of service delivered	√	√	√	√
Water quality				
Water quantity	√			√
Distance water source				
Reliability facility	√	√		√

**Table 39: Tested possible correlations between performance of the S/C and level of the service**

The first analysis was between the overall level of the service delivered and the level of performance of the S/C, overall and for each individual S/C indicator. The tested assumption is that a better performing S/C (overall) would have a positive influence on the overall level of the service delivered. None of the graphs obtained, however, showed any correlation.

The next correlation tested was whether a better performing S/C has a positive influence on the quantity of water fetched by households at the water point. This is based on the assumption that both during the mobilisation and phase and during hygiene sensitisation meetings after construction, S/C would raise users' awareness about the

importance of using at least 20 litres per person per day for all household purposes. However, no correlation was found between the overall performance of S/Cs and water quantity, or between the performance of S/Cs in post-construction support activities (Indicator 4.6) and water quantity.

The search of correlations between the performance of the S/Cs and reliability is based on the assumption that if community mobilisation is well done, and adequate support is provided to user groups and committees during the post-construction phase, then water facilities should be more reliable. But, again, no correlation appeared between reliability of facilities and level of performance of the S/C (overall, or on Indicator 4.3 or on Indicator 4.6), be it on the whole sample or analysis TSU 2 and TSU 6 separately.

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### **Correlation between performance of the S/C and functionality of facilities**

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The assessment for correlations between level of the service delivered and performance of the S/Cs against the various SDIs triggered the idea to also look for correlations between functionality of the water sources and S/C performance. No data was systematically collected on functionality of facilities for this research, however the M4Water initiative<sup>27</sup> has been collecting functionality information since late 2011 on all water points (be they point sources or piped schemes taps) in four of the districts where the SDI survey has been implemented: Kabarole, Kasese, Kyenjojo and Lira. The relevant information was therefore extracted from the M4Water database, i.e. functionality status of point sources in the 7 sub-counties<sup>28</sup> where both this research and M4Water data collection were carried out, and crossed with the performance levels of the sub-counties. The overall performance of the S/C, as well as each S/C performance indicators were crossed with functionality data, based on the following assumptions:

- Efficient community mobilisation by S/C during the pre-construction phase (Indic. 4.3) would lead to stronger community sense of ownership, and users would be willing to mobilise the required resources whenever there is a breakdown.
- S/Cs support during construction would also influence positively functionality, as well trained WSCs and source caretakers well trained in preventive maintenance can ensure that breakdowns happen less frequently.
- Post-construction support by S/C (Indic. 4.6): regularly retraining WSCs and supporting and supervising them in the mobilisation of finances from users should have a positive influence on functionality of facilities.

However, no correlation appeared between sub-county performance and functionality of the facilities. The various cross-analyses undertaken in this part therefore suggest that the level of performance of the sub-county has no correlation with the level of the service delivered.

#### *4.2.1.4 Correlations between level of performance of the district and level of the service*

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### **Correlation between performance of the district and level of the service**

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This section presents the analysis of the possible relations between the performance of the district and the level of the service delivered. The table below summarises the assumptions that were tested; in short correlations were looked for between:

- Each indicator of district performance (as well as the overall performance of the district) with the overall level of the service delivered;
- The overall performance of the district with each parameter of the water service (including the overall level of the service delivered);
- Resources of DWO and reliability of the facilities;
- District planning, procurement and construction supervision and reliability of the facilities;
- Post-construction support to service providers by the district and reliability of the facilities;
- Support by the district to HPMs and reliability of the facilities.

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<sup>27</sup> <http://m4water.org/>

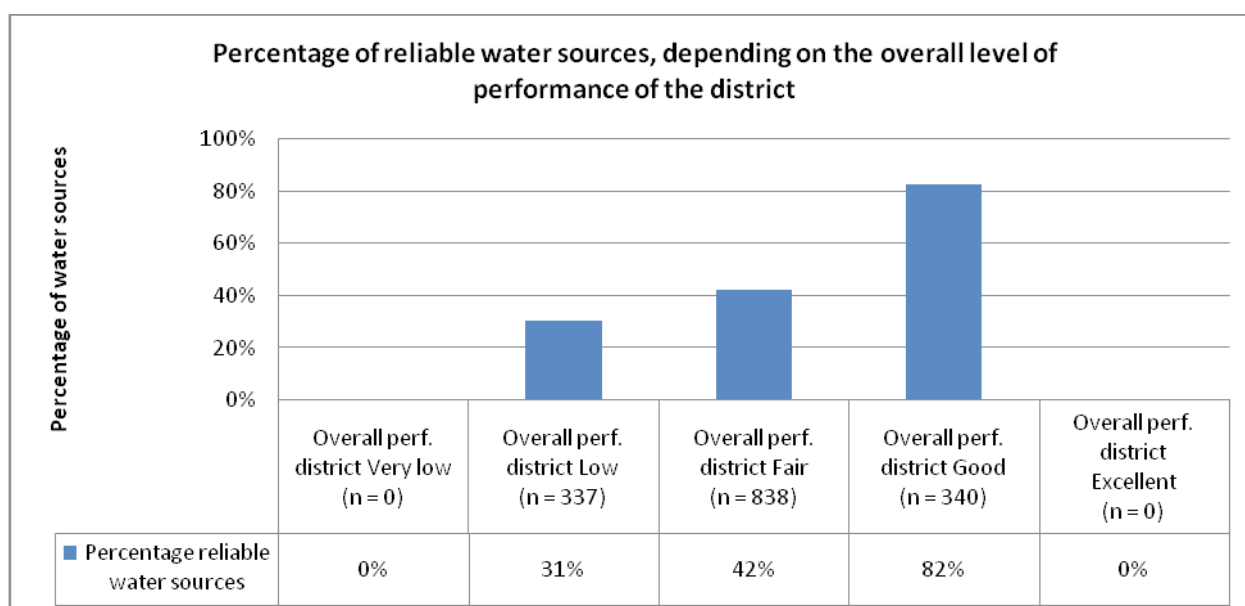
<sup>28</sup> Buheesi and Busoro S/Cs in Kabarole district, Rukoki S/C in Kasese district, Butiti and Katooke S/Cs in Kyenjojo district, Barr and Lira S/Cs in Lira district.



Performance district	Overall perform. district	Resources of DWO (Indic. 4.1)	District planning, procurement and construction supervision (Indic. 4.2)	Utilisation of DWSCG (Indic. 4.4)	Post-construction support to service providers (Indic. 4.5)	Support HPMs (Indic. 4.7)	District coordination and harmonisation (Indic. 4.8)
Level of the service							
Overall level of service delivered	√	√	√	√	√	√	√
Water quality	√						
Water quantity	√						
Distance water source	√						
Reliability facility	√	√	√		√	√	

**Table 40: Tested possible correlations between performance of the district and level of the service**

Crossing the various performance indicators of the district with the overall level of service delivered did not show any correlation. Analysing the overall performance of the districts with respect to the individual parameters of the water service along showed a meaningful correlation in the case of reliability of facilities:



**Figure 55: Percentage of reliable water sources, depending on the overall level of performance of the district**

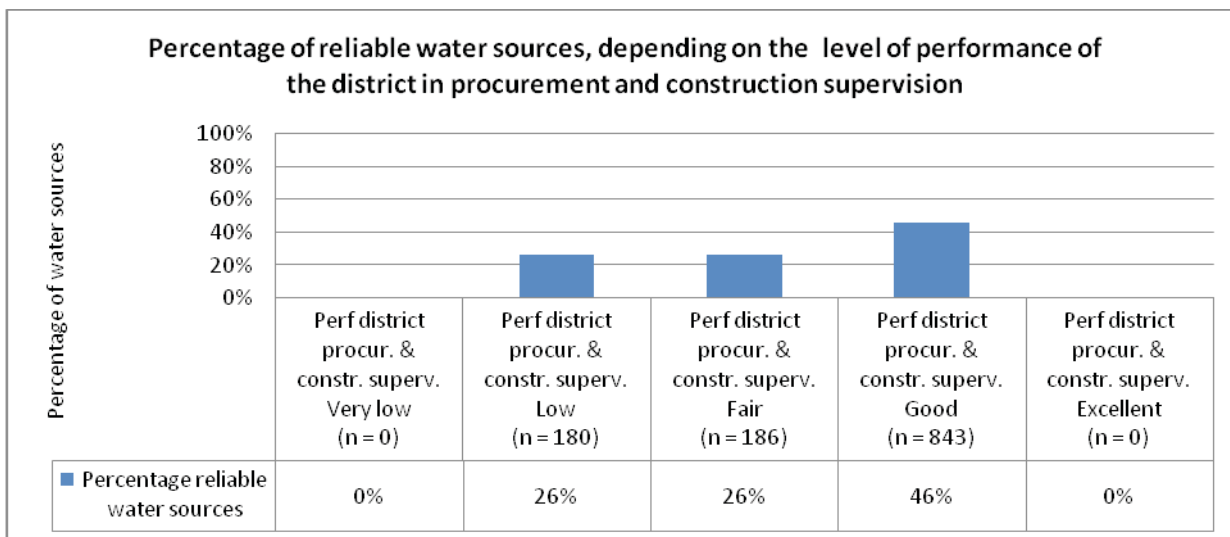
In districts with a good level of overall performance, 82% of the facilities are reliable, against only 31% in districts whose level of overall performance is low. As seen earlier, for the whole sample, only 40% of the facilities were classified as reliable (31% in TSU 2 and 51% in TSU 6).

Reliability of water facilities was also crossed with the following individual district performance indicators:

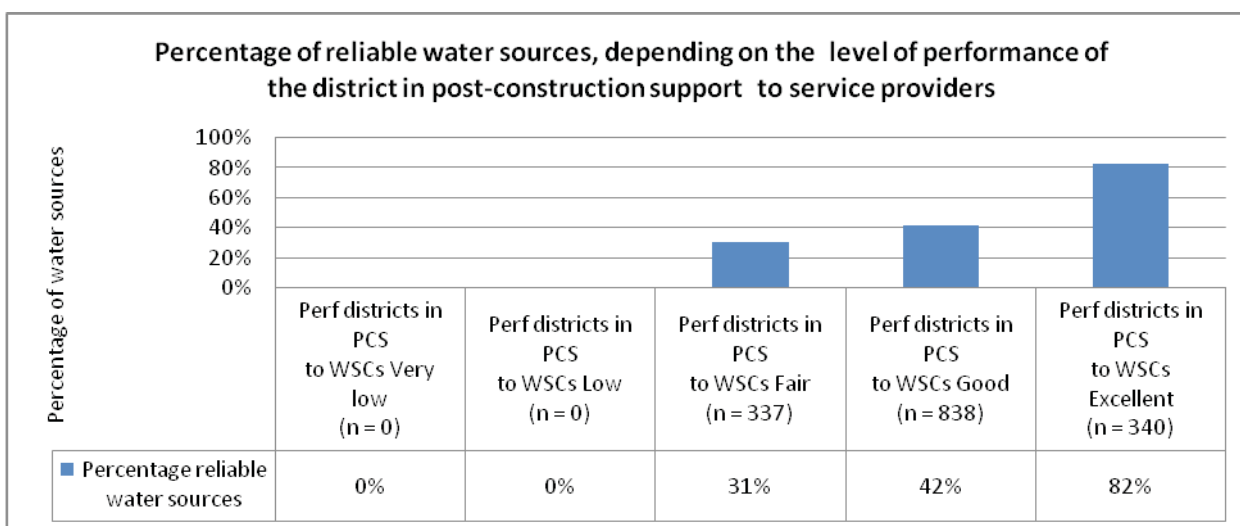
- Resources of DWO (Indicator 4.1);
- District planning, procurement and construction supervision (Indic. 4.2)
- Post-construction support to service providers (Indicator 4.5);
- Support to HPMs (Indicator 4.7)

As shown in figures 56 and 57, positive correlations appeared with the indicator on district planning, procurement and construction supervision, as well as with the indicator of post-construction support provided to service providers by district water office staff:





**Figure 56: Reliability of water sources, depending on the level of performance of the district in procurement and construction supervision (Indicator 4.2)**



**Figure 57: Percentage of reliable water sources, depending on the level of performance of the district in post-construction support to service providers (Indic. 4.5)**

### **Correlation between performance of the district and functionality of facilities**

After the cross-analysis between performance of the districts and level of the service, some of the district performance indicators were then crossed with data from the M4Water system. For the seven sub-counties in Kabarole, Kasese, Kyenjojo and Lira districts where both this research and M4Water data collection were carried out, functionality data were crossed with the following district indicators:

- Overall performance of the district;
- Resources of DWO (Indicator 4.1);
- Post-construction support to service providers by the district (Indicator 4.5);
- Support by the district to HPMs (Indicator 4.7).

However, no specific correlation was found.

#### **4.2.2 Parameters that may influence users' satisfaction and sense of ownership**

Users' satisfaction and sense of ownership has been captured through a number of parameters

- Users' satisfaction with the service delivered (quality, quantity, reliability, distance);
- Users' participation in the management and maintenance of the water source: payment of water fee (usually to cover O&M costs) and users' contribution for keeping the water source clean



- Users' hygiene and sanitation behaviour

It is expected that these parameters can be influenced by the level of the service, the performance of the service provider (WSC), or the performance of the service authority (sub-county and district).

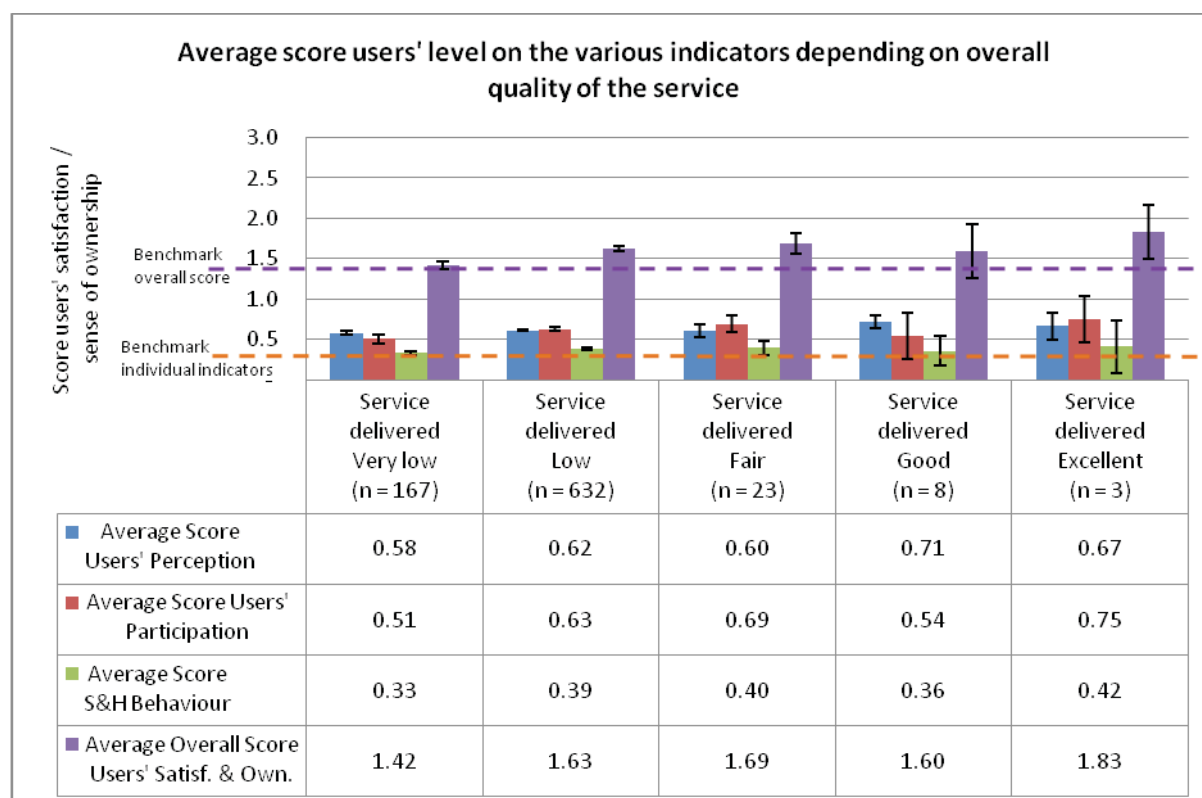
#### 4.2.2.1 Correlations between level of the service and user's satisfaction and sense of ownership

The following hypothesis were tested regarding possible correlations between level of the service and user's satisfaction and sense of ownership

Level of the service	Overall level of service delivered	Water quality	Water quantity	Distance water source	Reliability facility
Users' satisfaction and sense of ownership					
Overall users' satisfaction and sense of ownership	√				
Users' satisfaction with the service delivered	√				
Users' participation in the management and maintenance of the water source	√	√	√	√	√
Users' hygiene & sanitation behaviour	√				

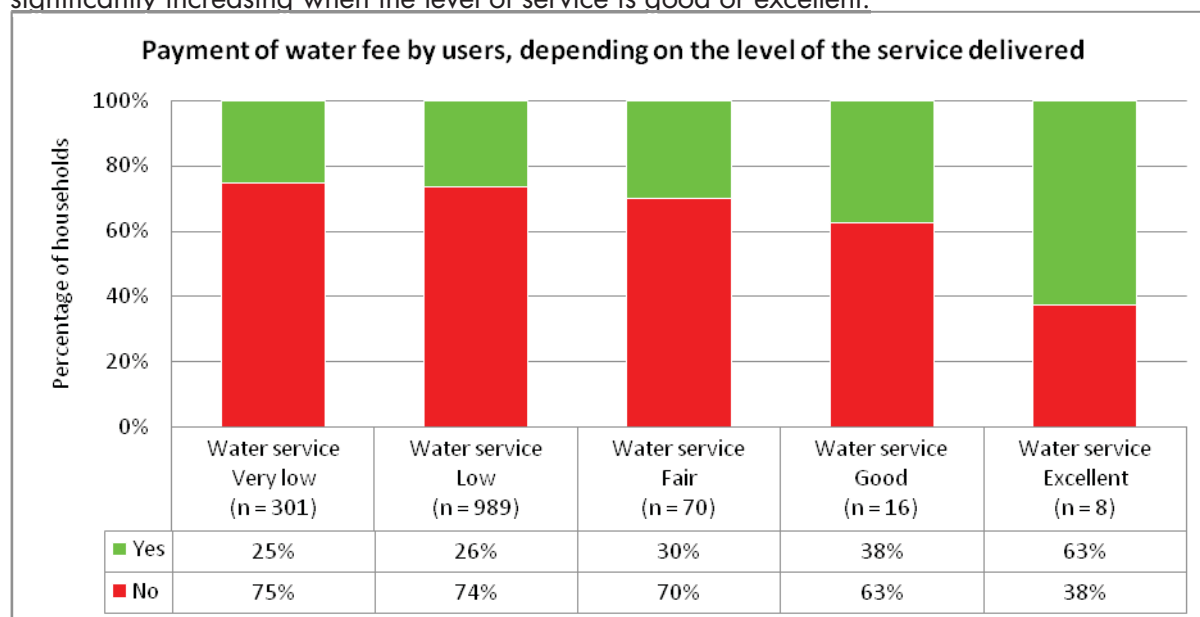
**Table 41: Tested possible correlations between level of the service delivered and users' satisfaction and sense of ownership**

The overall users' satisfaction and sense of ownership increases with the level of the service: from an average score of overall users' satisfaction and sense of ownership of 1.42 (out of a maximum of 3) for a service of very low quality to 1.83 for an excellent service. The overall users' satisfaction and sense of ownership displays a clear positive progression with improving service. Such trend, is not observed however when taking the users' level indicators individually.



**Figure 58: Average score users' level on the various indicators depending on overall level of the service delivered**

The search for correlations between the individual characteristics of the water service and user's participation in the management and maintenance of the water source did not show any significant result. However, when looking more in details at the link between level of the service and payment of water fees, it appears very clearly that the better the service, the higher the proportion of households that contribute to the operation and maintenance of their water facility: from only 25% for facilities delivering a very low service to 63% for the ones providing an excellent service. A threshold can even be observed: below a fair service level, payment stays equally low, only significantly increasing when the level of service is good or excellent.



**Figure 59: Payment of water fee by users, depending on the level of the service delivered**

#### 4.2.2.2 Correlations between performance of WSC and user's satisfaction and sense of ownership

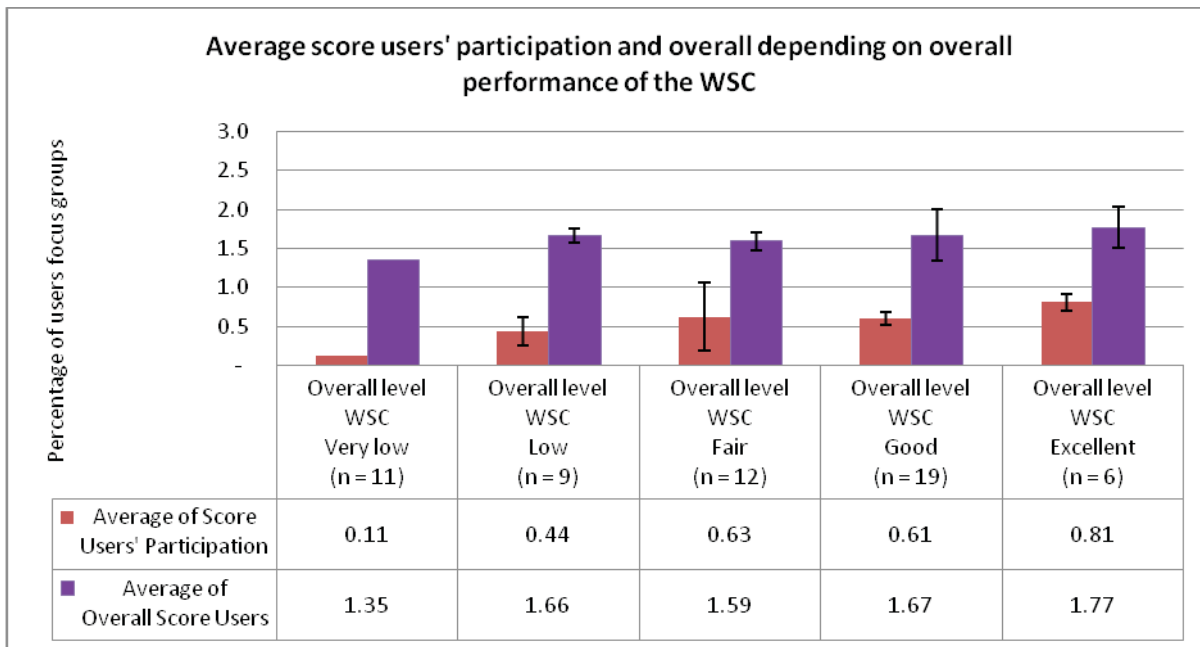
The next assumption tested through cross-tabulations was whether a better performing WSC would lead to increased users' satisfaction and sense of ownership. In particular, the possible correlations between WSC performance and users' satisfaction with the service delivered, and users' participation in the management and maintenance of the water source, were looked for.

Performance WSC	Overall performance WSC	Institutional capacity of the WSC (Indic. 3.1)	WSC administrative tasks (Indic. 3.2)	WSC involvement in O&M of the water services (Indic. 3.3)
Users' satisfaction and sense of ownership	✓	✓	✓	✓
Overall users' satisfaction and sense of ownership	✓	✓	✓	✓
Users' satisfaction with the service delivered	✓	✓	✓	✓
Users' participation in the management and maintenance of the water source	✓	✓	✓	✓
User's hygiene & sanitation behaviour				

**Table 42: Tested possible correlations between performance of the WSC and users' satisfaction and sense of ownership**

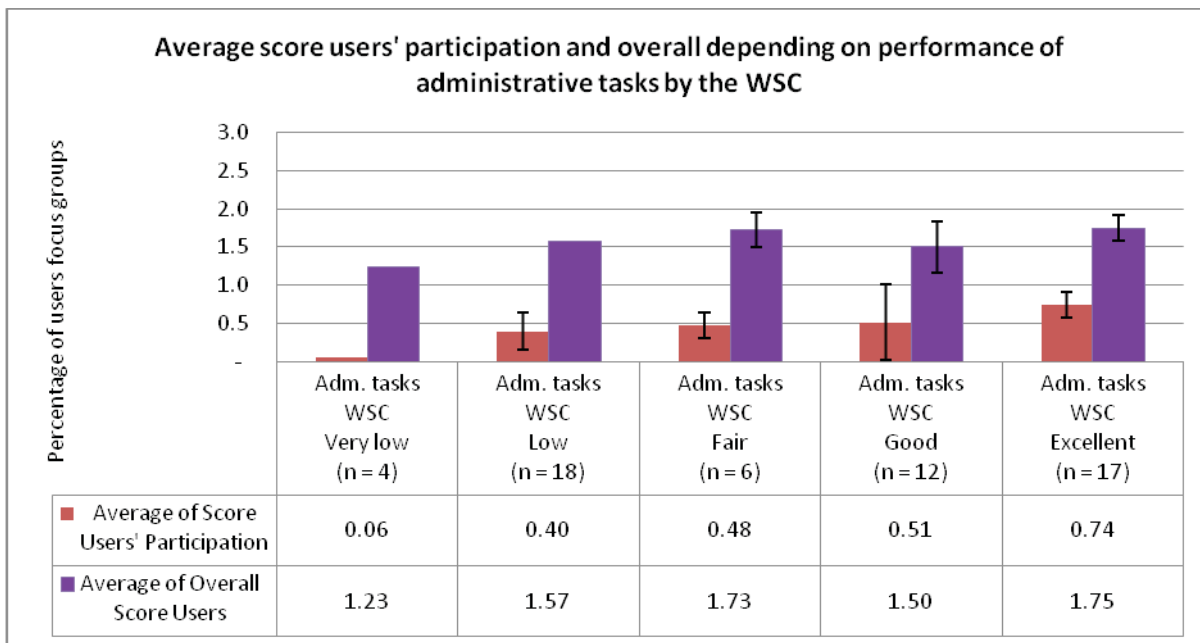
An increase in the overall performance of the WSC does not really influences users' satisfaction with the service delivered, but it clearly leads to a stronger participation of water users in the management and maintenance of the water source: from an average score of 0.11 (out of 1) when the WSC's overall performance is very low to 0.81 when the committee performs excellently. As a consequence, the average score for the overall users' satisfaction and sense of ownership also increases (from 1.35 to 1.77). These two trends are shown in figure 60:



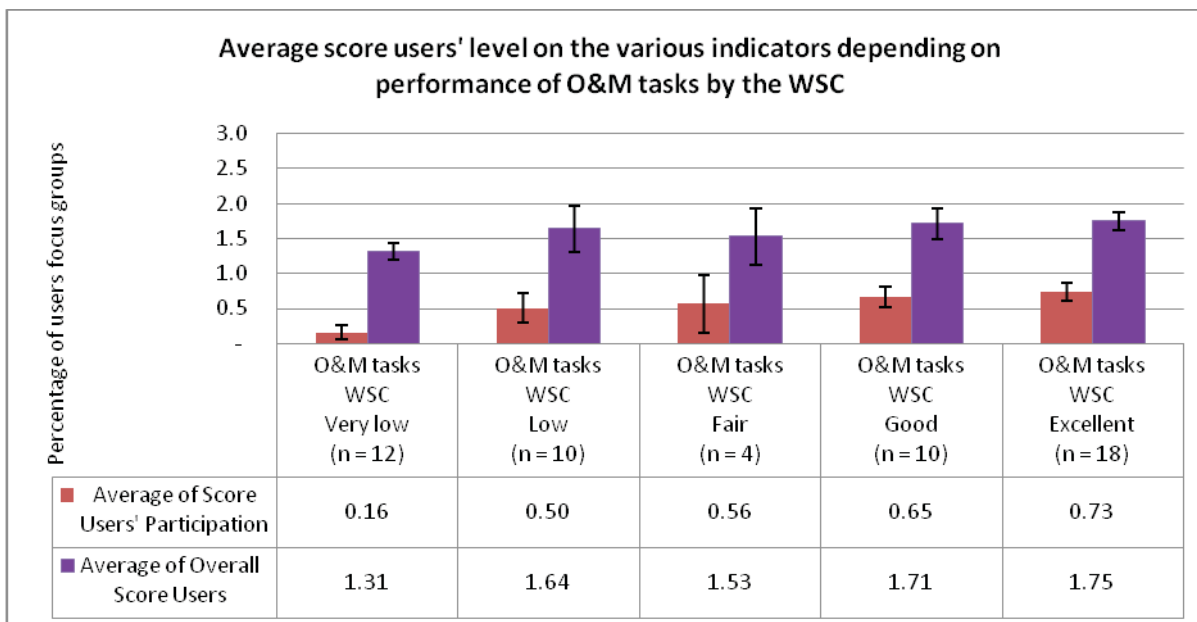


**Figure 60: Average score users' participation and overall depending on overall performance of the WSC**

The influence of each individual indicator for the WSC has also been looked at. Correlations were only found for the for the indicators on Performance by the WSC of administrative tasks and Involvement of the WSC in O&M of the water facility, having a positive influence on users' participation in the management and maintenance of the water source.



**Figure 61: Average score users' participation and overall depending on performance of administrative tasks by the WSC**



**Figure 62: Average score users' participation and overall depending on performance of O&M tasks by the WSC**

#### 4.2.2.3 Correlations between level of performance of the sub-county and user's satisfaction and sense of ownership

The performance of sub-county staffs, who within local government are supposed to be the closest to water users, is expected to have an influence on users' satisfaction and sense of ownership. This hypothesis was therefore tested by cross-tabulating the various indicators at sub-county and users levels.

Performance S/C	Overall performance S/C	Community mobilisation by S/C pre-construction (Indic. 4.3)	S/C support during construction	Post-construction support by S/C (Indic. 4.6)
Users' satisfaction and sense of ownership				
Overall users' satisfaction and sense of ownership	✓	✓	✓	✓
Users' satisfaction with the service delivered	✓	✓	✓	✓
Users' participation in the management and maintenance of the water source	✓	✓	✓	✓
User's hygiene & sanitation behaviour	✓	✓		✓

**Table 43: Tested possible correlations between performance of the S/C and users' satisfaction and sense of ownership**

However, none of the tested correlations showed any significant result.

#### 4.2.2.4 Correlations between level of performance of the district and user's satisfaction and sense of ownership

Performance of the districts was also cross-tabulated with users' satisfaction and ownership. More specifically, users' satisfaction and sense of ownership was scrutinised depending on:

- The overall performance of the district
- Resources of the district water office
- Post-construction support to WSCs by the district
- Support to handpump mechanics (HPMs) by the district

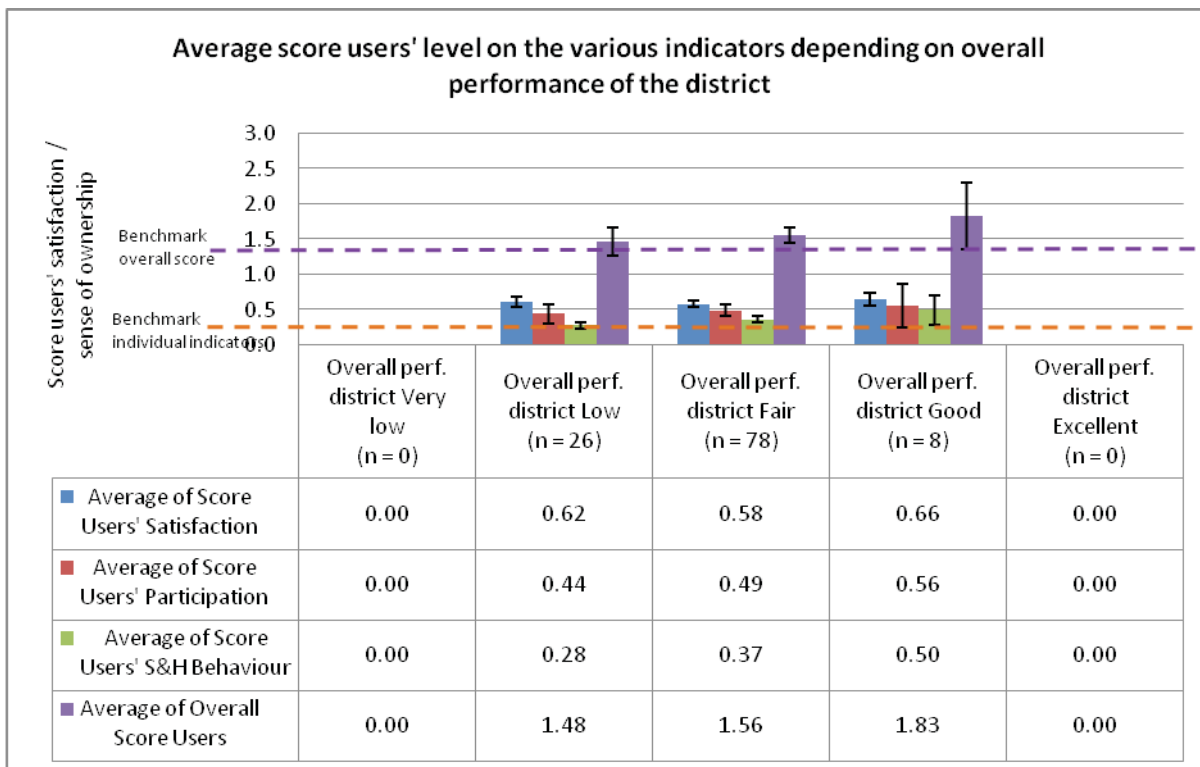


Performance District Users' satisfaction and sense of ownership	Overall perform. district	Resources of DWO (Indic. 4.1)	District planning, procurement and construction supervision (Indic. 4.2)	Utilisation of DWSCG (Indic. 4.4)	Post-construction support to service providers (Indic. 4.5)	Support HPMS (Indic. 4.7)	District coordination and harmonisation (Indic. 4.8)
Overall users' satisfaction and sense of ownership	✓	✓			✓	✓	
Users' satisfaction with the service delivered	✓	✓			✓	✓	
Users' participation in the management and maintenance of the water source	✓	✓			✓	✓	
User's hygiene & sanitation behaviour	✓	✓			✓		

**Table 44: Tested possible correlations between performance of the district and users' satisfaction and sense of ownership**

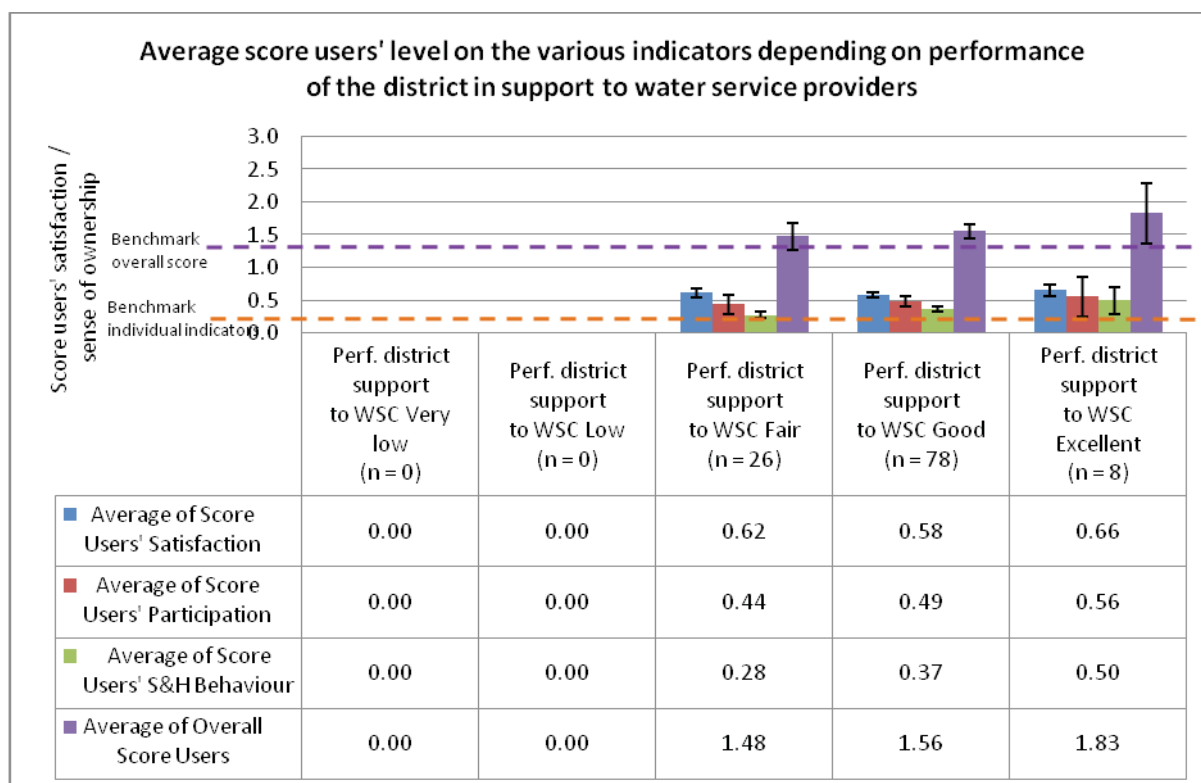
It is observed that the higher the overall performance of the district, the better the average scores reached on each of the indicators at user's level:

- The average score on users' satisfaction with the service slightly increases from 0.62 to 0.68 when the overall performance of the district progresses from low to good
- The average score on users' participation in the management and maintenance of the water source increases more significantly (from 0.44 to 0.56)
- The average score on users' hygiene & sanitation behaviour goes up from 0.28 to 0.50
- The average score on overall users' satisfaction and sense of ownership increases too (from 1.48 to 1.83) as a result of the combined effect.



**Figure 63: Average score users' level on the various indicators depending on overall performance of district**

A similar trend is observed for the districts' performance in supporting water service providers:



**Figure 64: Average score users' level on the various indicators depending on performance of the district in support to water service providers**

For the two other district performance indicators scrutinised (resources of the DWO and Support to handpump mechanics (HPMs) by the district), no such clear trend is observed.

#### 4.2.3 Parameters that may influence the performance of the WSC

Water Source Committees are usually established, trained and later supported by local government staff. The performance of the service authority – sub-counties and districts – is therefore expected to have an influence on the performance of the WSC.

##### 4.2.3.1 Correlations between level of performance of the sub-county and performance of the WSC

The following possible cross-tabulations were done in order to establish possible correlations between the performance of the S/C and the one of the water source committees:

Performance WSC \ Performance S/C	Overall performance S/C	Community mobilisation by S/C pre-construction (Indic. 4.3)	S/Cs support during construction	Post-construction support by S/C (Indic. 4.6)
Overall performance WSC	√	√	√	√
Institutional capacity of the WSC (Indic. 3.1)	√			√
WSC administrative tasks (Indic. 3.2)	√			√
WSC involvement in O&M of the water services (Indic. 3.3)	√			√

**Table 45: Tested possible correlations between performance of the S/C and performance of the WSC**

No correlation could be found between the performance of the WSC and the performance of the S/C (be it overall or for individual indicators).



#### 4.2.3.2 Correlations between level of performance of the district and performance of the WSC

Looking at districts' performance, correlations were sought between performance of the WSCs and:

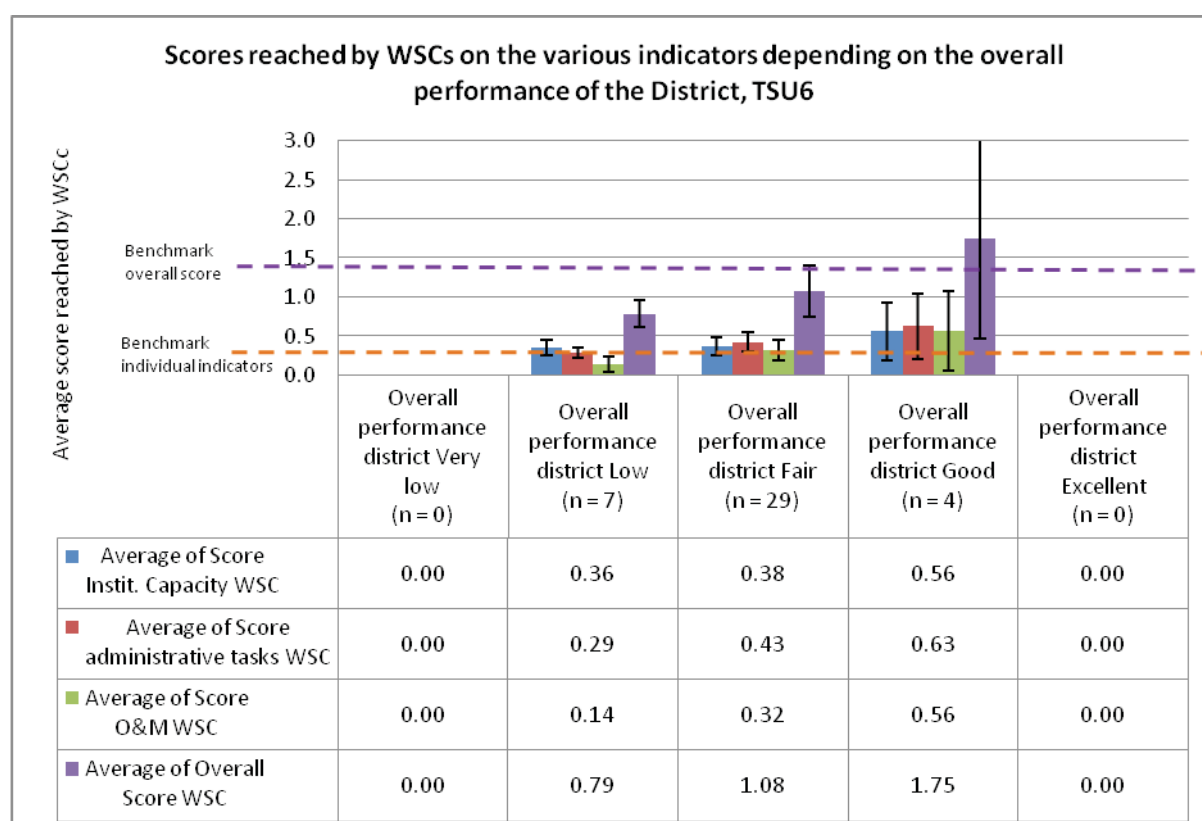
- The overall performance of district
- Resources of DWOs
- Post-construction support to service providers by districts

Performance District \ Performance WSC	Overall perform. district	Resources of DWO (Indic. 4.1)	District planning, procurement and construction supervision (Indic. 4.2)	Utilisation of DWSCG (Indic. 4.4)	Post-construction support to service providers (Indic. 4.5)	Support HPMs (Indic. 4.7)	District coordination and harmonisation (Indic. 4.8)
Overall performance WSC	✓	✓			✓		
Institutional capacity of the WSC (Indic. 3.1)	✓	✓			✓		
WSC administrative tasks (Indic. 3.2)	✓	✓			✓		
WSC involvement in O&M of the water services (Indic. 3.3)	✓	✓			✓		

**Table 46: Tested possible correlations between performance of the district and performance of the WSC**

The overall level of performance of districts seems to influence positively the performance of WSCs, although mostly in TSU 6, as shown in Figure 65, where we can see:

- The average score on institutional capacity of the WSC is increasing (from 0.36 to 0.56) when the overall performance of the district progresses from low to good
- The average score on performance of administrative tasks by the WSC progressing from 0.29 to 0.63
- The average score on WSCs' involvement in O&M tasks going up from 0.14 to 0.56
- The average score on overall performance of the WSC progressing from 0.79 to 1.75.

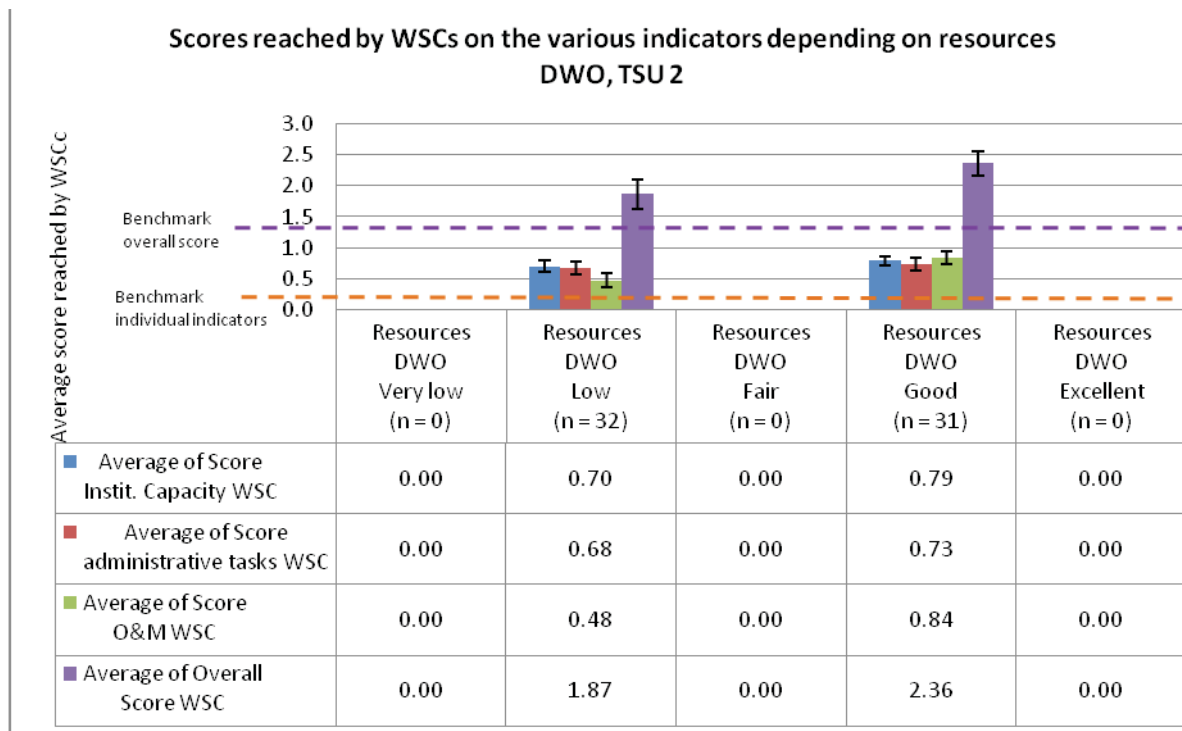




**Figure 65: Scores reached by WSCs on the various indicators depending on the overall performance of the District, TSU6**

In TSU 2, whether the overall performance of the district is poor or fair doesn't make much difference on the different performance indicators for the water source committees.

As regards to the resources of the DWO, the better sourced the district water office, the better the performance of the WSCs; this trend was however only observed in TSU 2.



**Figure 66: Scores reached by WSCs on the various indicators depending on resources DWO, TSU 2**

Finally, no correlation was found between the level of performance of the districts in support to service providers and the performance of the Water Source Committees:

### 4.3 Performance of the SDM in districts where innovations within the WSC management system have been adopted

As described earlier in section 3.4, communities where some innovations within the standard management system are found were included in the research area; the two selected innovations were (1) the integration of community-led savings and credit initiatives in financing O&M, which is found in Kamwenge district with the so-called Y-Y strategy, and (2) the involvement of Handpump Mechanics Associations (HPMAs), in Kasese district where such association has been in existence since 2008.

In the previous sections of this report, whenever the analysis showed remarkable results in Kamwenge and Kasese districts, these were highlighted. This section therefore contains a summary of how these innovations seem to have a positive influence on the level of the service delivered, users' satisfaction and sense of ownership, as well as the level of performance of the concerned WSCs. However, given the design and depth of the study, it is not possible to quantify to what extent the more positive situation can be attributed to these innovations or to other factors.

#### 4.3.1 Performance of the SDM in communities where the WSC operates a savings and credit scheme

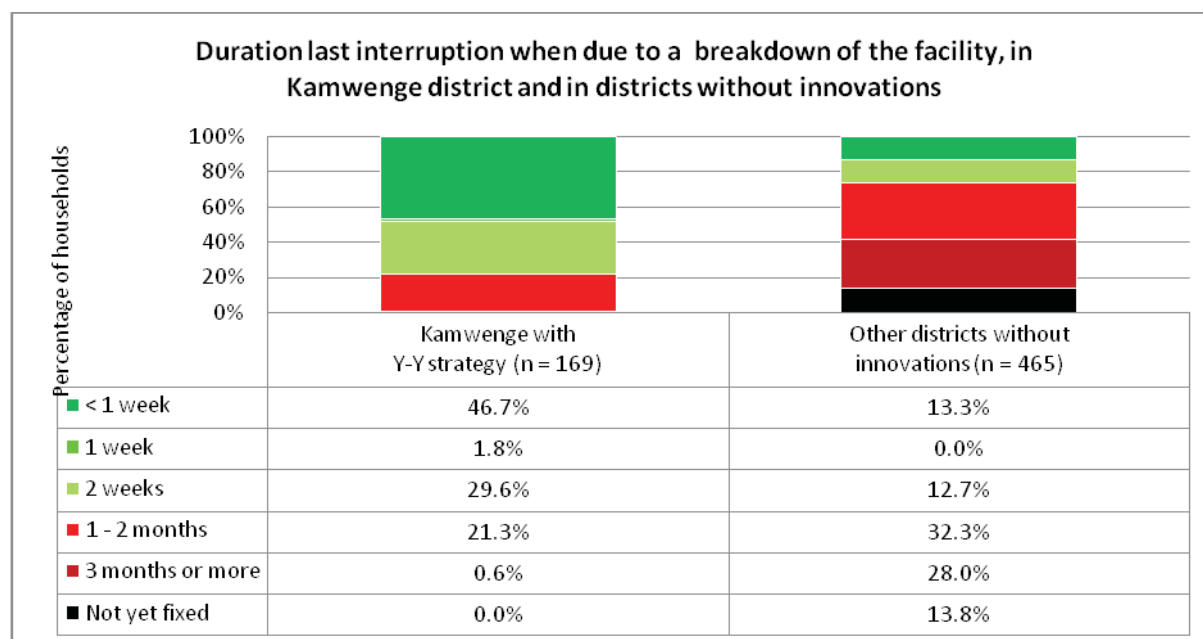
The analysis of the data specific of the Y-Y strategy was guided by a number of assumptions, i.e. that such saving scheme could have a positive influence on:

- the reliability of the water point facilities;
- users' satisfaction and participation in management and maintenance;
- the performance of the WSC as regards to the various service providers' SDIs.



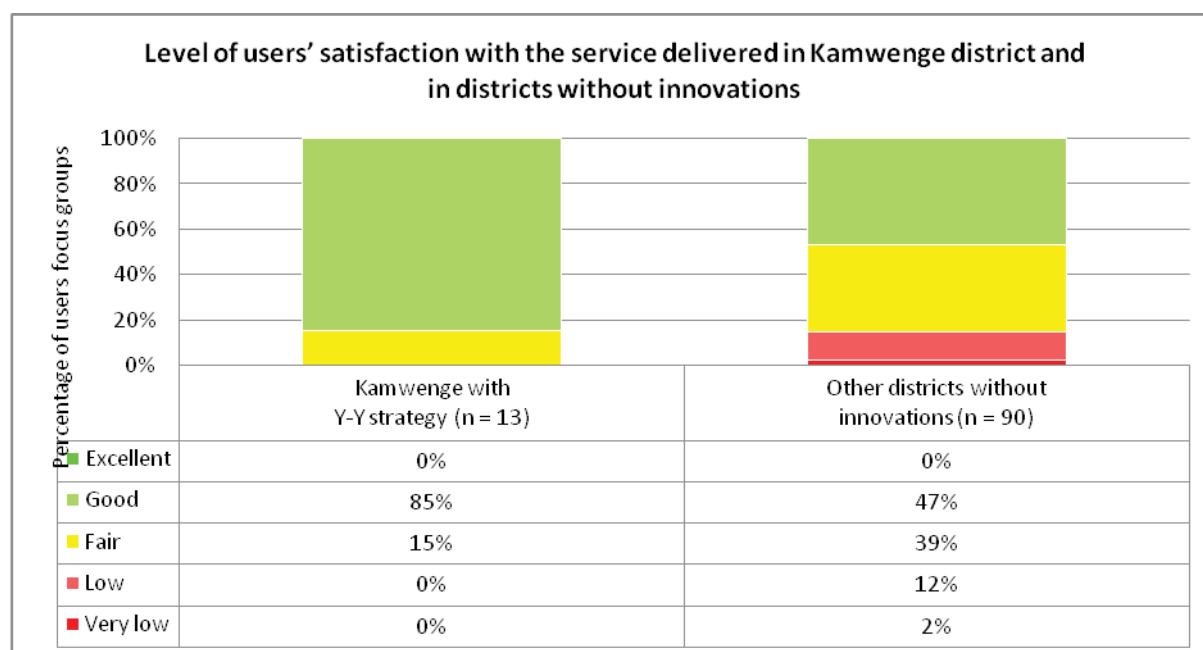
Table 7, on page 46, clearly shows that in Kamwenge district (as well as in Kasese), a significantly higher proportion of facilities have been classified as reliable (i.e. for which the last breakdown did not last longer than two weeks). If we look at the districts without the Y-Y strategy, excluding Kasese where another innovation is found, only 32% of the households have access to a reliable water source, against 72% in Kamwenge.

When looking more in the details at the duration of the last breakdowns, and comparing Kamwenge with other districts where no innovation is found, it is very clear that breakdowns are repaired faster in Kamwenge. This swift reply to breakdowns may be explained by the availability of enough cash in the saving scheme to enable the WSC to immediately call a handpump mechanic, without having to mobilise users to collect the funds needed for the repair.



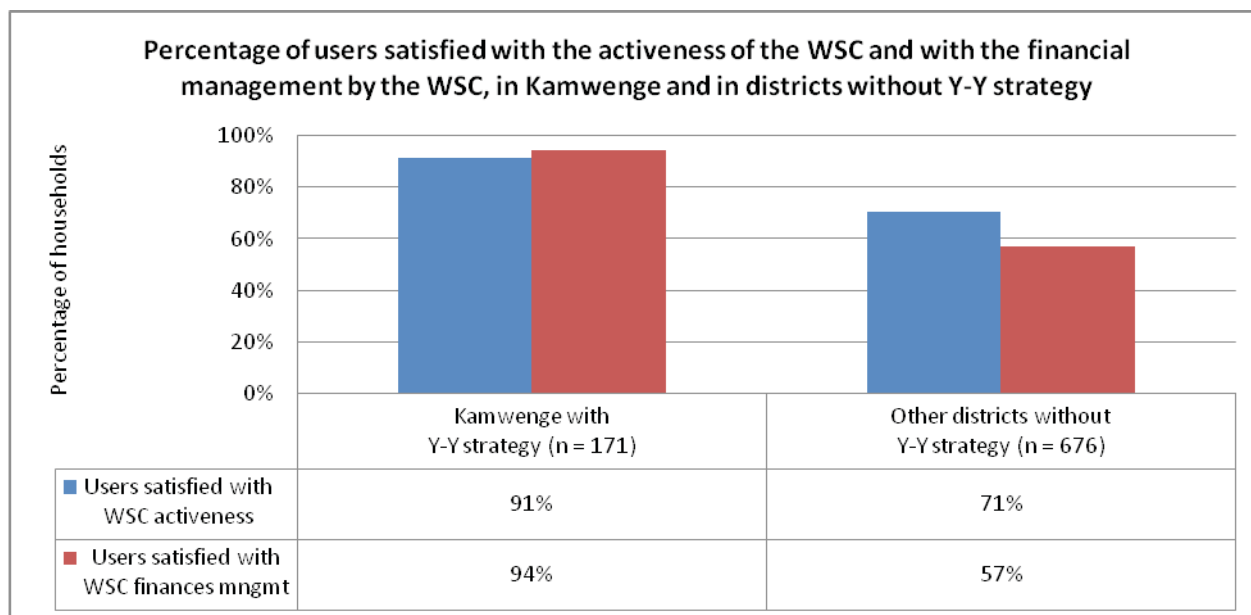
**Figure 67: Duration last interruption when due to a breakdown of the facility, in Kamwenge district and in districts without innovations**

Users' satisfaction with the service delivered (quality, quantity, distance and reliability), was also found to be higher in Kamwenge district than in districts without innovations:



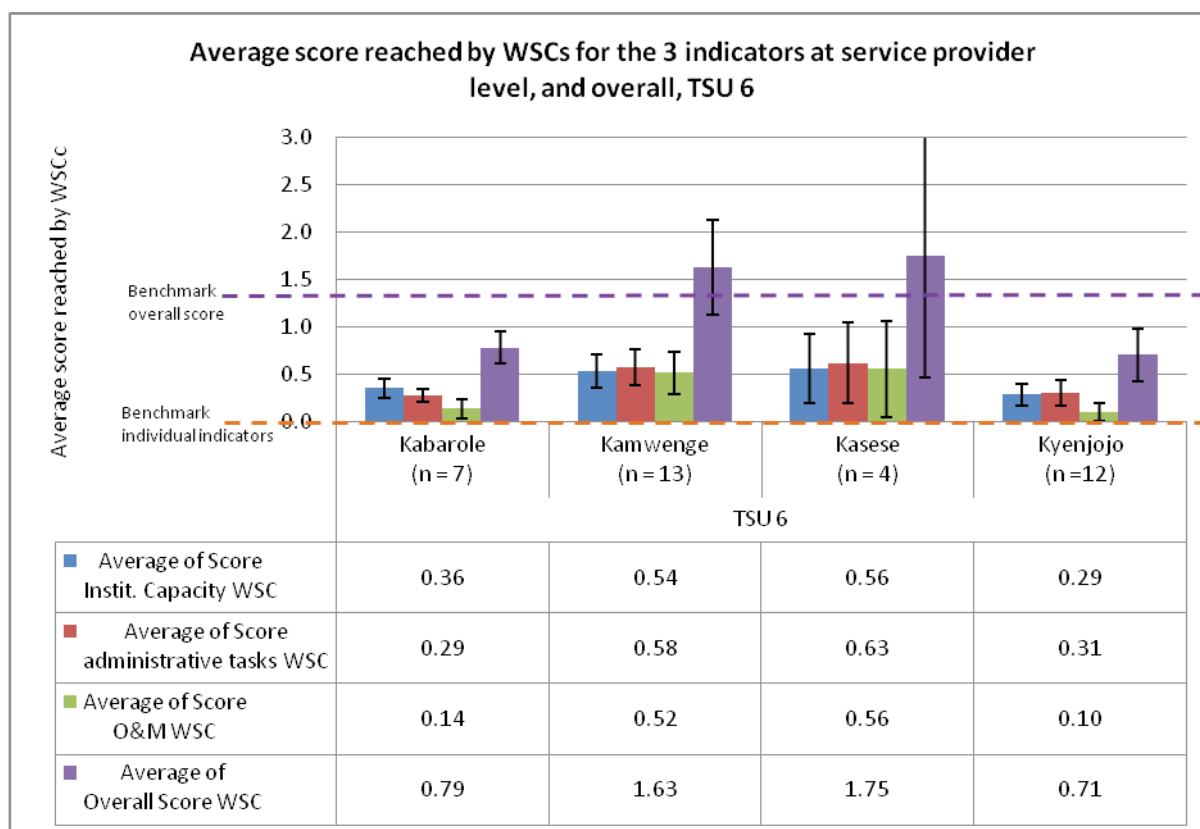
**Figure 68: Level of users' satisfaction with the service delivered in Kamwenge district and in districts without innovations**

Not only are water users in Kamwenge more satisfied with the water service delivered than in other districts, but they also were happier with the activeness of their WSC (91% of users satisfied, against 71% in districts without innovation), as well as with the way the committee manages finances (94% against 57%).



**Figure 69: Percentage of users satisfied with the activeness of the WSC and with the financial management by the WSC, in Kamwenge and in districts without Y-Y strategy**

The higher satisfaction of users in Kamwenge with the way their WSC perform its duties is mirrored by the analysis obtained for the various indicators of performance at service provider level: in TSU 6, while WSCs in Kabarole and Kyenjojo districts perform quite poorly, committees in Kamwenge (as well as in Kasese) stand out with average performance above the benchmark for all indicators:



**Figure 70: Average score reached by WSCs for the 3 indicators at service provider level, and overall, in TSU 6**



Savings schemes organised around a water point, such as the Y-Y strategy, are seen as presenting several advantages:

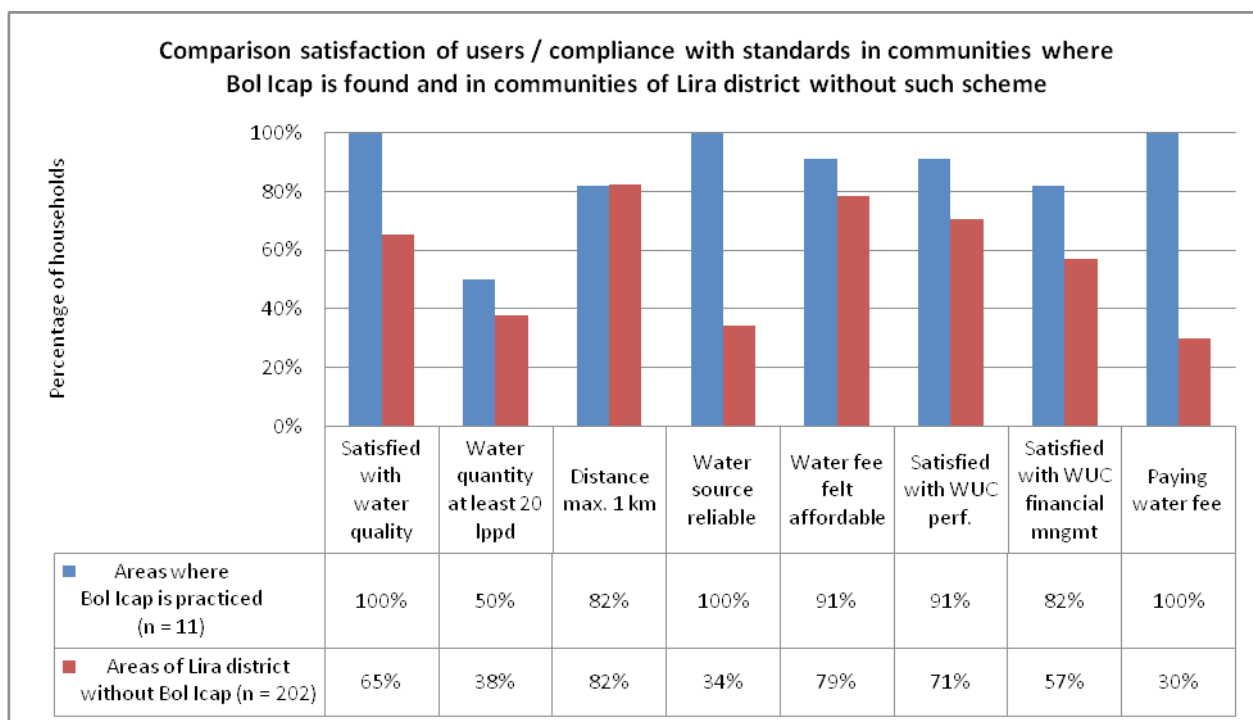
- They can provide a strong motivation for users to contribute money into a fund from which they later can borrow;
- They provide a fund reserved for any necessary repair of the facility;
- The collection and management of the fund, including of the loan system, provides additional work to WSCs that otherwise do not have much to do and for this reason often do not stay mobilised.

Findings from Kamwenge confirm the assumption that the management of a savings and credit scheme motivates the WSCs to perform their duties.

Both the WSCs and users are keen not only on making sure that money is frequently contributed to the water point fund, but also on holding regular meetings to discuss the management of the savings scheme. As shown in Table 15, the proportion of users that attended the last meeting organised by the WSC is one of the highest in Kamwenge district. These same meetings, during which aspects of the savings and credit scheme are discussed, are indeed also used to discuss other issues related to the water point. This enables the WSCs to better fulfil their roles.

In order to go deeper in the analysis of savings and credit schemes, and to provide stronger evidence of the positive influence of such schemes on users' satisfaction and sense of ownership, additional data were collected in Lira district, for the 3 water points where such schemes had been established. In this region, this system is not named "Y-Y" but "Bol lcap" (meaning keep in a box for future use, in Langi language).

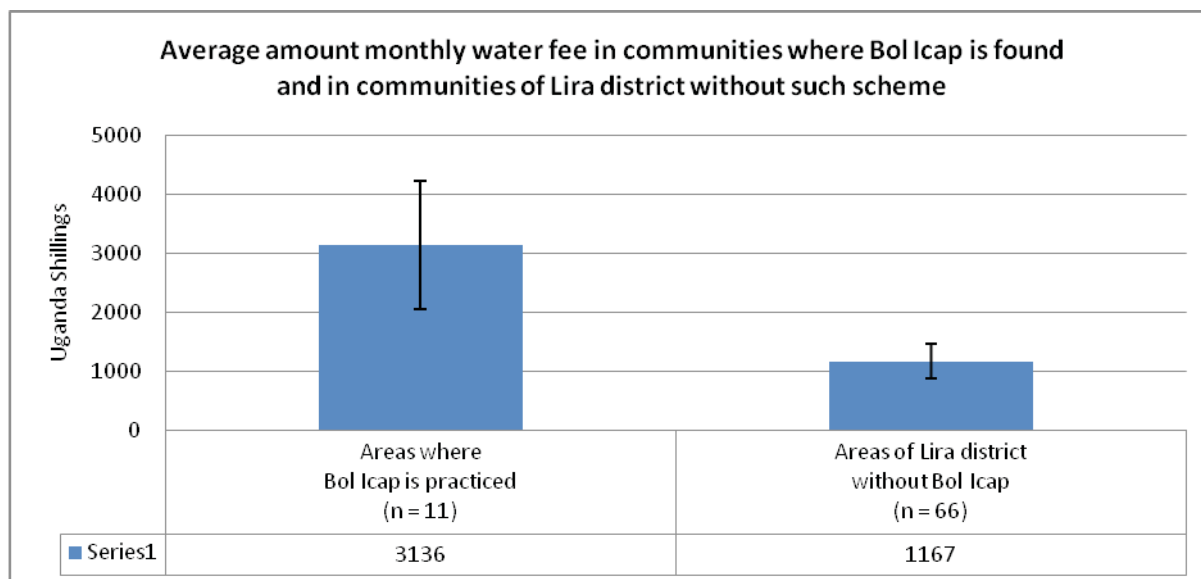
Figure 71 presents findings on the comparison between the proportion of households whose water service level parameters comply with the standards in communities where Bol lcap is found (in blue) and in areas where no such scheme exist. Apart from distance, which is not a parameter on which the Bol lcap scheme can have much influence, the compliance with the standard is higher in communities where such scheme is found. All facilities where Bol lcap is practiced have been classified as reliable, against 34% of water facilities in Lira without a savings scheme. The proportions of users finding the water fee affordable is also higher for facilities with Bol lcap (91% compared to 79%) and all interviewed households claimed that they pay a water fee (against only 30% in communities without Bol lcap). The level of satisfaction of users with the work of the WSC and with the way the committee manages finances is also significantly higher in communities with Bol lcap.



**Figure 71: Comparison satisfaction of users / compliance with standards in communities where Bol lcap is found and in communities of Lira district without such scheme**

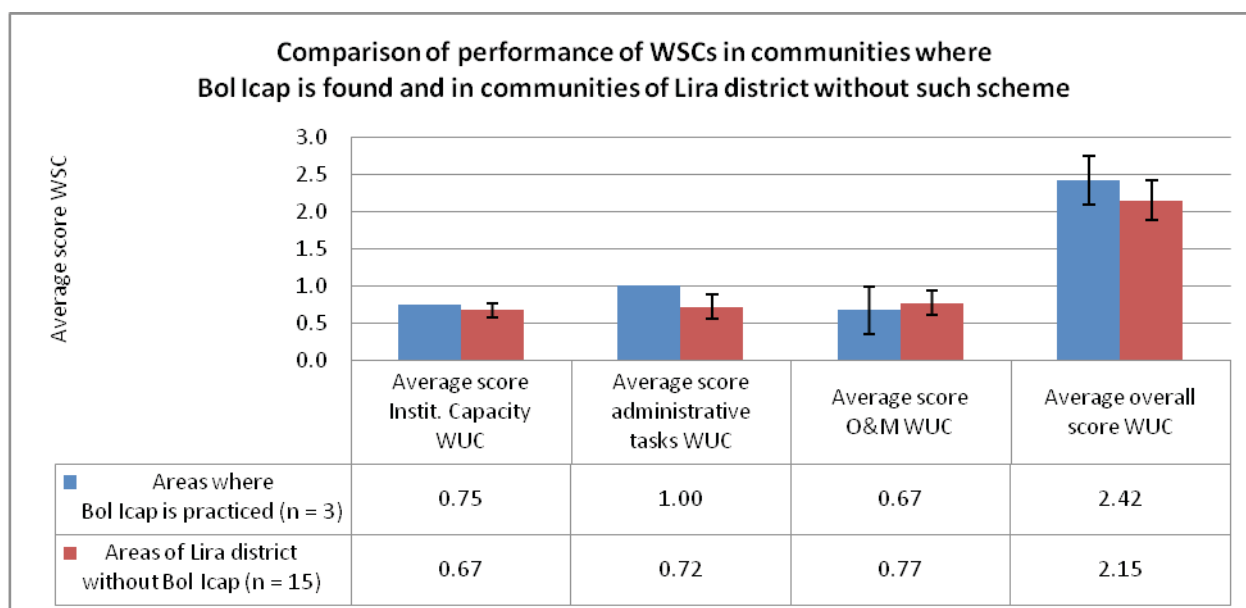
All parameters above (apart from distance of the facilities) therefore are better in communities with Bol lcap

than in communities without. The proportion of users who found the water fee affordable was higher at facilities where Bol Icap is practiced, although the average amount contributed by households is about 2.5 times higher, as shown in figure 72:



**Figure 72: Average amount monthly water fee in communities where Bol Icap is found and in communities of Lira district without such scheme**

An analysis at service provider level shows a significantly higher average score on the performance of administrative tasks by the WSC (Indicator 2.2) at facilities where Bol Icap is practiced:



**Figure 73 Comparison of performance of WSCs in communities where Bol Icap is found and in communities of Lira district without such scheme**

#### 4.3.2 Performance in district where a HPMA has been established (Kasese)

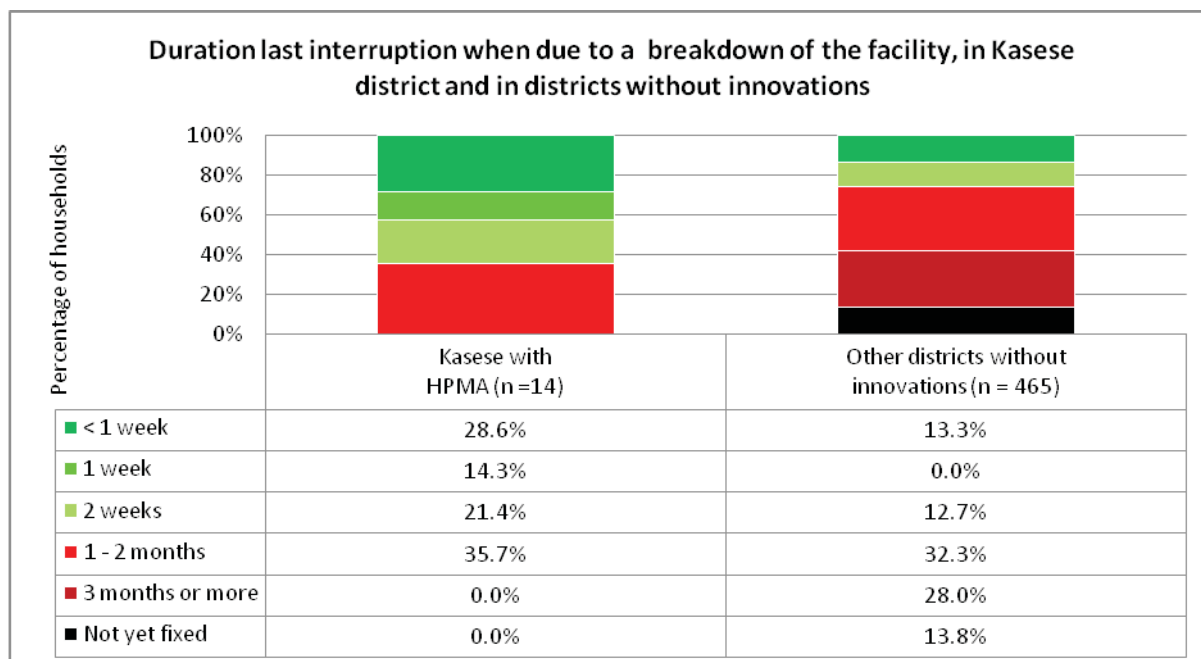
The other innovation within the management system assessed in this research is the formation of handpump mechanics association (HPMA). A HPMA is a district based association that brings together Handpump Mechanics (HPMs) that are usually operating individually in a specific district. As already mentioned, since data was collected, this innovation has been mainstreamed with the formation of association of a great number of districts under the impulsion of the MWE.

Kasese is a district of TSU 6 where a HPMA has been in existence since 2008. The research aimed at establishing whether the existence of such an established association has an effect on the reliability of water points and users'



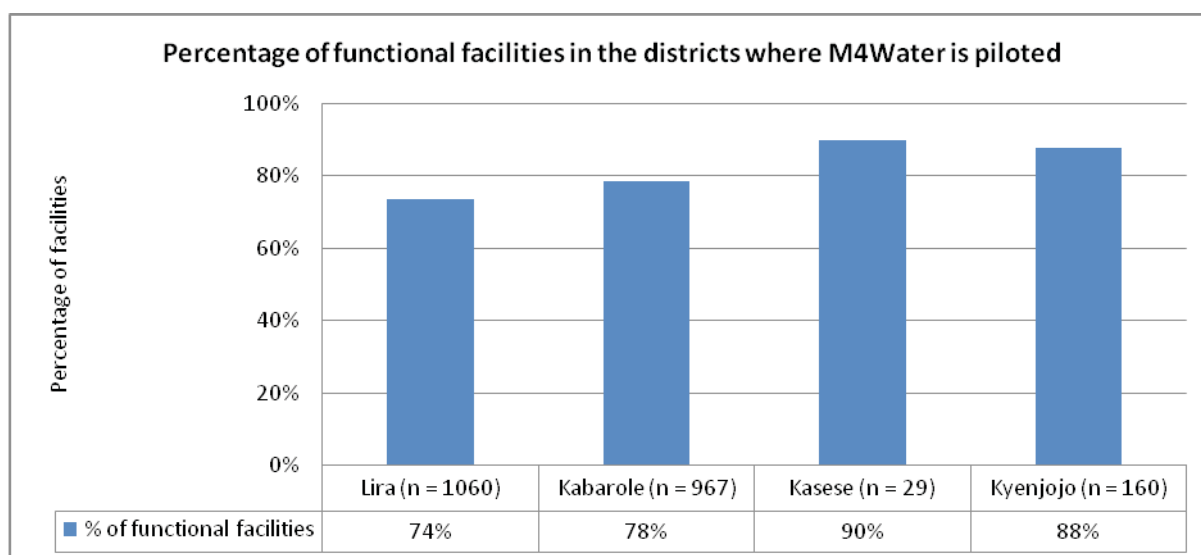
satisfaction and the performance of Water Source Committees.

Table 7, on page 46, showed that Kasese is the district among the eight sampled ones where reliability is the highest, with 82% of the facilities classified as reliable; in comparison, in other districts with the exception of Kamwenge), this proportion only reaches about a third of facilities. Figure 74 shows that a breakdown is usually addressed much faster in Kasese than in districts where no innovation to the management system exists:



**Figure 74: Duration last interruption when due to a breakdown of the facility, in Kasese district and in districts without innovations**

Data from the M4Water system shows a higher level of functionality in the sub-counties covered by both this study and the M4Water pilot: 90% of water sources were found functional in Kasese district, which is the highest among the 4 districts.



**Figure 75: Percentage of functional facilities in the districts where M4Water is piloted**

Users' satisfaction with the service delivered (quality, quantity, distance and reliability), is also higher in Kasese district than in districts without innovations:

**Level of users' satisfaction with the service delivered in Kasese district and in districts without innovations**



For performance of Water Source Committees, as shown in Figure 70, Kasese is the district in TSU 6 where WSCs have the highest average performance on all indicators.

The presence of a well-established and functional handpump mechanics association therefore has a positive influence on reliability and functionality of facilities, performance of Water Source Committees, and to a lesser extent users' satisfaction.



# 5 CONCLUSIONS AND RECOMMENDATIONS

## 5 CONCLUSIONS AND RECOMMENDATIONS

This study in eight selected districts of Uganda aimed at (1) describing the service delivery model for point sources, also named WSC SDM in this report; (2) assessing its performance; (3) examining successes factors and weaknesses within the model and (4) identifying ways of improving it; and at (5) establishing a baseline of service delivery performance in the study districts.

Objective (1) was covered in chapter 3, where key elements of the SDM as outlined in sector policy documents and guidelines were described. Objectives (2) and (5) were fulfilled in Chapter 4 with the presentation of the results of the univariate and bivariate analysis of the data that was collected to measure the performance of the SDM at four levels: service delivered, water users, service providers, and service authorities (including support functions). This was done both for the standard management system and for two innovations within the traditional model: the integration of community-led savings and credit initiatives for financing O&M and the involvement of handpump mechanics associations. This final chapter aims at fulfilling objectives (3) and (4), through the identification of stronger and weaker aspects within the SDM, again at the four studied levels.

The performance of the SDM was assessed against a set of service delivery indicators that were developed within the framework of this research. These SDIs were designed based on the standards (for service delivered) and the duties and responsibilities (for service providers and service authorities, and some extent users) outlined in sectors policy documents and guidelines. Whenever for instance a service provider is scoring low on a given service delivery indicator, this implies a gap between policy and practices on this given area of responsibilities of the WSC. In this chapter, gaps between policy and practices are therefore highlighted.

In addition to the univariate analysis within each level of service delivery (service delivered, users, service provider and service authority), the study of the SDM for point sources was taken a step further by carrying out a bivariate analysis, cross-tabulating data of interest at the different levels and looking for potential correlations.

Both the univariate and bivariate analyses permitted to identify successes, weaknesses and opportunities for improvement for the standard SDM and innovations within the WSC management system.

### 5.1 Conclusions and recommendations on levels of service

Reliability is the aspect of service that is usually the most problematic as, with the exception of Kasese and Kamwenge districts, where the two innovations to the standard management system (Y-Y-strategy and HPMA) are found, only 32% of the households have access to a reliable water source. The majority of users, and even more strongly in TSU 6 districts, fetch less than 20 litres per person per day. There seems to be a very low demand for improved water sources, with the availability of many unimproved alternative water sources in TSU 6 districts. according to their perception, 51 to 88% of the consumers, perceive their water to be of good quality. As a result of the combination of these factors, depending on the district, 88% to 97% of the households access sub-standard service, i.e. a water service that does not comply with the minimum standard catered for in the policy.

Low reliability of the water facilities, probably goes hand in hand with the low payment for water by users, as only 27% of interviewed households (42% in TSU 2 and as low as 5% in TSU 6) contribute to the O&M of their water systems. The bivariate analysis showed that repairs are done faster and the reliability of the facilities is slightly better in communities where users contribute to the operation and maintenance (see Figure 50). Handpump mechanics invited at the data interpretation and validation meetings mentioned that the speed of repairs when a facility breaks down is usually limited by the time communities take to mobilise the necessary funds. Other attendants of the meetings considered that politicians' attitudes often have an important negative influence on reliability of water sources: as many politicians promise water users that they will finance the necessary repairs, communities then just wait until they come back to them. This usually doesn't happen, and eventually communities resolve to contribute the necessary funds.



The performance of the water sources committees generally does not have any influence on the quality of the service delivered in the study districts. It was only found that, in TSU 6, when the performance of the WSC improves, be it for individual indicators or overall, the reliability of the water facilities also increases.

The bivariate analysis also showed that better performance of the S/Cs does not lead to higher levels of service. This may be due to various possible reasons. First of all, there may be a threshold effect, i.e. a S/C would really need to be above a really good performance level to have any effect on the level of service. It may also be that the capacity of the WSC is so low (as suggested by the results of the analysis in part 4.1.3) that it cannot absorb the support in an optimal way. Lastly, the self-assessment of the sub counties had some weaknesses, with S/C staff often overrating their actual performance, which may have an impact of the effectiveness of the cross-tabulation. District stakeholders indeed pointed the limited resources and presence of sub-county staff for WASH activities, to the point that S/C staff may not be well versed with the situation of water services in their area. For instance, the District Water Officer of Kitgum narrated that he works more with the HPMS than with health assistants whenever a WSC requires support, as in his view HPMS have a better knowledge of the situation than health assistants.

Water facilities were found more reliable in districts performing better overall, and in particular in procurement and construction supervision, as well as in post-construction support to service providers. Reliability was however the only water service parameter on which district performance seems to have an influence.

## **5.2 Conclusions and recommendations on users' satisfaction and participation in the management and maintenance of the water source**

At users' level, data was collected to measure both the satisfaction of users with the service delivered and their participation in the management and maintenance of the water source.

The assessment on users' satisfaction was an entirely new concept that provided stakeholders with opportunity to analyse issues raised by users on services delivered, also in relation to their willingness to pay for water services. In all districts, except Alebtong, users' satisfaction reaches the benchmark. Users' satisfaction with the service delivered was found significantly higher in Kamwenge district, where savings and credit schemes (Y-Y strategy) have been established by Water Source Committees.

If we look at the individual parameters of the water service, the level of users' satisfaction as regards to quantity and reliability was found higher than the level of compliance of the service with these two parameters. For distance, even though most interviewed users estimate their facility to be within the prescribed 1 km radius, the level of satisfaction with having to walk this distance was found lower. The great majority of consumers also expressed that they find their water affordable; this is however to be taken with a huge pinch of salt, as, as seen earlier, only a small proportion of users pay a water fee.

Users' satisfaction with the water service is not really influenced by the level of service, the performance of the WSC or the performance of the service authority.

The level of participation of users in the management and maintenance of the water sources was found fairly low, in particular in TSU 6 districts (from as low as 0.13 in Kyenjojo or 0.30 in Kabarole). A better service does not lead to higher users' participation overall, although it contributes to a higher proportion of users paying a water fee. However, a better performing water source committee does contribute to increased participation of users in the management and maintenance of the water facility. Again, the performance of the sub-county doesn't play any significant role, while in districts where the DWO is providing better post-construction support to the service providers, users' participation is stronger.

Although the policy framework clearly states that communities are responsible for the management and maintenance of their water facilities, including for preventive maintenance and repairs, and payment of required funds, this in practice happens to a limited extent only. The proportion of households paying a water fee is of only Affordability is in most cases not the stumbling block for people's payment of water fee, as a comparison with expenditures made on mobile phones shows that way much more is spent on communications. Also a majority of water user groups stated that the water is affordable. More probable explanations for the very low payment for water include the following:

- There is just a very low demand for improved water sources; for example, in TSU 6 water consumption is far below the benchmark, as there are plenty of alternative water sources.
- There is a low trust of water users in their WSC when it comes to managing collected funds; if water users suspect that the O&M fund may be mismanaged (or if it actually happens), they usually are reluctant to continue paying for their water. The fact that many WSCs do not issue receipts to users who pay a water



fee is not encouraging a trustful relationship between consumers and committees.

The bivariate analysis indeed showed that a better performing WSC also has a positive influence on users' participation in the management and maintenance of their facility, including the payment of water fees (see Figure 60).

- The feeling that water should be a free commodity (as it is a gift from nature, and as it usually is the case for unprotected sources) is also still quite widespread among water users.
- The way community mobilisation is done, when a new facility is provided or an existing one rehabilitated, is still very top down and does not really promote a sense of ownership among users. In TSU 6, attendants of the interpretation and validation meeting pointed that the top-down approach, with no initial financial contribution from the communities, leaves users with the perception that the water point belongs to the providing agency. It was also highlighted that some NGOs and development partners do not follow the sensitisation guidelines set by central government.
- After a water facility has been built, the WSC is normally left alone to mobilise users to pay the water fees, without support from the sub-county and/or district. As WSC members are volunteers, they may have other priorities than chasing water users for payment.
- Political interferences seem to be an issue: some politicians give out free water points, raise the initial financial contribution on behalf of water users, or tell people that they should not pay for water.

In Kitgum, however, it was found that 62% of the households pay for the water they fetch. The District Water Officer attributed this success to a number of deliberate efforts made by the district, including:

- All politicians in the district who had promised that they would pay for initial contributions or costs of repair of water facilities where requested by the DWO to go back to the communities and inform them that this will not happen.
- Community mobilisation is done jointly by politicians and district technocrats. This ensures that a harmonised message is delivered. When a community applies for a water point, the capital contribution is not collected by the district office until they have ensured that the money really comes from the people, and not from a local politician.
- Strong working relationships exist between the HPMs, Health Assistants and Community Development Officers (CDOs);
- A 'shame game' has been developed and used to report villages performing poorly in WASH. For example, dirties villages are pointed on a local radio programme, mentioning also the names of the concerned village chief, community development officer, etc., who are ashamed and in turn try to mobilise people to improve the situation. A similar shame game has been tried for reporting issues at water points, mentioning for instance facilities that have a non-functioning committee.

Attendants of the validation and interpretation meetings organised in the two regions highlighted that strengthening community' sense of ownership and involvement in the management of the facilities should be prioritised. A number of actions and changes in practices were suggested in this view:

1. Improving mobilisation and sensitisation of users, so that they understand that the facilities are theirs, the importance of paying a water fee, and that the water fee is meant for the O&M of the water source not for payment of the committee. This can be achieved through:
  - A stricter adherence to the guidelines during the mobilisation phase by both local government and NGOs
  - Better involvement of community members – i.e. not as mere recipients of a project – at the different stages of service provision
2. Providing an incentive for users to contribute money to the O&M fund. Savings and credit schemes such as the Y-Y strategy do provide such incentive, as contributing households have access to soft loans.
3. Reducing mistrust between users and WSCs, which often leads to low payment of water fees; attempts to minimise users' mistrust in the WSC can include:
  - Involving users more in the setting of the water tariff

- Improved transparency by the committees, through the organisation of meetings, and keeping clear records so that people are better informed about the use of the contributed money
  - Ensuring safe custody by the WSC of the collected money; saving schemes such as the Y-Y strategy seem to have achieved this and a lot can certainly be learnt from community-based savings and credit schemes.
4. Supporting water source committees in their task of keeping users informed about the financial status of the O&M fund:
- As much as possible, local government staff involved in the water sector (from S/C or district) should be present during meetings with users organised by the WSCs, to guide them, check the account books, etc.
  - Alternatively, HPMs could be tasked to attend the meetings

### 5.3 Conclusions and recommendations on service providers performance

The performance of the water source committees, based on a self-assessment by the WSCs, was found quite low in TSU 6 where 2 districts (Kabarole and Kyenjojo) showed very low scores, while the best performing district (Kyenjojo) reached an average overall score of only 1.75 out of 3. The two districts in TSU 6 where committees are doing better are the ones where innovations to the standard management system have been found. The situation is better in TSU 2, where many committees probably have been established more recently.

When looking at the individual performance indicators of the WSCs, committees usually perform better on the SDI on Institutional capacity or on the one measuring the Performance of administrative tasks. The involvement of WSCs in O&M tasks is often the indicator which reaches the lowest score.

Performance of WSCs is better when districts are better performing, in particular in the provision of post-construction support. S/C performance doesn't positively influence the performance of committees.

Community-based management of point water sources as currently practiced is showing its limitations. Participants of the data validation and interpretation meetings raised their concerns on the current model, where Water Source Committees manage services on a voluntary basis with hardly any motivation. They felt that this was no longer viable. Could more professionalisation, in contrast with the current voluntarism of WSC members, help to ensure the model functions better? The following options were proposed to professionalise water management structures:

- Establishing sub-county based water user associations.
- Privatising management of point water sources at sub-county level. The District Water Officer of Kitgum for example proposed having HPMs as private operators.
- Promoting sub-county based water supply and sanitation boards.

The latter is an alternative management system already proposed by the DWO of Kabarole and Triple-S initiative: the establishment of a Water Supply and Sanitation Board at sub-county level, that would be overseeing all water facilities in a given sub-county, be they point sources or piped schemes. This Sub-county Water Supply and Sanitation Board (SWSSB) would be the main water service provider, but still linking to water operators and water user associations on the ground, at parish and/or village levels.

Whenever more professional structures cannot be yet be set up, another issue that could be tackled is the fact that WSCs often become dormant because they have only few tasks to undertake. The establishment and running of savings and credit schemes such as the Y-Y strategy seems to motivate committees to undertake their tasks, and to carry them out more effectively.

### 5.4 Conclusions and recommendations on performance of service authorities and support functions

According to the self-assessment made by S/C staff, most sub-counties have an overall performance that is below the benchmark or just reaching it (see Figure 40). Only in Alebtong, Lira and Kasese districts do S/Cs stand out. Weaknesses are at all stages of provision of the water service: before, during and after constructions. For example, stakeholders of TSU 2 acknowledged during the data interpretation and validation meeting that quite often the critical requirements, during the pre-construction mobilisation phase, are not fully applied, as this is a fairly new practice since the shift from supply-driven (during the insurgency) towards more demand-driven provision of water facilities. The issue of land is quite important in this region, and the critical requirement of signing land agreements before construction often is not met; this is complicated by the fact that land owner usually are not compensated for the land they cease for building the water facilities. Attendants of the data interpretation and validation meetings were also of the opinion that the scores allocated to post-construction support by S/Cs were



very generous and not really reflecting the reality. In their view, post-construction support, be it by sub-counties, districts or NGOs, is still very poor, as there usually is no plan for these activities. In addition, as highlighted in previous sub-sections, the performance of the S/C has little influence on the performance of the service or of the service provider, or on users' satisfaction and sense of ownership. There is a clear gap at sub-county level, which will be further discussed below.

The overall performance of the districts, also based on self-assessment by the DWOs, was found better than the one of sub-counties. None of the districts were found as having the prescribed number of staff, highlighting staffing as an issue. Lack of resources, including lack of transport, is often pointed as a key limiting factor by local governments.

In the following, 3 areas identified as critical gaps are further discussed.

#### **5.4.1 Gaps at sub-county level**

During the data interpretation and validation meetings, stakeholders from TSU 2 and TSU 6 noted that the results of the study highlight the current institutional gap at sub-county level. Although sub-county staff should play a crucial role in the provision of rural water services, in particular during users mobilisation and for some post-construction support activities (such as support to WSC through conflict resolution, re-training of committees, etc.), there is no decentralised office of the water department at sub-county level. Instead, staff from other ministries, i.e. Health Assistants (from the Ministry of Health) and Community Development Officers (from the Ministry of Local Government) is tasked to do these activities, with the challenge that they are also already involved in other work of other departments.

Due to these important gaps as regards to the roles of the S/C after construction, quite often water users or WSCs by-pass the sub-counties whenever they have a problem with their water facility, going straight to the district office. Handpump mechanics also pointed that at the moment they can only report to the districts, as there is no water office at S/C level.

Some discussions were held on the opportunity and potential added-value of having a MoU signed between user groups and S/Cs for post-construction activities. A general consensus among participants was that a mechanism is required to motivate sub-counties to budget for WASH under the Local Government Development Program.

Various attendants of the meetings were of the opinion that there is a need for a structure from the water department at S/C level, with a focal person for water there. The need for a platform at sub-county level to manage water activities and coordinate all Water Source Committees was hence expressed. The question is how to ensure that sufficient resources are available the WASH sector at that institutional level? Should a new platform / water office be opened at S/C level or will the establishment of sub-county water supply and sanitation boards help address this gap? Establishing a new entity may not solve the initial problem, which is that S/C lack resources (staff, funds) to closely interact with most Water Source Committees. If sub-county water supply and sanitation board are to be established, funds for post construction activities should be sent to sub-county to top up funds collected by Water Source Committees.

Some stakeholders were also of the opinion that handpump mechanics associations (HPMAs) may contribute to filling in the staff and capacity gap at sub-county level, although they would also need to be paid for any task they perform.

In addition to the need for more resources for WASH at sub-county level, attendants of the data validation and interpretation meetings also identified the strengthening of coordination at sub-county level as key for improving support by sub-counties (and other) to communities and service providers; this will be developed further in sub-section 5.4.2.

#### **5.4.1 Allocation of resources**

Districts acknowledged during the data interpretation and validation meetings that generally lack resources, be it for pre-construction, construction or post-construction activities. And this has important consequences. For example, given the limited budget available for construction supervision, supervision of contractors cannot be performed so well. It may hence happen that for example a contractor doesn't put a screen in a borehole, without that it is noticed. Attendants of the validation and interpretation meeting stressed the need to strengthen the DWO with enough resources, and/or that the procurement department better "filters" contractors when tendering. Going for the cheapest contractor may in the end not really contribute to saving financial resources.

In general, the lack of resources at both sub-county and district levels can explain at least partly the limited influence that the performance of these service authorities has on services and performance of service providers. For example, in Kabarole district, in 2012, only UGX 3 million (about USD 1247.87) were allocated to post-construction support, excluding hardware. This is for all sub-counties in the district, and represents about USD 0.005 per capita. This contrasts strongly with the estimates from a study by Triple-S and WASHCost, which

established that USD 2-3 per capita per year are required to provide direct support to service providers, including the costs of monitoring (Smits et al., 2011, Arrangements and cost of providing support to rural water service providers, IRC International Water and Sanitation Centre).

The responsibility for planning for post-construction support still lies with the districts; these usually have a budget for refresher trainings of WSCs. However, districts are not allowed to transfer part of the District Water and Sanitation Conditional Grant (DWSCG) to sub-counties, even for post-construction support activities (such as refresher training) that could be carried out by them. In the end, districts hence use this fund, which is also limited. Sub-counties do have their own funds, but it was acknowledged during the data interpretation and validation meetings that they often do not set WASH as a priority, and allocate a significant amount of their budget to roads. The lack of a dedicated budget to WASH at S/C level was seen as an important issue by attendants of the meetings.

The needed additional resources should mostly come from central government (direct support). This also comes through enhanced support from the TSUs.

#### **5.4.3 Coordination between stakeholders**

A last area of improvement at service authority level is coordination between stakeholders. In some sub-county, such as Layamo (Kitgum district) strong linkages exist between the local politicians, the HPM, the Community Development Officer and the Health Assistant, which seems to be having quite positive effect as in Layamo S/C 72% of the households are paying a water fee.

Politicians are often accused of, undermining the involvement and sense of ownership of communities, for example by promising free water points of discouraging people from paying for water. To counteract this, attendants of the data validation and interpretation meeting strongly stressed the need for technocrats and politicians to work together, to ensure that a harmonised message is delivered. Negative political influence can be limited by advocating and explaining to them why it is so important that consumers pay water fees, and by involving them during critical steps of implementation (e.g. community mobilisation). Having one voice from the technical and political sides can limit users finding excuses for not paying.

The harmonisation of discourses and approaches actually concerns all stakeholders providing WASH services. This starts with all local government and NGO staff implementing the guidelines (e.g. for community mobilisation). This should be led by the MWE, and Chief Administrative Officers (CAOs) should hold to account NGOs / development partners who do not follow the guidelines and rules.

In TSU 2, attendants of the data interpretation and validation meetings felt that performance on coordination and harmonisation was affected by inadequate follow up of issues from DWSCC meetings, as well as by limited funding that do not permit field learning visits. The district water officer of Kitgum noted that an important challenge he faces is that most NGOs do not participate to DWSCC meetings and continue working in isolation, as was greatly the case during the emergency phase. The only well performing district in TSU 2 as regards to coordination and harmonisation, Lira, explained that key to its success in this area is full support provided by the district leadership to the DWSCC and the organisation of at least 2 targeted field visits every year, tied to DWSCC meetings. The availability of funds for organising these meetings is however also a limiting factor, as reported by the DWO of Kabarole: the available UGX 900,000 for each meeting allows the water office to hire a hall and invite only about 20 attendants, although they would like to have more participants. This also limits the possibility of coupling a learning event, with presentations and/or a field visit, to a DWSCC meeting. This comment on lack of funds for coordination and harmonisation generated some debates on the role of the district water office. There was a strong feeling among some attendants that the district should fully embrace its service authority role by calling stakeholders to DWSCC meetings without paying any transport allowance, as participation to coordination platform should be seen as being part of the work of the various organisations and agencies that are concerned.

Although data was collected on TSU 2 only, stakeholders of TSU 6 noted during the data interpretation and validation meeting that TSU6 staff should be more visible on the ground, acknowledging at the same time that the important size of their operating areas creates a challenge. It was suggested that TSUs develop a capacity building plan of at least 2 years, to ensure that support provided is more systematic. Although support from TSUs is mainly supposed to be demand-driven, to function well this supposes that S/C and DWO staff is well aware of the kind of the support they can get. Although they usually are aware of the broad categories of assistance they can get from their TSU, district personnel do not necessarily know about all the specific tasks TSU staff can support them in. Hence the need for both sensitisation of service authorities on the kind of support they can request from TSUs (platforms such as the DWSCC meetings could be used for this sensitisation) and the development of capacity building and supervision plans (also for routine supervision by TSU staff).



## 5.5 Conclusions and recommendations on the methodology used for this study

Based on the experience during the data collection, analysis and interpretation, the methodology used during this study, including the developed service delivery indicators can be reviewed. First of all, the limitations of the study are presented, followed by an initial review of the SDIs

### 5.5.1 Limitations of the study

As the study aimed at assessing existing water services and the related SDM, the entry point for sampling was existing water sources and the communities around. Some of the figures obtained (e.g. on distance from the home to an improved water point) in this study therefore are not necessarily representative of the overall populations of the districts. Also, it is probable that enumerators did not conduct interviews at households that are further away from the water source.

The field team had not prepared a list of target villages before rolling out the data collection exercise. This led to inconsistency in the recording of village names, as well as incorrect recording of some villages under given parish or sub-counties, which required a tedious process of cleaning of the villages/parishes/sub-counties/counties list. Some enumerators also conducted household interviews beyond the selected villages. For future data collection exercise, an accurate and complete list of villages (with their related parishes/sub-counties/counties) of the entire survey area should be drawn beforehand.

In all districts, many water users had access to more than one water source, which implied that the users were relating with more than one WSC. This made it difficult to link the service received by users to the performance of the WSCs. Future surveys will have to be designed in such a way that the main facility used by the households interviewed is clearly identified.

Also, some enumerators did not correctly match households to their respective WSCs, making cross analysis of household and WSC data difficult. This issue can be avoided by giving clear IDs to water points, WSCs and user groups, so that cross-tabulation between the various levels of service delivered / users / service providers can be easily made.

The QIS tables incorporated in the FGD guides for the Service Authority provided opportunity for respondents to rate their own performance in fulfilling their roles. However, some respondents rated their performance much higher than the actual. This was common for sub-county extension staff. However, triangulation of information provided with the WSCs provided opportunity for assessing their actual performance.

### General review of the SDIs

Attendants of the data interpretation and validation meetings showed great interest in the SDIs and several of them, in particular from service authorities, stated that they were willing to incorporate the indicators in their work, requesting for training in their use.

The scores for a majority of service delivery indicators are obtained by the direct application of QIS tables, through a self-assessment. This methodology presents the advantage that data collection is not limited to “extracting” information, but that this moment also offers an opportunity for raising awareness of stakeholders, for example the WSCs, about their roles and responsibilities, as well as for discussing identified issues and gaps. This participatory process makes the use of QIS tables more attractive and interesting than more classic monitoring questionnaires for both enumerators and interviewed individuals and focus groups. However, as highlighted above, some respondents, in particular at service authority level but probably also some WSCs, may have rated their performance higher than what it actually is. This illustrates the importance of having enumerators that are well trained to participatory methodologies and are critical enough to engage further discussions when they think that the groups they interview may be too self-satisfied. This may also be limited by triangulating the data – still being cautious of not making the whole monitoring too heavy by collecting information on the same indicator from different sources – and by ensuring a good mix between qualitative and quantitative data.

Attendants of the data interpretation and validation meetings nonetheless felt that the findings of the research reflected the reality. They also considered the SDIs as an opportunity to harmonise and mainstream the various surveys done by different agencies and organisations at decentralised level. To achieve this, it would be necessary to harmonise the indicators and data collection tools used by the various agencies and organisations, after also making a critical assessment of what can realistically be done by them based on the available resources. Although the service delivery indicators are mainly based on the existing policy framework in Uganda, there may still some room to further harmonise some of the definitions, as well as the data collection tools with existing tools and practices applied by for example government extension staff.

It would hence be necessary to design tools so that local governments can collect data on the indicators through their field staff, and later on be in a position to manage and analyse the collected data. Data collection, processing

and management can be greatly simplified through the use of mobile phones, where the questionnaires / scenarios of the QIS tables would be loaded, and data centralisation platforms linked to them. ICT applications and devices are indeed becoming increasingly easier to use, and sector professionals require less training than ever before<sup>29</sup>. These technologies are more and more used in the WASH sector, including in Uganda, where the M4Water system is being piloted (see as earlier discussed part 4.2.1.3).

The designed interfaces are more intuitive and easier to customise, e.g. for use by illiterate users or in different languages. Data collection can be more guided with the use of phone; this is particularly useful when there are relationships of dependency between some questions. As a consequence, data collection is easier than for a paper survey, and errors during data collection are less likely to happen. Data from the phones is then automatically uploaded to a cloud-based database, through mobile network, which avoids double data entry and general entry errors, and allows instant access to the uploaded data from multiple locations. The shorter loop between data collection and processing allows for real time feedback on data quality during collection. Data cleaning and analysis is usually done after exporting it from cloud storage into spreadsheets.

The full set of SDIs (as well as the data collection tools) is undergoing since the first quarter of 2013a comprehensive review process, led by staff from MWE, the Triple-S team, and other key stakeholders. Specific adjustments to individual service delivery indicators will therefore be documented separately.

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29 Dickinson, N., 2013 (To be published), *ICT for monitoring rural water services: from smart phones to cloud computing*. The Hague: IRC International Water and Sanitation Centre.



## ANNEX 1: MAIN CHARACTERISTICS OF RESEARCH DISTRICTS

TSU	District	Lower level administrative unit	Estimated population (UBOS, 2012)	Rural safe water access rates (MWE, 2010)	Rural functionality rate (MWE, 2010)	Functionality of Water Source Committees (MWE, 2010)	Technology mix (urban and rural together)
TSU 2	Lira District	4 counties 9 sub-counties 1 municipality	403,100	90%	77%	31%	deep boreholes 35.5% shallow wells 33.0% protected springs 28.9% public tap 2.5% rainwater harvesting tanks 0.1%
TSU 2	Alebtong (new district formerly part of Lira)	Not available (new district)	226,000				
TSU 2	Kitgum District	2 counties 18 sub-counties 1 town council	247,800	87%	86%	24%	deep boreholes 96.8% shallow wells 2.4% protected springs 0.1% public taps 0.7% rainwater harvesting tanks 0.1%
TSU 2	Nwoya District (new district formerly part of Amuru)	Not available (new district)	54,000	Not available (new district)	Not available (new district)	Not available (new district)	Not available (new district)
TSU 6	Kabarole District	2 counties 1 municipal council 14 sub-counties 3 town councils	415,600	90%	77%	23%	deep boreholes 5.1% shallow wells 52.9% protected springs 26.9% public tap 14.9% rainwater harvesting tanks 0.2%
TSU 6	Kamwenge District is	2 counties 8 sub-counties 1 town council	332,000	88%	78%	38%	deep boreholes 4.8% shallow wells 45.5% protected springs 27.5% public tap 22.0% rainwater harvesting tanks 0.2%
TSU 6	Kasese District	2 counties 1 municipal council 19 sub-counties 4 town councils	747,800	61%	77%	32%	deep boreholes 3.4% shallow wells 3.8% protected springs 29.0% public tap 63.8% rainwater harvesting tanks 0.1%
TSU 6	Kyenjojo District	2 counties 13 sub-counties 3 town councils	383,600	72%	81%	24%	deep boreholes 16.0% shallow wells 49.6% protected springs 29.2% public tap 5.0% rainwater harvesting tanks 0.2%



### WSC SERVICE DELIVERY MODEL

## A. INTRODUCTION TO THE SET OF INDICATORS

### *Why service delivery indicators?*

In Uganda, national monitoring indicators of rural water supply include the following Golden Indicators:

- Access: % of people within 1 km of an improved water source
- Functionality: % of improved water sources that are functional at time of spot-check
- Management: % of water points with actively functioning Water Source Committees (WSCs) / Water Supply and Sewerage Boards (WSSBs)

These indicators provide some information about the adherence to some service delivery norms (quality, distance, management structure), but they also have a number of limitations:

- These indicators provide little information on the potential sustainability of the water facilities (what we understand here as sustainability being the indefinite provision of a water service, with certain agreed characteristics, over time). A water system may for example be functioning well at a given moment, but at the same time users may not be contributing to the O&M fund and in case of a break down the facility may only be repaired after some time.
- The functionality indicator emphasizes performance of facility rather than actual service received by users; it is advisable to rather look at uptime of a facility (hours or days) rather than functioning at spot check.
- These indicators is that they say little about the underlying factors that make a service sustainable, such as adequate management capacity, tariff recovery or technical backstopping to WSCs.
- Most emphasis here is on service delivered and service provider (the WSC or WSSB) and little on the users or the service authority<sup>30</sup> (local government)

To address these gaps, Service Delivery Indicators (SDIs) have been designed to measure the critical performance requirements for ensuring that users have continuous access to water as provided in the national policy framework. Service delivery indicators describe the way in which water supply services are delivered and supported across the different levels of service delivery:

- Users' level
- Service provider level
- Service authority level.

### *Structure of the set of proposed service delivery indicators*

The proposed service delivery indicators for Uganda were designed building on existing policies, guidelines and strategies, capturing compliance with them, and also including as far as possible the Golden Indicators related to rural water supply. Besides, these indicators were designed keeping in mind the need that the data that will be collected using them should be used for managing the monitoring of performances at the various levels, by feeding into decision-making processes to help to improve performance and sector practices, policies and resource allocation.

In order to capture the full picture of the service delivery 'chain', indicators were developed at the following levels:

#### 1. Indicators for service delivered:

Here we look at users' access to a water service, i.e. user's ability to reliably access a given quantity of water, of an acceptable quality, at a given distance from her or his home

National standards set the minimum rural service level as follows: users access at least 20 litres/capita/day of quality water (Uganda Water Quality Standards 2007), from a source within a distance of 1 km (and a difference in elevation between the household and the water point below 100 m) that serves a given maximum number of persons depending on the technology (300 persons for a handpump, 200 for a shallow well, 200 for a spring and 150 for a tap). As for reliability, we opted for a rate of 95% of the time public water point providing water (measured in uptime).

#### 2. Indicators at users' level:

It is believed that users' are more prone to look well after their water facility when there is a strong sense of ownership. A factor that enhances the sense of ownership is users' involvement in decision making

<sup>30</sup> Service authorities are the institutions that fulfil functions in relation to water supply, such as planning, coordination, regulation and oversight, and technical assistance, but not the actual service provision itself. In Uganda the Service Authority function is fulfilled by local government (district and sub-counties).



(in particular during the establishment of the water facility), while this sense of ownership materialises by users' participation in meetings organised by the WSCs, payment of fees for O&M and participation in the maintenance of the facility and its surroundings. This sense of ownership is also closely linked with users' satisfaction with the service delivered; someone who does not appreciate the service that he/she received is less likely to feel it's his/hers. For these reasons, at this level we look at users' satisfaction with the service delivered, and users' involvement in some maintenance activities (contribution to the O&M funds and cleaning of the water point surroundings). As for the involvement of users in decision-making during the establishment of the water source, this is looked at the service authority level, as this belongs to critical requirements that have to be fulfilled by sub counties before construction of the facilities.

Also at users' level, we look at sanitation facilities and hygiene behaviour (handwashing after visiting the toilet) as a link to existing Golden Indicators.

3. Indicators for service provider:

At this level, we focus on the performance of the operators that manage the water systems. For WSCs, this means looking at their institutional capacity (No. of members, gender-balance, decision-making process, training) as well as at management & governance issues (fulfilment of administrative tasks such as holding meetings, keeping and displaying financial & management reports, formulating local water user rules, and O&M tasks such as collecting user fees and providing feedback to users on O&M funds, carrying out preventive maintenance, calling Hand Pump Mechanics to carry out minor repairs).

4. Indicators for service authority and support functions:

Here we are interested in the degree to which local government and the private sector provide support to service providers. The support of Technical Support Units (TSUs) to districts and sub-counties is also included. The following indicators were selected as key:

- Resources of the District Water Office (in terms of staff, equipments and sector documents)
- Compliance of the district planning, procurement and contract management with the Public Procurement and Disposal of Public Assets Authority (PPDA)
- Community mobilisation during the provision of the water facility (assessment of the level to which community mobilisation and participation was done applying the 6 critical requirements contained in the OP-5)
- Utilisation of District Water and Sanitation Conditional Grant (DWSCG) as per the sector guidelines (prescribed percentages of budget for investment in new water facilities, in software activities, in O&M, in sanitation facilities and for running costs)
- Support, Supervision & Monitoring to service provider by the district (support plan in place for providing technical support to WSCs and application of the plan, monitoring of the performance of water services and updating of the Management Information System)
- Post-construction management support & supervision by Sub County to WSCs (in the area of behaviour change and environmental issues, sanitation & hygiene promotion, retraining of WSCs, monitoring of records and finances, conflict resolution)
- Support, Supervision & Monitoring to Hand Pump Mechanics/local artisans (keeping of an updated inventory of trained artisans and HPMs at district level, supervision of their performance and availability of spare parts at decentralised level)
- Coordination and harmonising of DLG Departments, NGOs & CBOs involved in rural water service delivery (with the existence of a functional and representative DWSCC, that meets on a regular basis to coordinate and plan activities, with opportunities for learning)
- Support & Supervision to Districts and Sub-Counties (S/Cs) by TSU (in the areas of reporting, mapping and monitoring; adherence to policies / guidelines; "ad-hoc" technical support and capacity building; Coordination at district and inter-district levels)

As seen from the brief description above, each indicator in this set is actually including a number of aspects or sub-indicators. None of these composite indicators can be apprehended in a simple "yes-no" way; for this reason, each of them is associated to a scale or scoring table, going from 0 to 1 (based on Qualitative Information System (QIS) methodology). During data collection, some of these tables are used directly with stakeholders so that they can rate their own performance.

## B. SET OF INDICATORS

### SERVICE DELIVERED

#### Service delivery ladder

Options	Score	Population
High quality water supply of at least 40 lppd within a distance of 0.5km from a water source that is 95% reliable source	1	
High quality water supply of at least 30 lppd within a distance of 0.75km from a water source that is 95% reliable source	0.75	
Users access quality water of at least 20 lppd within a distance of 1km a water source that is 95% reliable source	0.5	
Users access a service that doesn't meet one or more of the standards (Quality, quantity, crowding , and reliability)	0.25	
Community doesn't have an improved water source within a walking distance of 1km.	0	
Reasons:		



## USERS' LEVEL

Indicator	Description of components of the indicator	Performance level	Score
<b>2.1. Users' satisfaction with the service delivered</b>	<p>Users' satisfaction with the following parameters:</p> <ul style="list-style-type: none"> <li>Quality (Colour, Taste, Odour, Hardness)</li> <li>Quantity</li> <li>Reliability</li> <li>Distance</li> <li>Affordability</li> </ul>	Average of level of satisfaction on the 5 parameters is between 0% and 24%	0
		Average of level of satisfaction on the 5 parameters is between 25% and 49%	0.25
		Average of level of satisfaction on the 5 parameters is between 50% and 74%	0.5
		Average of level of satisfaction on the 5 parameters is between 75% and 99%	0.75
		Average of level of satisfaction on the 5 parameters reaches 100%	1
<b>2.2. Users' participation in the management and maintenance of the water source</b>	<p>Level of participation of users in key activities for management and maintenance of the water source:</p> <ul style="list-style-type: none"> <li>Paying O&amp;M fees</li> <li>Keeping the water source clean</li> </ul>	Water user group not clearly defined and there is no community involvement in the management and maintenance of the water source	0
		Less than 60% of the registered of H/Hs participate in the management and maintenance activities	0.25
		At least 60% of the registered of H/Hs are actively involved in its management and maintenance	0.5
		80% of the registered of H/Hs willingly participate in its management and maintenance	0.75
<b>2.3. Users' hygiene and sanitation behaviour</b>	<p>Water users have access to toilets with proper hand-washing facilities (i.e. a container with water inside, next to the toilet, and with soap)</p>	100% of the registered of H/Hs willingly participate in its management and maintenance	1
		Water users do not have access to toilet facilities.	0
		Less than 50% of the users have access to a toilet	0.25
		60% of the users have access to a toilet with proper hand washing facilities.	0.5
		75% of the users have access to a toilet with proper hand washing facilities.	0.75
<b>TOTAL SCORE USER LEVEL</b>			<b>1</b>
<b>TOTAL SCORE USER LEVEL</b>			<b>/ 3</b>

## SERVICE PROVIDER LEVEL (WATER SOURCE COMMITTEES)

Indicator	Description of components of the indicator	Performance level	Score
3.1. Institutional capacity of the WSC	<p>WSC composition, capacity and internal processes, looking at:</p> <ul style="list-style-type: none"> <li>• Presence of an elected and gender-balanced Water Source Committee</li> <li>• WSC training and regular retraining</li> <li>• Decision-taking based on consensus</li> </ul>	There is no WSC in place	0
		An elected WSC is in place, composed of less than 6 members or less than 3 women	0.25
3.2. Management & Governance - WSC administrative tasks	<p>Administrative tasks fulfilled by the WSC, comprising:</p> <ul style="list-style-type: none"> <li>• Holding executive meetings</li> <li>• Keeping and displaying financial &amp; management reports</li> <li>• Holding meetings with users</li> <li>• Formulating local water user rules</li> </ul>	Bench Mark: An elected, trained and active WSC is in place, composed of 6 members with 3 women and at least one in an executive post. WSC members take decisions based on consensus. WSC receives refresher training, is re-elected every two years & orients new members	0.5
		An elected, trained and active WSC is in place, composed of 6 members with 3 women and at least one in an executive post. WSC members take decisions based on consensus.	0.75
		Ideal Situation: An elected, trained and active WSC is in place, composed of 6 members with 3 women and at least one in an executive post. WSC members take decisions based on consensus. WSC receives refresher training, is re-elected every two years & orients new members	1
		There is no WSC in place	0
		WSC holds at least 1 executive meeting in a year but has no records	0.25
		Bench Mark: WSC holds quarterly meetings with the executive & users, and keeps records	0.5
		WSC holds monthly executive meetings & quarterly meetings with users, keeps up to date records and formulates local water user rules	0.75
		Ideal Situation: WSC holds monthly executive meetings & quarterly meetings with users, keeps up to date record, formulates local water user rules, keeps and displays financial & management reports at key strategic points	1

Indicator	Description of components of the indicator	Performance level	Score
3.3. Management & Governance - WSC involvement in O&M of the water services	<p>Fulfillment by the WSC of key O&amp;M activities:</p> <ul style="list-style-type: none"> <li>• Collection of user fees and providing feedback to users on O&amp;M funds</li> <li>• Carrying out preventive maintenance</li> <li>• Calling Hand Pump Mechanics to carry out minor repairs</li> </ul>	No WSC in place, or a WSC in place that has not taken the responsibility for O&M	0
		WSC ensures users fees are collected in case of a breakdown and organises HPM to carry out minor repairs, but has no mechanism of providing feedback to users and does not carry out preventive maintenance	0.25
		Bench Mark: WSC ensures continuous collection of user fees, organises HPM to carry out minor repairs, but has no mechanism of providing feedback to users on O&M funds and does not carry out preventive maintenance	0.5
		WSC ensures continuous collection of user fees, organises HPMs to carry out minor repairs, has mechanism of providing feedback to users on O&M funds but does not carry out preventive maintenance	0.75
		Ideal Situation: WSC ensures continuous collection of user fees, organises HPMs to carry out minor repairs, has mechanism of providing feedback to users on O&M funds, and carries out preventive maintenance	1
<b>TOTAL SCORE SERVICE PROVIDER LEVEL</b>			<b>/ 3</b>



## SERVICE AUTHORITY AND SUPPORT MECHANISMS/FUNCTIONS (HPMS, S/C, DWSSC/DWO, TSU)

Indicator	Description of components of the indicator	Performance level	Score
4.1. Resources of the District Water Office (DWO)	Resources of the District Water Office in terms of staff, equipments and sector documents	The District Water office does not have substantive members or the water officer has multiple roles beyond his / her role in the DWO.	0
	<ul style="list-style-type: none"> <li>Required No of staff (according to Water Sector Guidelines): <ul style="list-style-type: none"> <li>1 Senior Engineer / Senior Water Officer</li> <li>1 Hygiene Education / Sanitation Officer / Planner</li> <li>1 Assistant District Water Officer Mobilisation</li> <li>1 Technical Officer (minimum Diploma in civil / water engineering) in each county</li> <li>1 Borehole maintenance Supervisor</li> </ul> </li> <li>Equipments: cars, computers, GPS handsets, software...</li> <li>Key sector documents: of the conditional grant guidelines, the DIM (including annexes) &amp; the O&amp;M Framework, the water statute and a copy of the constitution</li> </ul>	The District Water office consists of 1 or 2 (engineer, and one other person).	0.25
		The District Water office consists of at least 3 members (engineer, community mobilise and one other person). They have some equipment in order to do their job (transport (car + fuel), computer, GPS handset).	0.5
		The District Water office consists of at least 3 members (engineer, community mobilise and one other person), in line with the water sector guidelines. They have equipment in order to do their job (transport (car and one motor cycle + fuel), computer, GPS handset). They have a copy of the of the conditional grant guidelines, the DIM (including annexes) & the O&M Framework.	0.75
		The District Water office consists of at least 5 members, in line with the water sector guidelines. They have equipment in order to do their job (transport (car and multiple motor cycles + fuel), computer, GPS handset). They have a copy of the of the conditional grant guidelines, the DIM (including annexes) & the O&M Framework.	1

Indicator	Description of components of the indicator	Performance level	Score
4.2. Compliance of the district planning, procurement and contract management with the Public Procurement and Disposal of Public Assets Authority (PPDA)	<ul style="list-style-type: none"> <li>DWO generates annual procurement plans for investments and major repairs for water services</li> <li>DWO monitors investments and major repairs for water services and submits quarterly reports</li> <li>Procurement and contract management procedures (including construction supervision) are done as per the guidelines provided in the DIM</li> </ul>	DWO does <u>not</u> generate annual procurement plans for investments and major repairs for water services. Procurement and contract management procedures (including construction supervision) are <u>not</u> done as per the guidelines provided in the DIM.	0
		DWO does <u>not</u> generate annual procurement plans for investments and major repairs for water services or Procurement and contract management procedures (including construction supervision) are <u>not</u> done as per the guidelines provided in the DIM, but not both.	0.5
		DWO generates realistic annual procurement plans for investments and major repairs for water services but procurement and contract management procedures (including construction supervision) are <u>not</u> done as per the guidelines provided in the DIM.	0.75
		DWO generates annual procurement plans for investments and major repairs for water services. Procurement and contract management procedures (including construction supervision) are done as per the guidelines provided in the DIM. DWO monitors investments and major repairs for water services and submits quarterly and annual reports to the Ministry.	1

Indicator	Description of components of the indicator	Performance level	Score
<b>4.3. Community mobilisation during the provision of the water facility</b>	<p>Community mobilisation and participation was done applying the 6 critical requirements contained in the OP-5:</p> <ul style="list-style-type: none"> <li>• Settlement of land and ownership conflicts with formal agreements in place</li> <li>• Community capital cash contribution</li> <li>• Preparation of a realistic and viable 3 year O&amp;M plan with guidance from the District and Sub-County</li> <li>• Gender mainstreaming</li> <li>• Hygiene promotion and sanitation through emphasising exemplary leadership and targeting latrine coverage of 30% during mobilisation and 95% four years after completion of the water facility for sustained health benefits</li> <li>• Signed MoU which stipulates nature of cooperation and responsibilities between GoU, Districts, Sub-Countries, communities and contractors</li> </ul>	<p>None of the critical requirements are met.</p> <p>Less than 3 critical requirements are met.</p> <p>3 critical requirements are met.</p> <p>4 or 5 critical requirements are met.</p> <p>All 6 critical requirements have been met.</p>	<p>0</p> <p>0.25</p> <p>0.5</p> <p>0.75</p> <p>1</p>
<b>4.4. Utilisation of District Water and Sanitation Conditional Grant (DWSCG)</b>	<p>Sector guidelines stipulate that the DWSCG should be spent as follows:</p> <ul style="list-style-type: none"> <li>• Investment in new water facilities: &gt;= 70%</li> <li>• Investment in software activities: &lt;= 11%</li> <li>• Rehabilitation of boreholes and piped water schemes: &lt;= 8%</li> <li>• Investment in Sanitation facilities: &lt;= 6%</li> <li>• Supervision, monitoring and DWO operational costs: &lt;= 4%</li> </ul>	<p>Utilisation of DWSCG is <u>not</u> spent according to sector guidelines</p> <p>Utilisation of DWSCG is spent according to sector guidelines</p>	<p>0</p> <p>1</p>



Indicator	Description of components of the indicator	Performance level	Score
<b>4.5. Support, Supervision &amp; Monitoring to service provider by the district</b>	<ul style="list-style-type: none"> <li>• Plan in place for providing technical support to WSCs</li> <li>• The DWO provides technical support in line with the plan</li> <li>• The DWO monitors the performance of water services &amp; updates MIS: <ul style="list-style-type: none"> <li>- Update water atlas</li> <li>- Water quality monitoring twice a year</li> <li>- Annual monitoring of functionality</li> </ul> </li> </ul>	<p>The DWO does not have a plan in place, and does not provide technical support to WSCs and does not monitor.</p> <p>The DWO does not have a plan in place, but does provide some technical support to WSCs and does some monitoring.</p> <p>The DWO has a plan in place for providing technical support to WUG and provides technical support accordingly. The DWO monitors the performance of the water service: annual functionality monitoring, some water quality monitoring is done, but not on frequent basis.</p> <p>The DWO has a plan in place for providing technical support to WUG and provides technical support accordingly. The DWO monitors the performance of the water service: annual functionality monitoring, annual water quality monitoring.</p> <p>The DWO has a plan in place for providing technical support to WSC and provides technical support accordingly. The DWO monitors the performance of the water service: annual functionality monitoring, water quality monitoring twice a year, update of water atlas. The DWO updates MIS on a regular basis.</p>	<p>0</p> <p>0.25</p> <p>0.5</p> <p>0.75</p> <p>1</p>
<b>4.6. Post-construction management support &amp; supervision by Sub County to WSCs</b>	<p>The Sub County support the WSCs in the following areas:</p> <ul style="list-style-type: none"> <li>• Provision of software information on behaviour change and environmental issues, sanitation &amp; hygiene promotion</li> <li>• Retraining of WSCs</li> <li>• Monitoring of records and finances</li> <li>• Conflict resolution</li> </ul>	<p>Sub County does <u>not</u> provide management support &amp; supervision to WSCs.</p> <p>The sub county provides support to WSCs to mobilise communities on operation &amp; maintenance and has mechanism for continuously following up the performance of WSC</p> <p>The sub county provides support to WSCs to mobilise communities on Operation &amp; maintenance and has mechanism for continuously following up the performance of WSC, and retrains WSCs that disintegrate</p> <p>The sub county technical &amp; political staff work together to support WSCs to mobilise communities on Operation &amp; maintenance, Sub County has mechanism for continuously following up the performance of WSCs, and retrains WSCs that disintegrate</p> <p>The sub county provides support to WSCs to mobilise communities on Operation &amp; maintenance and has mechanism for continuously following up the performance of WSC, retrains WSCs that disintegrate &amp; has documentation of support provided to WSCs &amp; Communities</p>	<p>0</p> <p>0.25</p> <p>0.5</p> <p>0.75</p> <p>1</p>



Indicator	Description of components of the indicator	Performance level	Score
<p><b>4.7. Support, Supervision &amp; Monitoring to Hand Pump Mechanics/local artisans</b></p> <ul style="list-style-type: none"> <li>The DWO has an inventory of trained artisans and HPMs, which is up-to-date</li> <li>HPMs/Local artisans regularly report to the Sub County &amp; DWO on services provided and issues</li> <li>Functional spare parts supply mechanism decentralised to district/sub county level (time it is supposed to take not clear from guidelines)</li> <li>There is an association of HPM/ artisans at district level which supports the DWO in O&amp;M.</li> </ul>	<p>The DWO has no inventory of trained artisans and HPMs</p>	0	0
	<p>The DWO has an inventory of trained artisans and HPMs. HPMs/Local artisans do not report to the Sub County &amp; DWO on services provided and issues. There is no information on availability of spare parts at the district level</p>	0.25	0.25
	<p>The DWO has an inventory of trained artisans and HPMs, but it is not up-to-date. HPMs/Local artisans report from time to time to the Sub County &amp; DWO on services provided and issues. There is information on availability of spare parts at the district level</p>	0.5	0.5
	<p>The DWO has an inventory of trained artisans and HPMs, which is up-to-date and updated on an annual basis. HPMs/Local artisans quarterly report to the Sub County &amp; DWO on services provided and issues. There is information on availability of spare parts at the sub county level.</p>	0.75	0.75
	<p>The DWO has an inventory of trained artisans and HPMs, which is up-to-date and updated on an annual basis. HPMs/Local artisans quarterly report to the Sub County &amp; DWO on services provided and issues. There is information on availability of spare parts at the sub county level. There is an association of HPM/ artisans at district level which supports the DWO in O&amp;M.</p>	1	1



Indicator	Description of components of the indicator	Performance level	Score
<p><b>4.8. Coordination and harmonising of DLG Departments, NGOs &amp; CBOs involved in rural water service delivery</b></p>	<ul style="list-style-type: none"> <li>• Existence of a functional DWSCC, with an updated register of DWSCC members</li> <li>• DWSCC is representative of stakeholders involved in the provision of WASH services in the district. Members: all heads of departments of the DLG, the NGOs active in WASH sector in the district, DWO as secretary, chief admin officer as chair</li> <li>• Coordination at decentralised level ensures that WASH guidelines and strategies are followed by all stakeholders: <ul style="list-style-type: none"> <li>- Plans and reports from the different stakeholder are presented and discussed at the DWSCC.</li> <li>- Decisions and action plans developed during DWSCC meeting are followed up and reported upon during subsequent meetings.</li> </ul> </li> <li>• Synergies and partnerships are formed between government and other stakeholders that result in more efficient use of resources (e.g. joint implementation of activities).</li> <li>• DWSCC provides structural opportunities for reflection of experiences in order to improve the situation or future action and possible scaling up (learning).</li> <li>• DWSCC reports issues to the works sub-committee.</li> </ul>	<p>No DWSCC meetings</p> <p>There are irregular DWSCC meetings, but there is no required or stipulated representation of all the stakeholders in the district.</p> <p>There are at least 2 DWSCC meetings a year, in which some (&lt;75%) of stakeholders involved in the provision of WASH services in the district are members.</p> <p>Plans and reports from some (not all) stakeholder are presented and discussed at the DWSCC. Decisions and action plans developed during DWSCC meeting are <u>not</u> followed up and reported upon during subsequent meetings.</p> <p>Some synergies and partnerships are formed between government and other stakeholders that result in more efficient use of resources</p> <p>There are quarterly DWSCC meetings. <u>Most (&gt; 75%)</u> but <u>not all</u> stakeholders in the provision of WASH services in the district participate.</p> <p>Quality of attendance</p> <p>Plans and reports from some (not all) stakeholder are presented and discussed at the DWSCC. Decisions and action plans developed during DWSCC meeting are <u>not</u> followed up and reported upon during subsequent meetings.</p> <p>Some synergies and partnerships are formed between government and other stakeholders that result in more efficient use of resources (e.g. joint implementation of activities).</p> <p>Presentation of monitoring reports</p> <p>There are quarterly DWSCC meetings, in which all stakeholders participate.</p> <p>Quality of attendance</p> <p>Plans and reports from the different stakeholder are presented and discussed at the DWSCC. Decisions and action plans developed during DWSCC meeting are followed up and reported upon during subsequent meetings.</p> <p>Synergies and partnerships are formed between government and other stakeholders that result in more efficient use of resources (e.g. joint implementation of activities).</p> <p>DWSCC provides structural opportunities for reflection of experiences in order to improve the situation or future action and possible scaling up (learning).</p> <p>DWSCC reports issues to the works sub-committee.</p> <p>A field visit is conduct prior to DWSCC meetings.</p>	<p>0</p> <p>0.25</p> <p>0.5</p> <p>0.75</p> <p>1</p>

Indicator	Description of components of the indicator	Performance level	Score
<b>4.9. Support &amp; Supervision to Districts and S/Cs by TSU</b>	Support and monitoring of performance of districts and sub-counties by TSU around the following broad areas (based on demand) <ul style="list-style-type: none"> <li>• Support in reporting, mapping and monitoring</li> <li>• Ensuring adherence to government policy guidelines and standards</li> <li>• Support in timely and transparent procurement of services, and contract management</li> <li>• “Ad-hoc” technical support and capacity building</li> <li>• Support in coordination at district and inter-district levels</li> </ul>	TSU does not provide support to the district / sub-county in any of the areas on the left. TSU provides support to the district / sub-county in 1 or 2 out of the 5 areas on the left. TSU provides support to the district / sub-county in 3 out of the 5 areas on the left. TSU provides support to the district / sub-county in 4 out of the 5 areas on the left. TSU provides support to the district / sub-county in all of the areas on the left.	0 0.25 0.5 0.75 1
<b>TOTAL SCORE SERVICE AUTHORITY AND SUPPORT MECHANISMS/FUNCTIONS LEVEL</b>			<b>/ 9</b>



## ANNEX 3: DATA COLLECTION TOOLS

TOOL	PAGE
Key informant Interviews with District Water Officers	148
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### KEY INFORMANT INTERVIEW FOR DISTRICT LEVEL

District	
Date	

QUESTIONS		RESPONSE
<b>District has a well resource Water Office</b>		
1	<p>How many staff do you have in the Water Office &amp; what positions do they hold?</p> <p><i>Check List (minimum degree holders plus 3 years relevant experience):</i></p> <p><i>1 Senior Engineer/Senior Water Officer. 1 Hygiene Education/Sanitation Officer/Planner. 1 Assistant District Water Officer (ADWO) Mobilization 1 Technical Officer (minimum Diploma in civil/water engineering) in each county 1 Borehole maintenance Supervisor)</i></p> <p><i>Is there any position that is not filled? Why?</i></p>	
2	<p>What equipment do you have to facilitate your work?</p> <p><i>Indicate how many Cars Computers GPS handsets</i></p> <p><i>Is the equipment adequate? What is missing?</i></p>	

QUESTIONS		RESPONSE
3	<p><i>Which of the following sector documents do you have in your office (Evidence of available copies)</i></p> <p><i>Conditional grant guidelines</i></p> <p><i>District Implementation manual</i></p> <p><i>Community handbook</i></p> <p><i>O&amp;M Framework</i></p> <p><i>O&amp;M Hand Book for WSSBs</i></p> <p><i>Which document have you made use most in the last year?</i></p> <p><i>Which are the two documents you make reference to most times?</i></p>	
<b>Procurement and Contract Management</b>		
4	How would you rate your office in fulfilling procurement requirements in the last financial year?	
5	In which months of the year did you start the procurement process (Preparation of prequalification docs)?	
6	<p>In which months did you sign contracts with service providers?</p> <p>Were you satisfied with the time taken in procurement process?</p> <p><b>If not why?</b></p>	
7	<p>How would you rate your satisfaction with supervision of contracts works on a scale of (1-5)</p> <p><b>Reason for score</b></p>	
8	<p>Who receives reports on the Supervision of construction works for new water sources?</p> <p>Which other stakeholders should receive these reports?</p>	



QUESTIONS		RESPONSE
9	<p><i>Which of the following categories of stakeholders participated in supervision of construction for water sources and how?</i></p> <p><i>a) Contracted Supervisor</i>  <i>c) Sub County technical staff</i>  <i>d) Sub County Councillor</i>  <i>e) Community representative</i>  <i>f) Chief Administrative Officer</i></p> <p><i>Which of the stakeholders who did not participate would you recommend for consideration and Why?</i></p>	

### Conditional Grant

10	<p><i>In the last financial year, did you receive the full DWSCC grant?</i>  <i>What proportion of the grant allocation did you receive?</i></p>	
11	<p><i>Was the allocation spent in accordance with the guideline</i></p> <p><i>Check list</i>  <i>Investment new water facilities: &gt;= 70%</i>  <i>Investment of software activities: &lt;= 11%</i>  <i>Rehabilitation of boreholes and piped water schemes: &lt;= 8%</i>  <i>Investment in Sanitation facilities: &lt;= 6%</i>  <i>Supervision, monitoring and DWO operational costs: &lt;= 4%</i></p> <p><i>How did the spending differ from the guideline?</i></p> <p><i>If you had an opportunity to change the allocation formula, how would you change it and why?</i></p>	
12	<p><i>What procedure do you use to select the water systems for rehabilitation for a financial year?</i></p>	

### QUESTIONS

### RESPONSE

### Support Supervision and Monitoring

13	<p><i>Do you have a plan for providing technical support to WSCs/WSSBs</i></p> <p><i>How does it work</i></p>	
14	<p><i>What mechanism do you use to monitor functionality of water systems in the district?</i></p> <p><i>Who is involved</i>  <i>How is information collected</i>  <i>How often</i>  <i>Who processes the information collected</i>  <i>How often is district MIS updated</i>  <i>What reports are produced for district MIS &amp; which stakeholders receive them</i></p>	
15	<p><i>What proportion of the water systems in the district did you monitor last year and how?</i></p>	

QUESTIONS		RESPONSE
16	<i>How often does the district conduct water quality monitoring</i>	
17	<i>What mechanism does that District Local Government use to hold the Sub county accountable for performing its support &amp; oversight functions</i>	

### **Support, Supervision & monitoring to Hand Pump Mechanics/local artisans are done in accordance with the O&M framework**

Scenario	Score
<i>The DWO has no inventory of trained artisans and HPMS</i>	0
<i>The DWO has an inventory of trained artisans and HPMS. HPMS/Local artisans from do not report to the Sub County &amp; DWO on services provided and issues. There is no information of availability of spare parts in the district</i>	25
<i>The DWO has an inventory of trained artisans and HPMS. HPMS/Local artisans from time to time report to the Sub County &amp; DWO on services provided and issues. There is information of availability of spare parts in the district</i>	50
<i>The DWO has an inventory of trained artisans and HPMS, which is up-to-date and updated on annual basis. HPMS/Local artisans quarterly report to the Sub County &amp; DWO on services provided and issues. There is information of availability of spare parts in the sub county level.</i>	75
<i>The DWO has an inventory of trained artisans and HPMS, which is up-to-date and updated on annual basis. HPMS/Local artisans quarterly report to the Sub County &amp; DWO on services provided and issues. There is information on availability of spare parts in the sub county level. There is an association of HPM/ artisans at district level which supports the DWO in O&amp;M.</i>	100
<b>Reason</b>	

### **Support, Supervision & Monitoring at service provider level are done in accordance with the O&M framework**

Options	Score
<i>The DWO does not have a plan in place, and does not provide technical support to WSCs and does not monitor</i>	0
<i>The DWO does not have a plan in place, but does provide some technical support to WSCs and does some monitoring</i>	25
<i>DWO has a plan in place for providing technical support to WSCs and provides technical support accordingly. The DWO monitors the performance of the water service: annual functionality monitoring, some water quality monitoring is done, but not on a frequent basis.</i>	50
<i>DWO has a plan in place for providing technical support to WSCs and provides technical support accordingly. The DWO monitors the performance of the water service: annual functionality monitoring, annual water quality monitoring.</i>	75



<p>DWO has a plan in place for providing technical support to WSC and provides technical support accordingly.  The DWO monitors the performance of the water service: annual functionality monitoring, water quality monitoring twice a year, update of water atlas.  The DWO updates MIS on a regular basis</p>	100
Reasons for scoring:	

## DWSCC is active in coordinating and harmonising DLG Departments, NGOs & CBOs involved in rural water service delivery

Scenario	Score
No DWSCC meetings	0
There are irregular DWSCC meetings, but there is no required or stipulated representation of all the stakeholders in the district.	25
<p>There are at least 2 DWSCC meetings a year, in which some (&lt;75%) of stakeholders involved in the provision of WASH services in the district are members.  Coordination at decentralised level ensures that WASH guidelines and strategies are followed by all stakeholders:  Plans and reports from the some (not all) stakeholder are presented and discussed at the DWSCC.  Decisions and action plans developed during DWSCC meeting are not followed up and reported upon during subsequent meetings.  Some synergies and partnerships are formed between government and other stakeholders that result in more efficient use of resources</p>	50
<p>There are quarterly DWSCC meetings. Most (&gt; 75%) but not all stakeholders in the provision of WASH services in the district participate.  Quality of attendance  Coordination at decentralised level ensures that WASH guidelines and strategies are followed by all stakeholders: (enforcement)  Plans and reports from the some (not all) stakeholder are presented and discussed at the DWSCC.  Decisions and action plans developed during DWSCC meeting are not followed up and reported upon during subsequent meetings.  Some synergies and partnerships are formed between government and other stakeholders that result in more efficient use of resources (e.g. joint implementation of activities).  Presentation of monitoring reports</p>	75
<p>There are quarterly DWSCC meetings, in which all stakeholders participate.  Quality of attendance  Coordination at decentralised level ensures that WASH guidelines and strategies are followed by all stakeholders:  Plans and reports from the different stakeholder are presented and discussed at the DWSCC.  Decisions and action plans developed during DWSCC meeting are followed up and reported upon during subsequent meetings.  Synergies and partnerships are formed between government and other stakeholders that result in more efficient use of resources (e.g. joint implementation of activities).  DWSCC provides structural opportunities for reflection of experiences in order to improve the situation or future action and possible scaling up (learning).  DWSCC reports issues to the works sub-committee.  All districts conduct field visit prior to DWSCCs</p>	100
<b>Reason</b>	



## Support & Supervision to Districts by Technical support Unit

### Ranking level of satisfaction of District water office with TSU Support

Scenario	Level of satisfaction (1-5) (1.Very Low & 5.Very high)					Reason
	1	2	3	4	5	
Support in reporting to improve quality & timing						
Ensuring adherence to government policy guidelines and standards						
Timely & transparent procurement of services & contract management						
Technical support & capacity building						
Support in coordination of district stakeholders, inter district cooperation & learning						

### Overarching: Support and strengthen quality assurance at various levels

Broad area (identified by TSU2 staff)	Specific duties (as in the ToRs for TSUs)
<b>Reporting</b>	Support in preparations of reports to improve quality and timing
<b>Mapping and monitoring</b>	Mapping and documentation of water resources
	Development of MIS (for WRM, human resources planning and management, sub-projects implementation tracking) for enhanced monitoring and feedback into planning of district programmes)
	Support the establishment of water quality monitoring system
<b>Ensuring adherence to policies / guidelines</b>	Compliance to national policies and guidelines
	Adherence to standards and specification
	Planning support to districts in preparation of district WSS plans integrating all district programmes and in line with national investments plans and strategies
	Support in bottom-up planning, quality and timeliness of plans
	Support the use of software implementation steps for community mobilisation and for hygiene education
	Support gender, environment and HIV mainstreaming integration in water sector
<b>Timely and transparent procurement of services and contract management</b>	Support in procurement planning, management and use of standard procurement tools
	Transparent tendering and procurement management
	Support the PSO in execution of contracts
	Support in contract management and supervision – training in supervision tools
	Support in implementation of contract management at district and lower levels
<b>Technical support and capacity building</b>	Equip the LGs with knowledge of project proposal writing and project planning
	Enhance specialised skills transfer (drilling supervision, study and design of piped water systems, project planning, etc.
	Orientation of staff in new roles and mandate of LGs. This will include basic management
	Support in basic financial management of non financial officers
	Support in establishment of O&M systems including development of O&M plans
	Advocacy for sanitation improvement in the districts
	Design and management of piped water schemes in RGCs
	Introduction and promotion of low cost and cost effective appropriate technology
	Advise on private sector interface and private sector capacity building
	<b>Supporting coordination</b>
Advise on NGO/CBO interface and coordination	
Formation and functionality of DWSCC and facilitation of inter-sectoral coordination	
Inter-district	
Coordination of capacity building and inter-district cooperation	
Promotion of inter-district learning	



# FOCUS GROUP DISCUSSIONS FOR TECHNICAL SUPPORT UNIT STAFF

## Self Assessment by TSU on support & supervision of Districts

Scenario	Ranking Level of satisfaction with performance (1-5) (1.Very Low & 5.Very high)					Reason
	1	2	3	4	5	
Support in reporting to improve quality & timing						
Ensuring adherence to government policy guidelines and standards						
Timely & transparent procurement of services & contract management						
Technical support & capacity building						
Support in coordination of district stakeholders, inter district cooperation & learning						

## TSU assessment of district performance

Options	Score
The DWO does not have a plan in place, and does not provide technical support to WSCs and does not monitor	0
The DWO does not have a plan in place, but does provide some technical support to WSCs and does some monitoring	25
DWO has a plan in place for providing technical support to WSCs and provides technical support accordingly. The DWO monitors the performance of the water service: annual functionality monitoring, some water quality monitoring is done, but not on a frequent basis.	50
DWO has a plan in place for providing technical support to WSCs and provides technical support accordingly. The DWO monitors the performance of the water service: annual functionality monitoring, annual water quality monitoring.	75
DWO has a plan in place for providing technical support to WSC and provides technical support accordingly. The DWO monitors the performance of the water service: annual functionality monitoring, water quality monitoring twice a year, update of water atlas. The DWO updates MIS on a regular basis	100
Reasons for scoring:	

## FOCUS GROUP DISCUSSIONS FOR SUB-COUNTY TECHNICAL TEAMS

District	
Sub County	
Date	

### Performance of the sub county in providing Pre-construction support

Pre construction Phase Functions	Ranking Satisfaction with performance Scale of (1 -5)					Reason
	1	2	3	4	5	
Supporting communities in selection of WSCs						
Training Water Source Committees						
Conducting a sanitation baseline survey						
Mobilizing communities to fulfil critical requirements						
Field verification of communities that fulfilled critical requirements						
Meeting with successful communities to sign MoUs & plan for construction						

### Performance of the sub county in providing support during construction of new water sources

Construction Phase Functions	Ranking Satisfaction with performance Scale of (1 -5)					Reason
	1	2	3	4	5	
Mobilization of communities to participate						
Training of source care takers in preventive maintenance						
Training WSCs on O&M						
Commissioning water sources						

### Performance of the sub county in providing post construction support

Scenario	Score (%)
The sub county provides no support to WSCs to mobilize communities on Operation & maintenance	0%
The sub county provides support to WSCs to mobilize communities on Operation & maintenance and has mechanism for continuously following up the performance of WSC	25%
The sub county provides support to WSCs to mobilize communities on Operation & maintenance and has mechanism for continuously following up the performance of WSC, and retrains WSCs that disintegrate	50%
The sub county technical & political staff work together to support WSCs to mobilize communities on Operation & maintenance, Sub County has mechanism for continuously following up the performance of WSCs, and retrains WSCs that disintegrate	75%
The sub county provides support to WSCs to mobilize communities on Operation & maintenance and has mechanism for continuously following up the performance of WSC, retrains WSCs that disintegrate & has documentation of support provided to WSCs & Communities	100%
<b>Reason</b>	



## Issue Discussion Guide

QUESTIONS	RESPONSE
<p>1. <i>i) Does the sub-county have a budget allocation for support to the maintenance of water sources? Which of these options and how much in the last year</i>  <i>a) DWSSCG - (DWO) b) LGDP (direct funding)</i></p> <p><i>ii) If LGDP direct funding is not mentioned</i></p> <p><i>Do you think WASH services can be planned for under LGDP direct funding? If yes who would be the right person to take it up?</i></p>	
<p>2. <i>Where you able to monitor/receive reports on performance of all water sources in the last year?</i></p> <p><i>If no what proportion of the water sources were you able to monitor?</i></p>	
<p>3. <i>What mechanism do you use/recommend for holding WSCs accountable in fulfilling their roles?</i></p>	
<p>4. <i>What mechanism do you use/recommend for holding the District Water Office accountable in fulfilling its roles?</i></p>	
<p>5. <i>Does the Sub County have a mechanism for coordinating WASH</i></p> <p><i>i) Technical planning committee</i>  <i>ii) Sub county Water &amp; Sanitation Committee</i></p>	
<p>6. <i>What do you think should be done to improve the capacity of sub county to provide support &amp; Oversight to WASH service delivery</i></p>	

## FOCUS GROUP DISCUSSIONS FOR WATER SOURCE COMMITTEES

District		
Sub county		
Village		
Name of Water source		
Type of water source investigated		
Date		
QUESTIONS		RESPONSE
<b>WSC COMPOSITION</b>		
1.	<i>i) When was the Water Source Committee established?</i> <i>ii) How was the Water Source Committee selected?</i> <i>iii) How many members make up the WSC? Male? Female?</i> <i>iv) How many members on the WSC are able to read and write?</i>	
<b>INVENTORY OF USERS</b>		
2.	<i>i) How many households use this water source?</i> <i>ii) Do you have an inventory where all the users are registered?</i>	
<b>FUNCTIONALITY</b>		
3.	<i>Do you have a water system care taker?</i>	
4.	<i>Is the caretaker active in doing preventive maintenance?</i> <i>Any mechanism in place to motivate the caretaker?</i>	
5.	<i>Was he trained, when?</i>	
6.	<i>Have you had contact with the sub county Hand Pump Mechanic?</i>	
7.	<i>Has the HPM rendered you any service?</i> <i>Was the HPM compensated for the service rendered?</i> <i>How much is he paid?</i>	
8.	<i>Are you satisfied with the service provided by the HPM</i> <i>Reason</i>	
<b>OPERATIONAL PERFORMANCE</b>		
9.	<i>What is the relationship of the Committee to the LC1? Is there a signed agreement between the WSC and WSCs/ local council/LC1 that stipulates O&amp;M management and financial responsibility for the water services?</i> <i>Does the WSC have any byelaws to guide community involvement in Operation &amp; maintenance</i>	
10.	<i>Does the LC I hold water users accountable for payment of user fees?</i> <i>Any other mechanism for holding water users accountable?</i>	
11.	<i>What kind of support does the LC I provide in case of breakdown/interruption in water supply?</i>	
12.	<i>Does the WSC have a mechanism for ensuring accountability to users?</i>	



## QIS/FOCUS GROUP DISCUSSION QUESTIONNAIRE

### Institutional capacity

Scenario	Score
<i>There is no WSC in place</i>	0
<i>An elected WSC in place composed of less than 9 members or less than 3 women</i>	25
<i>Bench Mark: An elected and trained WSC composed of 9 members with 3 women but with none in an executive post</i>	50
<i>An elected and trained WSC composed of 9 members with 3 women and at least one in an executive post.</i>	75
<i>Ideal Situation: An elected WSC composed of 9 members with 3 women and at least one in an executive post. WSC receives refresher training is re-elected every two years &amp; orients new members</i>	100
<b>Reasons:</b>	

### Management & Governance: WSC is active in managing the water services

Scenario	Score
<i>There is no WSC in place</i>	0
<i>WSC holds at least 1 executive meeting in a year but has no records</i>	25
<i>Bench Mark: WSC holds quarterly meetings with the executive &amp; Users, and keeps records</i>	50
<i>WSC holds monthly executive meetings &amp; Quarterly meetings with Users, keeps up to date records and formulates local water user rules</i>	75
<i>Ideal Situation: WSC holds monthly executive meetings &amp; Quarterly meetings with Users, formulates local water user rules, Keeps and displays financial &amp; management reports at key strategic points</i>	100
<b>Reason:</b>	

### WSC is active in operating and maintaining the water services

Scenario [ Focus Group Discussion]	Score
<i>WSC is in place but has not taken the responsibility for O&amp;M</i>	0
<i>WSC ensures users fees are collected in case there is breakdown and organises HPM to carry out minor repairs but has no mechanism of providing feedback to users and does not carry out preventive maintenance</i>	25
<i>Bench Mark: WSC ensures continuous collection of user fees, organises HPM to carry out minor repairs, but has no mechanism of providing feedback to users and does not carry out preventive maintenance</i>	50
<i>WSC ensures continuous collection of user fees, organises HPMS to carry out minor repairs, has mechanism of providing feedback to users on O&amp;M funds but does not carry out preventive maintenance</i>	75
<i>Ideal Situation: WSC ensures continuous collection of user fees, organises HPMS to carry out minor repairs, has mechanism of providing feedback to users on O&amp;M funds , and carries out preventive maintenance</i>	100
<b>Reason:</b>	

## FOCUS GROUP DISCUSSIONS FOR WATER USER GROUPS

District	
Sub county	
Village	
Name of respondent	
Date	

### Users' satisfaction and perception

Parameter	Level of satisfaction (1- 5) To indicate 1 as the least important and 5 as very important				
	1	2	3	4	5
Quality					
Quantity					
Reliability					
Distance					
Affordability					
Reasons:					

### Users exhibit ownership of the water source/service

Options	Score
100% water users are registered and willingly participate in its management and maintenance	100%
80% of the registered water users willingly participate in its management and maintenance	75%
At least 60% of the registered water users are actively involved in its management and maintenance	50%
Less than 60% of the registered water users actively participate in the management and maintenance activities	25%
Water user groups not clearly defined and there is no community involvement in the management and maintenance of the water source	0



Reason:

### Hygiene and sanitation behaviour

Options	Score
<i>Users have 100% toilet usage</i>	100%
<i>Users have 75% toilet usage</i>	75%
<i>Users have 60% toilet usage</i>	50%
<i>Users have less than 50% toilet usage</i>	25%
<i>Water users have no toilet facility</i>	0
Reason:	

### Users using hand washing facilities (soap and facility)

Options	Score
<i>Users have 100% proper hand washing facilities</i>	100%
<i>Users have 75% proper hand washing facilities</i>	75%
<i>Users have 60% proper hand washing facilities</i>	50%
<i>Users have 50% proper hand washing facilities</i>	25%
<i>Water users do not have hand washing facility</i>	0
Reason:	



# HOUSEHOLD INTERVIEWS

## INTRODUCTION

I am (...) a research assistant, working on behalf of Triple-S/IIRR for data collection on rural water service delivery models from household water users in the community. The profiling exercise aims to improve the performance of community based service delivery through the collection of data on improved rural water supply from household water users in various communities of selected districts of Uganda.

## FOR COMMUNITY WATER USERS ONE QUESTIONNAIRE PER INTERVIEW

A. To be administered to the Water Users (WATER USER LEVEL):			
Date:	Enumerator:	Team leader:	
Sex of respondent:	a) Male	b) Female	
1. LOCATION			
1.1 District			
1.2 County			
1.3 Sub-county			
1.4 Parish			
1.5 Village			

2. GENERAL INFORMATION			
2.1 Family/Household size (number of persons living in the compound):			
2.2 Composition of family	Male	Female	Total No. Of people
Over 60 years			
45-60 year			
21-44 years			



	10-20 years					
	5-9 years					
	1-4 years					
	Under 1 year					
<b>3</b>	<b>WATER SUPPLY</b>					
3.1	<b>Which types of water sources are used by the Household</b>	<i>Pipe water/water tap</i>	<i>Hand pump boreholes</i>	<i>Shallow well</i>	<i>Protected springs</i>	<i>Rivers/streams</i>
	For drinking					
	For animals					
	For washing					
	Others					
3.2	<b>Distance from house (Km)</b>					
	Others (please Specify)					
<b>4</b>	<b>USERS' SATISFACTION AND PERCEPTION</b>					
4.1	<b>Affordability of water supply</b>					
	Do you pay for the water fetched by household members	a) Yes	b) No			
	If yes, how are the fees charged?	a) in quantity ( 20 litre), b) daily, c) weekly, d) monthly				
	How much do you pay per unit (20 litre)					
	Please state, if you have any other alternative way of paying fees or making contribution?					
	Do you find the water affordable	a) Yes	b) No			
	If No how much would you have wanted to pay for water?					
	Does your household have a mobile phone?	a) Yes	b) No			
	How much do you spend on the mobile phone and charging per month					
<b>4.2</b>	<b>Reliability of water supply</b>					
	When did you last experience an interruption?	a) less than one week, b) one week, c) two weeks, d) 1 - 2 months, e) 3 - 6 months, f) 6 months				
	What was the reason; break down of facility or seasonal yield problem?	a) Break down of facility b) Seasonal Yield problem				

	In case the interruption was due to a breakdown, how long did it take to fix it?	
	In case if it is a seasonal variation, for how long has the source been dried?	
	How long did it take to fix the breakdown ? (please select response)	a) 6 - 12 months,      b) 3 - 6 months,      c) 1 - 3 months,      d) 2 weeks      e) less than a week
	Where households asked to contribute towards the repair?	a) Yes      b) No
	If Yes how much where they asked to contribute?	
	If No how much would you be willing to contribute towards the repair?	
<b>4.3</b>	<b>Water quantity</b>	
	i) Who collects water?	a) Adult male      b) Adult female      c) Boy child      d) Girl child
	ii) How much water does your household use in a day?	
	iii) How much water did you collect yesterday from all sources?	5 litres      10 litres      15 litres      20 litres
	No. Of trip / Adult male	
	No. Of trip / Adult female	
	No. Of trip / Boy child	
	No. Of trip / Girl child	
	<b>b) How much time do you spend collecting water?</b>	
		<b>Time (Pls. select option that applies)</b>
	i) Adult male	a) less than 10 minutes, b) 10 minutes c) 30 minutes d) 30 minutes - 1 hour
	ii) Adult female	a) less than 10 minutes, b) 10 minutes c) 30 minutes d) 30 minutes - 1 hour
	iii) Boy child	a) less than 10 minutes, b) 10 minutes c) 30 minutes d) 30 minutes - 1 hour
	iv) Girl child	a) less than 10 minutes, b) 10 minutes c) 30 minutes d) 30 minutes - 1 hour
	c) Do you normally have a queue for water?	a) Yes      b) No
	d) In the last one week what was the longest time?	
	e) In the last one week what was the shortest time?	

**WATER USERS' SATISFACTION AND OWNERSHIP OF THE SERVICE**

<b>5</b>	<b>Users Satisfaction</b>					
	<b>Parameter of satisfaction</b>					
<b>5.1</b>	Please rate the extent you agree with the following indicated statements below:	<table border="1"> <tr> <td><b>Strongly agree</b></td> <td><b>Agree</b></td> <td><b>Somewhat agree</b></td> <td><b>Disagree</b></td> </tr> </table>	<b>Strongly agree</b>	<b>Agree</b>	<b>Somewhat agree</b>	<b>Disagree</b>
<b>Strongly agree</b>	<b>Agree</b>	<b>Somewhat agree</b>	<b>Disagree</b>			



	a) I am satisfied with the quality of water (taste, colour, odour and hard water)	<b>State reason:</b>				
	b) I am satisfied with the water quantity	<b>State reason:</b>				
	c) I am satisfied with the time spent to fetch water	<b>State reason:</b>				
	<b>To rate how WSC responds to issues</b>					
	e) Is there WSC in your community?					
	f) If Yes, when was the last meeting organised by the WSC	a) YES      b) NO      c) I DON'T KNOW				
	g) If No, where do you go when your water facility breaks down?	a) One week      b) One Month      c) 1 - 2 Months      d) 2 Months +				
	h) Are you satisfied with the performance of the WSC?	a) YES      b) NO				
	i) Are you satisfied with the way the WSC manager finance?	Reasons:				
	Give a reason for your answer	a) YES      b) NO				
	<b>Users practice hygienic behaviour (for observation only)</b>					
<b>6.0</b>	1) Do you know if there is a toilet?					
	2) Do the household have a hand washing facility?					
	3) Is there soap and water?	a) YES      b) NO				
	4) Whether it has water? Is it inside the house or outside the house?					
	5) How do you store your drinking water?	A) in open containers,      b) receptacles      c) pots,      d) jerry cans      e) others				
	6) If you cover your drinking water, what type of cover do you use?	Plastic      b) Wood      c) Aluminium.				
	7) Are the surroundings of the water point maintained?					
	If Yes by whom?					

## ANNEX 4: LIST OF VILLAGES WHERE DATA WAS COLLECTED

TSU	District	Sub-County	Village
TSU 2	Alebtong	Akura	Abuta Di
TSU 2	Alebtong	Akura	Amin Owiye
TSU 2	Alebtong	Akura	Obanga A
TSU 2	Alebtong	Akura	Obanga B
TSU 2	Alebtong	Akura	Te Amyel
TSU 2	Alebtong	Aloi	Abiting
TSU 2	Alebtong	Aloi	Aliwok
TSU 2	Alebtong	Aloi	Amuro Odyek
TSU 2	Alebtong	Aloi	Awiiio
TSU 2	Alebtong	Aloi	Kakira
TSU 2	Alebtong	Aloi	Olengo A
TSU 2	Alebtong	Aloi	Olengo B
TSU 2	Alebtong	Aloi	Omuka
TSU 2	Alebtong	Aloi	Opele
TSU 2	Alebtong	Aloi	Te Cwao
TSU 2	Alebtong	Aloi	Te Itiri (Akwangkel Narish)
TSU 2	Alebtong	Aloi	Teramot
TSU 2	Alebtong	Aloi	Te Obwolo
TSU 2	Alebtong	Aloi	Te Oryany
TSU 2	Alebtong	Apala	Aduku
TSU 2	Alebtong	Apala	Akwo
TSU 2	Alebtong	Apala	Amoyal
TSU 2	Alebtong	Apala	Apala Center
TSU 2	Alebtong	Apala	Arwenyo
TSU 2	Alebtong	Apala	Erii
TSU 2	Alebtong	Apala	Amon Omito
TSU 2	Alebtong	Apala	Apado
TSU 2	Alebtong	Apala	Awicer
TSU 2	Alebtong	Apala	Awiny
TSU 2	Alebtong	Apala	Cung Aciki
TSU 2	Alebtong	Apala	Obal
TSU 2	Alebtong	Apala	Oloro
TSU 2	Alebtong	Apala	Onao
TSU 2	Alebtong	Apala	Adang Wor
TSU 2	Alebtong	Apala	Akuki
TSU 2	Alebtong	Apala	Elupe
TSU 2	Alebtong	Apala	Onango
TSU 2	Alebtong	Apala	Wicere
TSU 2	Kitgum	Layamo	Lerwot
TSU 2	Kitgum	Layamo	Not
TSU 2	Kitgum	Layamo	Obem Central
TSU 2	Kitgum	Layamo	Ocet Tok Central Ward
TSU 2	Kitgum	Layamo	Ocetok N
TSU 2	Kitgum	Layamo	Tomatoo
TSU 2	Kitgum	Layamo	Pagen West
TSU 2	Kitgum	Layamo	Paibwor West
TSU 2	Kitgum	Layamo	Paibwor E
TSU 2	Kitgum	Layamo	Olet C
TSU 2	Kitgum	Layamo	Pamolo Central
TSU 2	Kitgum	Layamo	Pi Bwor Central
TSU 2	Kitgum	Mucwini	Bidin W



<b>TSU</b>	<b>District</b>	<b>Sub-County</b>	<b>Village</b>
TSU 2	Kitgum	Mucwini	Orima A
TSU 2	Kitgum	Mucwini	Araa
TSU 2	Kitgum	Mucwini	Ayomomol
TSU 2	Kitgum	Mucwini	Biwang E
TSU 2	Kitgum	Mucwini	Biwang W
TSU 2	Kitgum	Mucwini	Kitibol (Kol Kal)
TSU 2	Kitgum	Mucwini	Okwil Ka
TSU 2	Kitgum	Mucwini	Kitibol (Okol)
TSU 2	Kitgum	Mucwini	Okure
TSU 2	Kitgum	Mucwini	Pakure
TSU 2	Kitgum	Mucwini	La Bot Otwonga
TSU 2	Kitgum	Mucwini	Pakuba Central
TSU 2	Kitgum	Mucwini	La Kwot Kal
TSU 2	Kitgum	Mucwini	Lakwele Okato
TSU 2	Kitgum	Mucwini	Pudo
TSU 2	Kitgum	Mucwini	Pudo B.
TSU 2	Kitgum	Mucwini	Tepwoy E
TSU 2	Kitgum	Mucwini	Arima
TSU 2	Kitgum	Mucwini	Odi Bidin
TSU 2	Lira	Barr	Acan Dyan
TSU 2	Lira	Barr	Ageri Wango
TSU 2	Lira	Barr	Angwiny Dwil
TSU 2	Lira	Barr	Apik Kongo
TSU 2	Lira	Barr	Arwot Nyap
TSU 2	Lira	Barr	Atongokoo
TSU 2	Lira	Barr	Aumi
TSU 2	Lira	Barr	Ayinyi
TSU 2	Lira	Barr	Omyelo Onoro
TSU 2	Lira	Barr	Ongwiny
TSU 2	Lira	Barr	Woromite
TSU 2	Lira	Barr	Apipit
TSU 2	Lira	Barr	Iguli
TSU 2	Lira	Barr	Oloi Te Tyang
TSU 2	Lira	Barr	Opungo Akolodong
TSU 2	Lira	Barr	Oyito Dero
TSU 2	Lira	Barr	Tegweny
TSU 2	Lira	Lira	Adel Okok
TSU 2	Lira	Lira	Ader
TSU 2	Lira	Lira	Akao Idebe
TSU 2	Lira	Lira	Apii Pe
TSU 2	Lira	Lira	Anyalo
TSU 2	Lira	Lira	Ayere
TSU 2	Lira	Lira	Okec Oyere
TSU 2	Lira	Lira	Omito
TSU 2	Lira	Lira	Ongres
TSU 2	Lira	Lira	Tedam
TSU 2	Lira	Lira	Atodi
TSU 2	Lira	Lira	Bar Odyek
TSU 2	Lira	Lira	Bung A
TSU 2	Lira	Lira	Bung B
TSU 2	Lira	Lira	Telela B
TSU 2	Nwoya	Alero	Panokora
TSU 2	Nwoya	Alero	Atoo Con

<b>TSU</b>	<b>District</b>	<b>Sub-County</b>	<b>Village</b>
TSU 2	Nwoya	Alero	Got Moko
TSU 2	Nwoya	Alero	Kal Atoc
TSU 2	Nwoya	Alero	Kal Okur
TSU 2	Nwoya	Alero	Kulu Kano
TSU 2	Nwoya	Alero	Okura
TSU 2	Nwoya	Alero	Pidin B
TSU 2	Nwoya	Alero	Cuku
TSU 2	Nwoya	Alero	Cuku St. Kizito
TSU 2	Nwoya	Alero	Alero
TSU 2	Nwoya	Alero	Ongai
TSU 2	Nwoya	Anaka	Alelele
TSU 2	Nwoya	Anaka	Alokolumgok
TSU 2	Nwoya	Anaka	Anaka Town cou
TSU 2	Nwoya	Anaka	Pabalai
TSU 2	Nwoya	Anaka	Amuka Pa
TSU 2	Nwoya	Anaka	Bono Amo
TSU 2	Nwoya	Anaka	Kweyo
TSU 2	Nwoya	Anaka	Pabit
TSU 2	Nwoya	Anaka	Patira
TSU 2	Nwoya	Anaka	Pudyek
TSU 2	Nwoya	Anaka	Labwarom
TSU 2	Nwoya	Anaka	Akago
TSU 2	Nwoya	Anaka	Akago Central
TSU 2	Nwoya	Anaka	Ceke War
TSU 2	Nwoya	Anaka	Do Gakak
TSU 2	Nwoya	Anaka	Got Yago
TSU 2	Nwoya	Anaka	Lamogi
TSU 2	Nwoya	Anaka	Pa Duny
TSU 2	Nwoya	Anaka	Koyo
TSU 2	Nwoya	Anaka	Lamoki
TSU 2	Nwoya	Anaka	Railway line
TSU 2	Nwoya	Anaka	Te Olam
TSU 2	Nwoya	Koc Goma	Bungu
TSU 2	Nwoya	Ogomwad	Nyomtil
TSU 6	Kabarole	Buheesi	Ilinda
TSU 6	Kabarole	Buheesi	Kabudaire
TSU 6	Kabarole	Buheesi	Kisomoro
TSU 6	Kabarole	Buheesi	Kyabongya
TSU 6	Kabarole	Buheesi	Bukia
TSU 6	Kabarole	Buheesi	Kyekumburwa
TSU 6	Kabarole	Buheesi	Nyakagongo
TSU 6	Kabarole	Buheesi	Nyantwire
TSU 6	Kabarole	Busoro	Kyamasungi
TSU 6	Kabarole	Busoro	Kirere
TSU 6	Kabarole	Busoro	Kiduburi
TSU 6	Kabarole	Busoro	Kyatambara
TSU 6	Kabarole	Busoro	Kyatambasi
TSU 6	Kamwenge	Kabambiro	Kagarama 1
TSU 6	Kamwenge	Kabambiro	Rugarama
TSU 6	Kamwenge	Kabambiro	Rugarama 1
TSU 6	Kamwenge	Kabambiro	Bwera
TSU 6	Kamwenge	Kabambiro	Iruhura
TSU 6	Kamwenge	Kabambiro	Kabambiro 1



<b>TSU</b>	<b>District</b>	<b>Sub-County</b>	<b>Village</b>
TSU 6	Kamwenge	Kabambiro	Karokarungi
TSU 6	Kamwenge	Kabambiro	Mpanga
TSU 6	Kamwenge	Kahunge	Kahunge
TSU 6	Kamwenge	Kahunge	Kahunge primary school
TSU 6	Kamwenge	Kahunge	Kahunge trading centre
TSU 6	Kamwenge	Kahunge	Kanyamutwe 1
TSU 6	Kamwenge	Kahunge	Kihura
TSU 6	Kamwenge	Kahunge	Kanyamutwe
TSU 6	Kamwenge	Kahunge	Kihura 1
TSU 6	Kamwenge	Kahunge	Kihura 2
TSU 6	Kamwenge	Kahunge	Ryamugonera
TSU 6	Kasese	Munkunyu	Kanyambara 2
TSU 6	Kasese	Munkunyu	Kanyatsi
TSU 6	Kasese	Munkunyu	Kimango
TSU 6	Kasese	Munkunyu	Kasomoro 1
TSU 6	Kasese	Munkunyu	Kasomoro 2
TSU 6	Kasese	Munkunyu	Kinyamaseke N
TSU 6	Kasese	Munkunyu	Kinyamaseke S
TSU 6	Kasese	Munkunyu	Lainyama
TSU 6	Kasese	Munkunyu	Rwengayu
TSU 6	Kasese	Munkunyu	Kinyamaseke 1
TSU 6	Kasese	Munkunyu	Kisasa
TSU 6	Kasese	Munkunyu	Muruti
TSU 6	Kasese	Nyakaton	Muhumule
TSU 6	Kasese	Nyakaton	Kakonge
TSU 6	Kasese	Nyakaton	Kakonge 2
TSU 6	Kasese	Rukoki	Buharu 1
TSU 6	Kasese	Rukoki	Buhaura
TSU 6	Kasese	Rukoki	Kabughabugha
TSU 6	Kasese	Rukoki	Kasiika Kigoro
TSU 6	Kasese	Rukoki	Kiburu
TSU 6	Kasese	Rukoki	Nsangu
TSU 6	Kasese	Rukoki	Kibolhu
TSU 6	Kasese	Rukoki	Buhagura
TSU 6	Kasese	Rukoki	Kigoro 1
TSU 6	Kyenjojo	Butiti	Kaihura
TSU 6	Kyenjojo	Butiti	Kaihura (Nyabwo)
TSU 6	Kyenjojo	Butiti	Kicwera
TSU 6	Kyenjojo	Butiti	Birenga
TSU 6	Kyenjojo	Butiti	Galihuma
TSU 6	Kyenjojo	Butiti	Galihuma Primary School
TSU 6	Kyenjojo	Butiti	Kitonzi
TSU 6	Kyenjojo	Butiti	Kaihura Trading Center
TSU 6	Kyenjojo	Butiti	Kaihura Trading School
TSU 6	Kyenjojo	Butiti	Kisamura
TSU 6	Kyenjojo	Butiti	Mukunyu
TSU 6	Kyenjojo	Butiti	Nyobya
TSU 6	Kyenjojo	Katooke	Buhura Trading centre
TSU 6	Kyenjojo	Katooke	Enjeru (Enjeru)
TSU 6	Kyenjojo	Katooke	Rwamukora
TSU 6	Kyenjojo	Katooke	Kaiganga
TSU 6	Kyenjojo	Katooke	Kyakaboyo
TSU 6	Kyenjojo	Katooke	Nfaaki