

# EVALUATING

## GENDERED WATER, SANITATION & HYGIENE ACCESS IN UGANDA

### **ESTABLISHING PRIORITIES & NEEDS**

#### **Project & Workshop Report**

May 2020 – June 2021

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# PROJECT DETAILS

## **Funding Body:**

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# EXECUTIVE SUMMARY

This project on gendered access to water, sanitation and hygiene (WASH) was funded by the GCRF administered by the United Kingdom Research and Innovation (UKRI). The funding was a 'pump-priming' award that provided seed funding to carry out an evaluation of the key issues, evidence base, and data availability in the area of gendered WASH access in Uganda. To this end, the project focused on participatory activities that brought together a total of 90 people from 65 Ugandan organisations.

This report frames gender equity in both Ugandan and global contexts in recognition of the interconnectedness between nuanced issues between settlements, regions and sectors within Uganda and the global push for sustainable development that brings additional resources such as funding, training and technological advances. In Uganda, women and girls are most often the primary water collectors and also experience high levels of unmet sanitation needs, especially in schools. Through participatory activities, we collectively investigate WASH access through a gender lens.

A summary of publicly available WASH related datasets can be found on pages 7-8 and key findings from the stakeholder online survey can be found on pages 9-12. The survey results include information about data sources, challenges and needs across organisations. Notably, 73% of respondents reported that data on gender roles in WASH are needed and 75% of respondents were in favour of sharing and exchanging data between organisations highlighting the opportunity for a coordinated effort to collate existing data and reduce duplication of data collection efforts. While privacy and protection of personal data will need to be considered carefully, sharing of data such as water quality and facility related information (e.g. location and functionality of water points) could be a starting point for exploring data sharing platform options.

From page 13 onwards, we provide a synthesis of the discussions and exercises during a three-day workshop as well as responses from the post-workshop survey. Key barriers to gender equity in WASH was discussed extensively throughout the workshop and eight common themes emerged:

cultural attitudes, school sanitation facilities, safety at school, time allocation to water collection, hospital hygiene, refugee settlements, intersectionality between gender and rural/urban location, and intersectionality between gender and economic status (see page 14). Addressing these key barriers requires education and community engagement as well as data and research to identify where the most vulnerable groups are and how best to advance their access to safe water and sanitation. On pages 16-17, we provide lists of the identified current gaps in quantitative data, knowledge, intervention effectiveness and technology. Based on these gaps identified during day two of the workshop, participants drew up an inventory of priorities on the workshop's final day. On pages 18-21, we provide a summary of these priorities, categorized into the following six groups: study design, governance, project design and implementation, capacity strengthening, communities, and technology. Where appropriate, we supply some suggested resources such as guides, research papers and online courses, relevant to each category. In the same section we propose future work needed to address each priority.

Overall, we recommend that future research projects focus on the following topics: development of more meaningful and useful gender-specific WASH indicators such as the Empowerment in WASH Index; feasibility of mobile phone applications for timely data collection; rainwater harvesting technologies, decontamination technologies; hand pump design for accessibility to all; design and effectiveness of water carriers, e.g. rollables; design and effectiveness of WASH awareness approaches; and, the interconnectedness of water with other systems (e.g. food and energy) to ensure improvements in WASH access is not detrimental to other areas of development.

All future projects should include community engagement and consultation at all stages of a project, and significant resources should be allocated to disseminate findings directly to participating communities. This could be via feedback forums, brochures and posters. Workshop participants also highlighted the need for future projects to include gender equity policies for staff and data collection activities, training in data collection and data analysis, and multi-stakeholder involvement and collaboration.



# PROJECT BACKGROUND

**There are limitations in access to reliable data and information on gender differentials in the WASH sector across the globe. Such information is required for formulating robust WASH gender policy. Uganda currently relies on data that is either aggregated for large spatial areas or only available for specific locations, and is often summarised for only a few metrics relating to large demographic groups.**

These data come from both governmental agencies and non-governmental organisations. Data is generated through a) large survey projects such as the Bill and Melinda Gates funded Performance Monitoring for Action (PMA) surveys; b) local surveys such as the Uganda National Household Survey (UNHS), Uganda National Panel Survey (UNPS), Uganda Malaria Indicator Survey (UMIS) and Uganda Demographic and Health Survey (UDHS); and c) governmental reports for example, the Ministry of Water and Environment (MoW&E) annual Sector Performance Reports.

The Joint Monitoring Programme (JMP) of the World Health Organisation (WHO) and United Nations International Children's Emergency Fund (UNICEF) are responsible for monitoring and reporting on this data to track progress towards international development agendas and targets, such as the Sustainable Development Goals (SDGs).

There is strong evidence to suggest that gender equity contributes to economic growth and that development projects are more effective when gender considerations are integrated into their design and implementation. Programmatic planning to improve access to safe WASH in Uganda is currently difficult due to:

- **Insufficient detail about gender in the WASH sector:** initiatives aimed at the betterment of lives must recognise gender roles as primary resource managers. Interventions must also recognise that women and girls often carry the responsibility of water collection and household water use. Better information and quantification of these roles and responsibilities is therefore needed.
- **Insufficient spatial resolution of WASH gender data:** details about the variation between settlements across the country or between different neighbourhoods within a given settlement are required for understanding how gender differences vary across space, e.g. if assumptions are made about all rural areas based on data from one part of the country, the influence of social and cultural differences among rural communities cannot be fully considered in the implementation of development projects.

**Overarching project aim: to evaluate gendered WASH access in Uganda and identify priority areas of research and data generation for improving equitable access to safe WASH.**





# THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT:

## MONITORING ACCESS TO SAFE WASH FOR ALL

In 2015 the United Nations laid out 17 Sustainable Development Goals (SDGs), with the aim to improve living standards and planetary health by 2030. SDG 6 relates to water and has the overarching aim to ensure availability and sustainable management of water and sanitation for all. This important goal addresses the estimated 2.2 billion people lacking safely managed drinking water globally and 4.2 billion people lacking safely managed sanitation. Additionally, two in five health care facilities worldwide have no soap and water or alcohol-based sanitisers. Within SDG 6 there are eight targets, and these are tracked and measured using 11 indicators.

Target 6.1 states that by 2030 we will achieve universal and equitable access to safe and affordable drinking water for all, and the indicator that measures this target is the proportion of population using safely managed drinking water services. Target 6.2 states that by 2030 we will achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in preventable situations. The indicator used to measure target 6.2 is the proportion of the population using safely managed sanitation services. Target 6.b states that we will support and strengthen the participation of local communities in improving water and sanitation management, and the indicator for this target is the proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management.

Some international organisations collate datasets to produce SDG indicators at the national level across the globe, and these national estimates are sometimes broken down by gender and by urban and rural. The Ugandan government provides aggregated data that feeds into these global indicator monitoring activities. In contrast, the government publishes much higher resolution indicator data. Having indicators such as the proportion of population with access to safe drinking water, at a higher resolution allows the most vulnerable areas and the most vulnerable subpopulations to be identified. Programs, campaigns and interventions can utilize this information to target and support the most vulnerable groups. With consistent and repeated monitoring through time, changes in measurements can show the effectiveness of interventions and/or track improvements or declines in standards.

The Water Supply Atlas<sup>6,7</sup> was published by the MoW&E in 2017. The Water Supply Atlas provides the most comprehensible subnational estimates of access to safe water and sanitation in Uganda. The Atlas includes several key indicators such as the percentage of functioning point water sources, the percentage of the total population served by safe water points and piped water, and the difference in the number of persons per improved water point in rural areas. The atlas also includes one gender related indicator: the percentage of communally managed water sources with at least one woman in a key position (e.g. for Gulu district, this percentage is 78%).





# PUBLIC DATA

# SUMMARY

**An assessment of the existing WASH data available for Uganda found two main resources, (1) reports and (2) datasets, from international institutions, UN agencies and Uganda's national Government. Both types of resources have varied strengths and applications, and differ in their coverage years, WASH metrics and levels of spatial disaggregation.**

**Resources provide perspectives of the WASH user (i.e. the general population of Uganda) and the WASH supplier (e.g. the Ugandan National Water and Sewerage Company (UNWSC)), in addition to the situation in schools and healthcare facilities (HCFs).**

Five key reports exist, including the older World Bank report 'Water Supply and Sanitation in Uganda: Turning Finance into Services for 2015 and Beyond'<sup>1</sup> from 2011. This has a national focus and considers both rural and urban WASH, as well as more broadly, WASH financing, monitoring and evaluation. It has been developed to enable the assessment of service delivery and help turn finance into WASH supplies and services across Uganda.

More recent reports include the annual Water and Environment Sector Report<sup>2</sup> produced by the MoW&E, the 2014 Ugandan Census Report<sup>3</sup> and a UNICEF 'Country Level Assessment of the State of WASH Financing in Uganda'<sup>4</sup> from 2019. The latter in particular focuses on government, donor and consumer WASH financing and aims to influence WASH planning in order to enable more effective allocation and use of resources.

In comparison, the MoW&E's annual sector report assesses the performance of Uganda's WASH supplies, management, resources & production, whilst evaluating investments,

targets, challenges & achievements in a given year. Similar data is also available via the International Benchmarking Network (IBNET) which provides the perspective of the UNWSC and includes a range of WASH-related indicators for 1996-2019<sup>5</sup>. The Ugandan Water Supply Atlas<sup>6,7</sup> complements these data sources by providing a nationwide census of all improved water supplies, disaggregated to district level.

From our own review of available national datasets, (see Table 1), it is clear that a range of additional publicly available resources exist. Critically these provide the perspective of the WASH user, schools and HCFs, and allow for sub-regional, district-level and household-level analysis.

Data also feeds into online databases such as the JMP's data portal<sup>8</sup> and the United Nation's SDG 6 data portal<sup>9</sup>. The JMP also provide a synthesis of all historic WASH data via their country files<sup>10</sup>, which include key indicators on inequalities and the situation in households, schools and healthcare facilities.

**TABLE 1: SUMMARY DETAILS OF AVAILABLE DATASETS REPORTING ON WASH IN UGANDA**

DATASET	Producer	Coverage Year's	Lowest Levels of Disaggregation	Approximate Sample Size	WASH Metrics Available	Survey's Included	Downloadable Data Format
<b>DEMOGRAPHIC AND HEALTH SURVEY (DHS)<sup>11</sup></b>	Ugandan Bureau of Statistics (UBOS); The DHS Program	1989-2016	Household (HH)/men  (GPS data is for household clusters)	19,600 HHs (2016 survey)	Main water source; water availability & availability at handwashing facility; water quality & safety; water accessibility; toilets; sharing of & location	HH survey; Men's dataset; GPS dataset; Health Biomarkers dataset	.dta, .sav, .csv, shapefile or a report
<b>GAVI FCE HOUSEHOLD SURVEY<sup>12</sup></b>	Institute for Health Metrics & Evaluation (IHME)	2015	HH/ women	4000 HHs	Main water source; water safety; toilet availability & sharing; hand-washing facilities	HH survey with HH head & mother's; Dried Blood Spots survey	.csv
<b>GAVI HEALTH FACILITY SURVEY<sup>13</sup></b>	IHME	2014-2015	HCFs	177 HCFs	Water for handwashing; toilet availability & functionality	HCF survey	.csv
<b>MALARIA INDICATOR SURVEY (MIS)<sup>14</sup></b>	Uganda National Malaria Control Division; UBOS	2009-2019	HH/ women  (GPS data is for household clusters)	8400 HHs (2019 survey)	Main drinking/ handwashing water source and accessibility; toilet source, location and sharing	HH survey; Women's survey; Health Biomarkers dataset; GPS dataset	.dta, .sav, .csv, shapefile or a report
<b>PERFORMANCE MONITORING FOR ACTION (PMA)<sup>15</sup></b>	Bill and Melinda Gates Institute; Makerere University	2014-2020	HH/ women  (GPS data is for enumeration areas)	4500 HHs (2017 survey)	WASH in health services, menstrual hygiene management; population open defecating; number of water sources; handwashing facilities	HH survey; Female survey; GPS dataset; health service delivery point survey	.csv, .dta or a report
<b>SERVICE PROVISION ASSESSMENT (SPA) SURVEY<sup>16</sup></b>	Uganda Ministry of Health (MoH); Macro International	2007	HCFs	630 HCFs	WASH in HCFs: water source, accessibility, interruptions, hand hygiene	HCF assessment survey	.dta, .sav or a report
<b>SERVICE DELIVERY INDICATOR (SDI) SURVEY<sup>17,18,19</sup></b>	World Bank	2013	Primary schools/ HCFs	400 schools, 400 HCFs; 5300 teachers & health providers	Clean water & improved sanitation in HCFs; accessible & private toilets in schools	HCF survey; Primary school survey	.xlsx, online data portal or a report
<b>UGANDA WATER SUPPLY ATLAS<sup>6,7</sup></b>	MoW&E	2008-2021	Sub-county	Full country coverage	Extensive WASH metrics including access, functionality & source types	'Census' of water sources across Uganda	Report or interactive online database
<b>UGANDA NATIONAL SERVICE DELIVERY SURVEY<sup>20</sup></b>	UBOS; MoH	2015	Sub-regions, including rural-urban disaggregation	10,100 HHs	Main drinking-water source at schools; HH drinking water: accessibility, historic availability; toilets, waste disposal and handwashing	HH survey; School survey; Health provider survey	Tabulations and a report
<b>UGANDA NATIONAL PANEL SURVEY<sup>21</sup></b>	Uganda Bureau of Statistics	2005-2020	HH/ women	3200 HHs (2019 survey)	Main drinking-water source, protection of source, accessibility, availability, collection, cost & quantity; toilet availability, location & hand-washing facilities	HH survey; Women's survey; Community survey (inc. schools)	.dta, .csv or .xml





# STAKEHOLDER USE OF GENDERED WASH DATA: SURVEY FINDINGS

**A stakeholder survey was carried out as part of this project from December 2020–January 2021. The survey aimed to assess the current uses, challenges and needs of WASH-related data of relevant stakeholders in Uganda. Here we present a summary of these survey results.**

The stakeholder survey comprised an anonymous online survey<sup>1</sup>, consisting of multiple-choice questions and supplemented with optional open-ended short-answer questions, was distributed to 93 WASH and/or gender-related stakeholders across Uganda<sup>2</sup>. Questions covered six key sections which focused on respondent characteristics, stakeholder activities, WASH-related activities, WASH data use, choices and challenges, and data requirements.

In total 44 responses to the survey were received. These were dominated by people working for an NGO, with 70% (n=31) of respondents in this category. 18% (n=8) of respondents were academics and 11% (n=5) were local government officials. Overall, respondents worked for 29 different stakeholders. Seventeen stakeholder organisations were NGOs, including smaller Ugandan NGOs and a range of international NGOs with projects in Uganda. Other responses were from five government bodies, one government organisation and six different universities (see: Appendix A).

<sup>1</sup> Ethical approval was received on the 9<sup>th</sup> December 2020 from the University of Southampton (ERGO II #62397).

<sup>2</sup> Stakeholders were sought using a purposive sampling strategy, which involved an online search for relevant WASH-related stakeholders who met the criteria outlined in Appendix B. Snowball sampling techniques were also used; websites and online reports from purposively selected stakeholders were searched for other relevant stakeholders. Stakeholders were also invited to pass on details of the project and survey to their colleagues, collaborators and partners.

The gender split of respondents was more or less equal, with 57% (n=25) men and 43% (n=19) women. Most respondents were aged between 31 and 40 years, with a roughly equal gender split in this category. Of those that were aged 20-30 years (9%) and over 61 years (2%), respondents were mainly female. 45% of respondents held mid-level roles, of which 55% were female. A further 45% of respondents were management level; 65% of these were male. 34% of respondents had been in their role for 11-20yrs, whilst 30% had been in their job for 1-5yrs.

When asked if WASH activities were a main focus of stakeholders', 64% reported that they were. Related aims included community engagement, as reported by 77% of respondents, whilst undertaking research relating to gender was the least common (14%) (Figure 1). Over half of respondents said that gender equity was a key aim. Interestingly however, aims relating to women's rights were less common (39%).

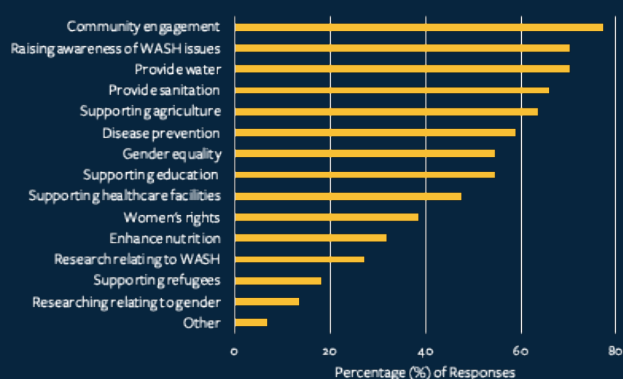


Figure 1: Main Aims of Stakeholder Activities

## Barriers to WASH and Related Stakeholder Activities

Where respondents could choose multiple answers from a list of 13, the top-three cited barriers to improving WASH in Uganda were too little funding (80%), inappropriate policy (57%) and limited data availability (55%), while the least cited reasons were restrictions due to land tenure (32%) and inappropriate decision making (36%).

75% reported their main sanitation and water related activity as community engagement and raising awareness. Almost three quarters install water infrastructure, whilst the least common water-related activity was treating water-borne diseases (14%) (Appendix C). Nearly 60% of respondents stated they undertake household and community surveys on water and sanitation, suggesting a wealth of data exists amongst stakeholders.

Comparison of the sanitation and menstrual related activities conducted suggests menstrual related activities, which are highly gendered, are less common. Installation of infrastructure for disposing of menstrual hygiene products is undertaken by 27% of respondents. Only 14% reported developing menstrual related policy and researching menstrual related issues (Appendix D). In contrast, almost double the number of stakeholders undertook similar sanitation activities (Appendix E).

## Stakeholder's WASH Data

Respondents were asked where they source the data they use; stakeholder's own data was used by 82% of all stakeholders: 100% of government respondents, 63% of all academics and 84% of NGOs (Appendix F). Interestingly, only 45% of respondents reported using international data, such as that available via reports and repositories. By comparison, most academics reported using WASH sector reports (88%) and international agency reports (75%). Whereas, international agency reports and repositories were only reported to be used by 42-45% of NGOs. Geospatial data was used by 57% of respondents whilst 48% used tabular data (Appendix G). Online portals were the least used data type (41%).

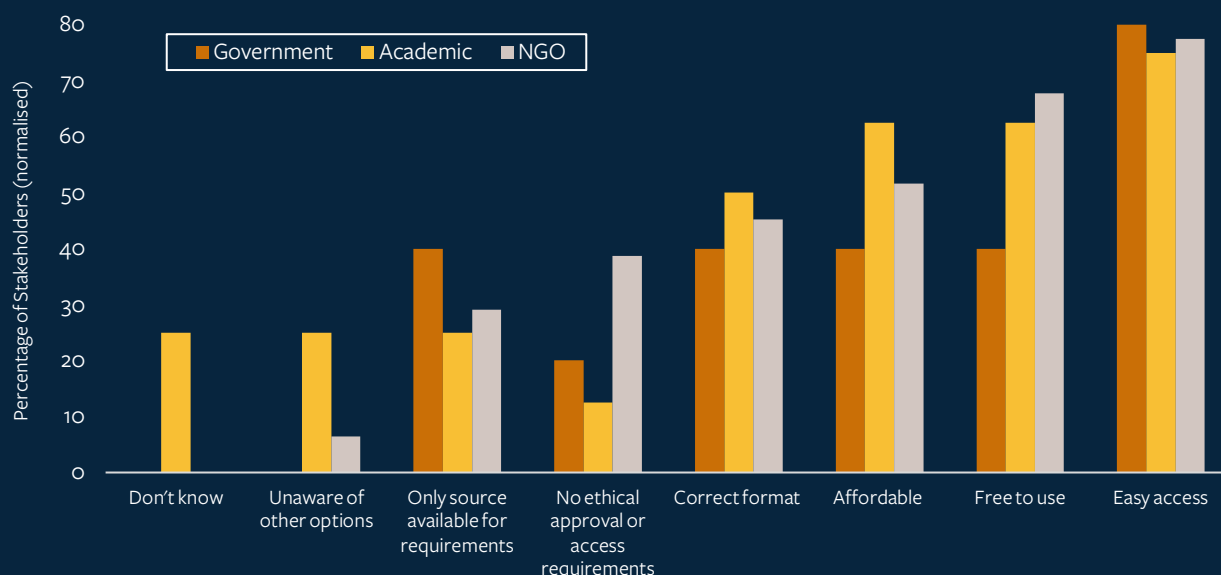
When asked specifically what type of WASH data stakeholder's use, 84% use data on WASH infrastructure (Appendix H). The least common type used was on who installs WASH facilities (39%). Two thirds use data on gender roles in WASH. It was encouraging to see 66% of stakeholders use data on factors that influence women's access to WASH, by comparison however, just over half (52%) use data on factors influencing men's access to WASH.

To understand use of data disaggregated by demographic groups, we asked what age- and gender-specific WASH-related indicators were used by respondents. Perhaps unsurprisingly, the most frequently used WASH indicators cover whole populations and communities (Appendix I), as reported by 91%. Worryingly, equal use of WASH related indicators on men and women, and specific age groups, was reported by less than half (45%) of respondents.

## Data Choices and Challenges

Free use, affordability and ease of access were the three top characteristics for stakeholder's choice of datasets (Figure 2). For government



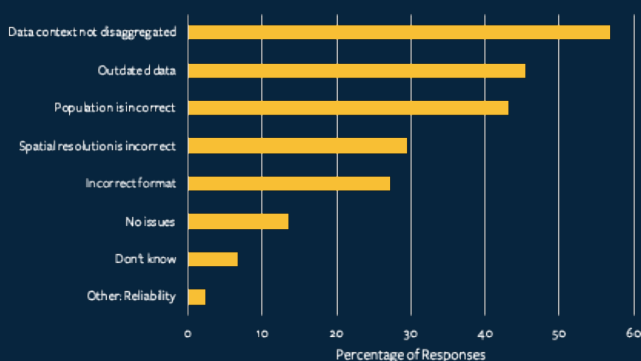


**Figure 2: Factors Considered by Stakeholders when Choosing Data**

respondents the latter was key.

Interestingly, 40% of government respondents reported choosing their data because it is the only source available for their needs. For NGOs and academics, the picture appears more complex. For example, no ethical approval or access requirements were reported by 40% of NGOs as key factors, more than any other type of stakeholder. While the correct format and affordability are critical for academics.

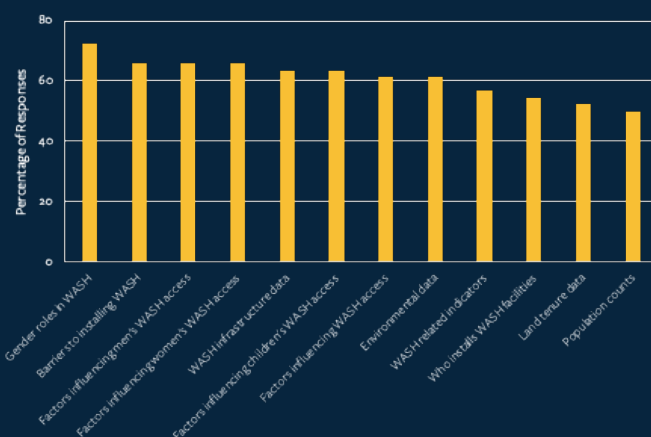
We asked respondents what the main issue is with the data they currently use (Figure 3). Over half reported a lack of context specific disaggregated data as a key issue, a problem supported by the low usage of gender and age specific WASH indicators mentioned previously. Between 43% and 45% of respondents reported outdated data and data covering the incorrect population being main issues. Of concern, only 14% had no issues with the data they use.



**Figure 3: Stakeholder-reported Issues with Current Data**

## Data Needs and New Data Uses

Respondents showed that all key WASH data examples given (Figure 4), are required. The lowest reported need was for population counts, despite this, 50% of respondents require them. 73% reported data on gender roles in WASH was needed.



**Figure 4: Stakeholder Data Needs**

Factors influencing women's and men's access to water and sanitation, as well as barriers to installing WASH were highlighted as additional data requirements by 66% of respondents. Gendered perceptions of data needs were generally the same between male and female respondents. The main difference was that 80% of men, compared to 47% of women, stated that WASH data that considered men's access was needed.

Additional examples of age-specific WASH-related data that stakeholders need can be seen in Appendix J. Common suggestions included age



disaggregated data on access to WASH, as well as menstrual hygiene. Child- and school-specific data was also highlighted as a need.

Similarly, gender-specific WASH-related data requirements, as requested from stakeholders, are in Appendix K. As with age-specific examples given by stakeholders, suggestions included a focus around gender-specific data on menstrual hygiene, access to WASH and school specific data. Interestingly, there was a strong emphasis on the need for data on women involved in WASH management, planning, operations and user committees.

Additional suggestions concerned WASH related data on adolescents, older people, the disabled and specifically in the context of schools.

Our survey revealed that across respondents the main uses of new data would be identifying areas in need and targeting interventions (Appendix L). These uses were consistently selected regardless of whether the respondent came from an academic, NGO or governmental organisation. However, given that academics and government officials were not well represented in the survey, further information

would be needed to better understand their priorities. In addition, all government respondents and three quarters of academics reported that new data would be used for tracking trends/change over time. Again, this was similar for NGOs, however 81% also stated that they would use it for supporting grant proposals.

## Acquiring New Data

Household surveys were the most supported method of data acquisition, with 89% of respondents reporting so (Appendix M).

All government and academic respondents reported household surveys as the method for acquiring new data. 90% of NGOs suggested undertaking interviews with community groups. In contrast, only 34% suggested transforming existing data. While this was the case, it was encouraging to see three quarters of respondents supporting the idea of sharing and exchanging data amongst stakeholders.

Photo Credit: John Hogg/World Bank





# STAKEHOLDER WORKSHOP

**Issues relating to the intersections of WASH and gender in Uganda were discussed in the context of stakeholder data needs, uses and knowledge gaps at a virtual workshop held from the 17<sup>th</sup> to 19<sup>th</sup> March 2021.**

**The workshop was opened by Dr Collins Okello, Head of the Biosystems Engineering Department at Gulu University, who highlighted that women and children in Uganda are largely responsible for the provision of clean water and are exposed to many risks during water provisioning processes.**

The workshop brought together attendees from approximately 50 different stakeholders. Stakeholders included a range of NGOs and academic institutions who undertake or engage with WASH and/or gender related interventions, research or projects (see Table 2 for the list of stakeholders).

The workshop aimed to:

- Build an understanding of the key issues in gender access to safe WASH, in common across Ugandan stakeholders.
- Identify the data needs of stakeholders and pinpoint any data and knowledge gaps currently restricting stakeholder activities.
- Build relationships with stakeholders and lay the foundations for future projects that will aim to improve access to safe WASH in Uganda.
- Produce a list of priority areas where research activities can improve gender equity in access to WASH in Uganda.

Topics were discussed in three themed sessions: (1) Key Barriers to Gender Equity in WASH, (2) WASH Data Availability and Data Needs, (3) Priorities and Needs 2021-2030.

**Table 2: Stakeholders who Attended the Workshop**

Action for Community Development (ACODEV) Uganda
African Agency for Integrated Development (AAID)
Agape Community Transformation (ACTS) Uganda
AVSI Foundation
Child Care and Youth Empowerment Foundation
Compassion International Uganda
Freedom drillers limited Uganda
Gulu University
Humanitarian OpenStreetMap Team (HOT)/MapUganda
Innovation Africa
IRC WASH Uganda
Joint Effort to Save the Environment (JESE)
Kagando Hospital/Kagando Rural Development Centre
Kampala International University
Link to Progress
Love Mercy Foundation
Makerere University
Malteser International
National Association for Women's Action in Development (NAWAD)
Partners for Community Health and Development Organisation (PACHEDO)
Plan International
Uganda Christian University
Uganda Muslim Rural Development Association
USAID - Uganda Sanitation for Health Activity (USHA)
Vision TERUDO
WaterAid Uganda
Wide Rights Uganda
Youth and Women for Opportunities Uganda-YWOU
Youth Environment Service- Busia

# SESSION 1: KEY BARRIERS TO GENDER EQUITY IN WASH

**In the first session the drivers of gender inequity in WASH were discussed. Two interactive sessions were run to establish eight key drivers:**

## Safety at School

In schools where the grounds are open, toilets may be unsafe. There are reports of girls being attacked on their way to or at a toilet block. This may be even more of a problem for boarding schools where girls are going to the toilet in the night.

## Cultural Attitudes

Beliefs that women and girls should be responsible for the housework including collecting water. In some cases, girls are prevented from going to school because of attitudes towards their role in the household. In other cases, girls do attend school but are still expected to collect water. This leads to girls collecting water in the evenings when there is a higher risk of being attacked or raped during the journey.

## School Attendance

Stakeholders highlighted a serious problem with schools providing inadequate quantity of toilets, privacy at toilet blocks and suitable washing facilities. This leads to girls not attending school during menstruation, which results in girls having a lower level of attendance compared to boys.

## Hospitals

In hospitals with poor hygiene standards, women giving birth can feel very uncomfortable and afraid that their newborn may become unwell.

## Time Allocated to Water Collection

With most water collecting responsibilities falling to women and girls, the time available for other activities such as school or paid work is much less for women and girls compared to men and boys.

## Refugee Camps

Due to few water points per person, there are often very long queues for water. There are reports of heightened vulnerability of women from standing in line for a long time. These include women exchanging sex for water, and women being pulled out of the line by men and raped, which have led to an increased number of unwanted pregnancies.

## Intersectionality Between Gender and Rural/Urban Location

In rural areas communities generally communally manage water and water points. Water conflicts may be common in rural areas but less so in urban areas. Because of these differences between rural and urban settings, gender dynamics can be very different also. Understanding how gender inequity in WASH varies between rural and urban areas requires careful consideration due to the complexity of the differences between settings.

## Intersectionality Between Gender and Economic Status

In households of higher economic status, the household may be able to afford its own improvements to water and sanitation facilities. This may lead to less of a gender gap in terms of school attendance and paid work in these higher income settings when compared to lower income settings.





# SESSION 2: WASH DATA AVAILABILITY AND NEEDS

**Building on the information gathered through the online questionnaire on data use, during the second day of the workshop we discussed data types in more detail. In Table 2 below we categorise the key datasets collected by stakeholders into three broad groups.**

**Table 2: Key WASH Data Collected by Stakeholders**

Household/Community Level Characteristics	Physical Attributes	Education, Governance & Management
<ul style="list-style-type: none"> <li>Time taken to collect water</li> <li>Access to services</li> <li>Main water source</li> <li>Household sanitation</li> <li>Uptake of appropriate sanitation</li> <li>Affordability in the acquisition of sanitation facilities by households</li> </ul>	<ul style="list-style-type: none"> <li>Water point functionality</li> <li>Lighting around water points</li> <li>Seasonality of source</li> <li>Water quality (E. coli, turbidity, contaminants)</li> <li>Construction of rainwater harvesting and storage tanks</li> <li>Different materials used in construction of WASH facilities</li> <li>Road networks</li> <li>Building footprints</li> </ul>	<ul style="list-style-type: none"> <li>Town sanitation planning</li> <li>Formation of WASH clubs</li> <li>Education in teenage pregnancy</li> <li>School administration (management of funds and percentage allocated to WASH)</li> <li>Water resource management</li> <li>Information on the companies/organisations who constructed boreholes</li> </ul>

Stakeholders noted many different forms of data collection methods. These included household or community surveys, focus group discussions, community dialogue sessions and key informant interviews. Additionally, the technologies used to collect data included GPS devices and mobile/tablet applications such as Kobocollect, mWater and ODK.

These datasets are used by stakeholders for developing and planning projects. Participants reported using data they collect to identify gaps (e.g. what WASH facilities could be unsafe for women and children to access in the evenings or early night), planning for allocation of WASH facilities in equitable manner, strategising for project implementation and selecting appropriate interventions. Ultimately, the planning and development activities feed into writing project proposals, resource mobilisation and fundraising.

Stakeholders also use data for monitoring and evaluation during and at the end of projects. This includes reporting (including for donors), generating baseline data for monitoring progress through project implementation and understanding the effectiveness of interventions. Other uses of data include providing evidence for advocacy and policy influencing, and community capacity building.

We categorised stakeholder data/information needs into four groups: 1) gaps in quantitative data; 2) gaps in knowledge; 3) gaps in effectiveness of interventions, and: 4) gaps in technology. Below, and overleaf, we present the key needs highlighted during the workshop and post-workshop survey.

## Gaps in Quantitative Data

1. Capturing data on quarterly basis (time series data) especially in schools and households.
2. Litres consumed per person or per household, disaggregated by gender, disability, elderly.
3. People per water point to estimate over-use and under-use, disaggregated by gender, disability, elderly.
4. Functioning water points.
5. Distance to water source.
6. Water coverage.
7. Toilet facilities at a household level.
8. Storage equipment used.
9. Data on performance of proper WASH practices and behaviours.
10. Distribution of WASH investments.
11. Gender differences in unpaid work/time allocation.
12. Temporal measurements of WASH indicator targets after an intervention.

## Gaps in Knowledge

1. Relationships between waste disposal/management (e.g. solid waste, faecal sludge, sanitary pads) and environmental impacts (e.g. water pollution).
2. Relationships between WASH practices/behaviours and health data.
3. Data/information related to the enabling environments that allow gender to be considered, e.g. willingness and buy-in to the concept of gendering data. These enabling environments are key for cascading of national policies to local level.
4. Links between water security and health outcome.
5. Attitudes around masculine and feminine ideals.
6. Future water availability and coverage.
7. Which technologies and facilities are not suitable for different sub-populations, e.g. toilets and washing facilities at school, lighting at water points and along water collection routes.



## Gaps in Effectiveness of Interventions

1. Solar panel powered water pumps.
2. Menstrual Hygiene Management (MHM) education for boys and girls.
3. Safe domestic water storage.
4. Normalisation of the presence of changing rooms at girl's sanitation facilities in schools.
5. Sexual education.
6. Campaigns addressing negative masculine culture among young men.
7. Community led/grassroots approaches.
8. Education on good WASH practices and behaviours.

## Gaps in Technology

1. Mobile phone application for real time data collection.
2. Data collection tools, sharing platforms and storage.
3. Hand pump design for increased accessibility, e.g. for the elderly and disabled.
4. Water decontamination technologies.
5. Solar panel powered pumps to aid cheaper piped water in rural areas.
6. Piped water suitable for the challenges associated with rural areas.
7. Prioritisation of women in designing sanitation facilities.
8. Internet access to keep updating information across multiple communities.



# SESSION 3: PRIORITIES AND NEEDS 2021-2030

**During the final session of the workshop a collaborative breakout activity was undertaken which encouraged discussion about the priorities for gendered WASH data in Uganda. Building on experiences from the stakeholders attending the workshop, six needs were determined alongside the resources required and recommendations for future work:**

1

## STUDY DESIGN

### Priority/Need:

- For updating, designing and testing survey questionnaires to identify nuanced issues and capture inequities.
- To develop more meaningful gender related WASH indicators.
- To consider multiple sectors and measure multiple indicators to ensure that improvements in the WASH sector are not at the detriment to other sectors such as energy use, carbon footprint and environmental impact.

### Future Work/Recommendations:

- Future studies could utilise the Empowerment in WASH Index by planning and conducting suitable surveys in Uganda. The index has not been tested in Uganda previously and so studies should consider incorporating a validation phase.
- Future research could focus on quantifying household and/or community level water, food and energy generation and use, and linking these to the wider interrelated water, food and energy systems.

### Resources:

In 2020, a new and innovative indicator called the Empowerment in WASH Index (EWI)<sup>22</sup> was published. This survey-based indicator is designed to measure agency, participation and empowerment in the WASH sector, for different demographic groups such as women. This indicator has been tested in Burkina Faso and Ghana. **Read here for an overview of EWI: <https://reachwater.org.uk/making-the-invisible-visible-measuring-empowerment-in-the-wash-sector/>**

The same research group published a recent review entitled: **“Understanding empowerment in water, sanitation, and hygiene (WASH): a scoping review”**<sup>23</sup>. This review provides information about leading concepts and research on empowerment in the WASH sector.

Developing multi-sector approaches for addressing gender equity in WASH is essential. In particular, the water-food-energy nexus is gaining attention in the face of rapid population growth and increased demand for resources **A review of the current state of research on the water, food and energy nexus**<sup>24</sup> was published in 2017.



### Priority/Need:

- Develop a policy advocacy agenda and promote SDG6.
- Allow women to make meaningful contributions to decision making processes.
- Communicate best water storage and sanitation practices.
- Enhance cooperation amongst stakeholders on routine monitoring, planning and implementation.

### Resources:

A practical guide relating to governance can be found in **“Local water conflicts in Uganda: Options for peacebuilding policy and practice”<sup>25</sup>** and **“Examining the contribution of community participation in water resource production and management: perspectives from developing countries”<sup>26</sup>** provides insight on the role of local level efforts.

There are a number of existing studies relating to the effectiveness of advocacy and educational approaches:

1. **“Cost-effectiveness of home-based chlorination and safe water storage in reducing diarrhoea among HIV-affected households in rural Uganda”<sup>27</sup>**
2. **“Assessing the effectiveness of a comprehensive menstrual health intervention program in Ugandan schools (MENISCUS): Process evaluation of a pilot intervention study”<sup>28</sup>** (see Figure 1).

### Future

#### Work/Recommendations:

Building on existing working groups and networks, future activities could include an annual or biannual meeting/conference where stakeholders can present their ongoing work to identify overlap and synergies between organisations.

- A conference could include the key highlighted areas (policy advocacy, educational activities, women in decision-making roles) and aim to lay out agendas for each area. Future research projects should fund the initiation of such a conference and plan for constituent stakeholders to host the conference after project funding has ended.

Future projects should have a clear gender equity policy for the project staff and partners.

An online data sharing platform should be developed. This should include clear data standards agreed upon by all stakeholders so that data can be collected and collated in a standardised way.

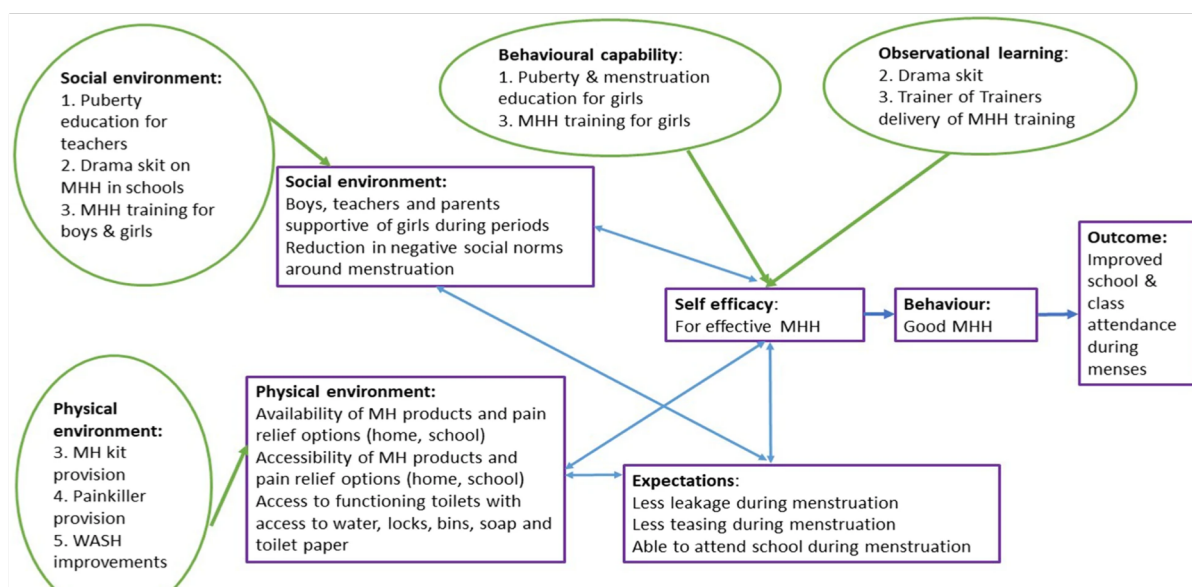


Figure 1: Theoretical Framework for the MENISCUS Intervention (see Nalugya *et al.* (2020)<sup>28</sup> for more detail)

**Priority/Need:**

- Feasibility studies need to be carried out prior to the implementation of projects.
- Need for community to lead design of data collection – local level leaders and community health workers are key here.
- Any data collected and/or results need to be validated.
- Need for better engagement with communities where project benefits may be indirect and/or not instant.

**Future Work/Recommendations:**

Future projects should ensure that local leaders are recruited and consulted during the project development stage. Once the research aims are set, workshops should be held to discuss and plan data collection. Depending on the data being collected this may include potential ambiguity/misinterpretation of survey questions, community ‘buy-in’ of the project, and logistics such as resource and time allocations.

Future projects should explicitly include a data validation phase, and a clear plan for disseminating results to the communities included in the project. Resources must be appropriately allocated to dissemination materials such as brochures and posters, and feedback forums such as feedback focal groups.

**Priority/Need:**

- GIS training and application in WASH.
- Training field staff, researchers and other data collectors in data capturing and data use.
- Training in water governance and management.

**Future Work/Recommendations:**

GIS and data analysis courses specialising on WASH applications should be developed using Uganda specific case studies and applications. These could include university level courses and introductory online courses.

Bespoke field training should be integrated into future projects in preparation for the project’s data collection activities.

**Resources:**

Free online international courses delivered by universities:

- **“Geographic information systems - part 1”**<sup>31</sup>, this course is based on the free software QGIS.
- **“Geographic information systems (GIS)specialization”**<sup>32</sup>, this includes four separate courses and is based on the licensed software ArcGIS.

More general theoretical courses:

- **“Water resource management and policy”**<sup>33</sup>
- **“Introduction to household water treatment and safe storage”**<sup>34</sup>

Resources for teaching children on **WASH topics**<sup>35</sup>



**Priority/Need:**

- Increase in awareness campaigns.
- Empower grassroots workers to inform on gender issues.
- Rejuvenating school health clubs.

**Future Work/Recommendations:**

Future projects will be developed in close partnership with community level organisations.

Engagement with focal communities should be conducted at all project phases and project dissemination activities should be planned with sufficient resources available.

**Priority/Need:**

- Mobile phone applications for real time data collection.
- Data sharing platforms accessible across stakeholders and sectors.
- Rainwater harvesting technologies.
- Water carriers that reduce gender inequities e.g. Hippo Rollers<sup>29</sup>, Pack H2O<sup>30</sup>
- Enhanced hand pump design that increase accessibility to all.
- Decontamination technologies.

**Future Work/Recommendations:**

Future research should include systematic literature reviews on the technologies available and their effectiveness.

Following a review, the feasibility and/or effectiveness of specific technologies may need to undergo field testing



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# APPENDICES

## Appendix A: Stakeholders Involved in the Survey

Non-Governmental Organisations (NGOs)	Government Stakeholders	Academic Stakeholders
<ul style="list-style-type: none"> <li>Advocates for Water and Environment Conservation (AWEC)</li> <li>Byepa International Foundation Uganda</li> <li>Church of Uganda Teso Dioceses Planning and Development Office (COU-TEDDO)</li> <li>EcoSan Club (ESC) Consulting (U) Ltd.</li> <li>Evidence Action</li> <li>Freedom Drillers Ltd.</li> <li>IRC WASH</li> <li>Joint Effort to Save the Environment (JESE)</li> <li>Kagando Rural Development Centre</li> <li>Kigezi Diocese WASH Programme</li> <li>Love Mercy Foundation</li> <li>Norwegian Refugee Council (NRC)</li> <li>Pamo Volunteers</li> <li>Rural Initiative for Community Empowerment West Nile (RICE-WN)</li> <li>Water For People</li> <li>WELTHUNGERHILFE</li> <li>Youth Environment Service-YES</li> </ul>	<ul style="list-style-type: none"> <li>Amuru District Local Government Uganda</li> <li>Bugiri District Local Government</li> <li>Ministry of Water and Environment</li> <li>Namayingo District Local Government</li> <li>Pader District Local Government</li> </ul> <p><b>Government Network</b></p> <ul style="list-style-type: none"> <li>Uganda Water and Sanitation Network (UWASNET)</li> </ul>	<ul style="list-style-type: none"> <li>Gulu University</li> <li>Kampala International University</li> <li>Kyambogo University, Kampala Uganda</li> <li>Makerere University School of Public Health</li> <li>Makerere University, Kampala</li> <li>Uganda Christian University</li> </ul>

## Appendix B: Stakeholder Inclusion Criteria

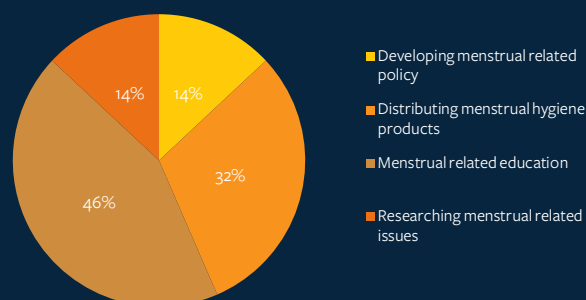
Prior to identifying relevant WASH-related stakeholders for the study, consultation was undertaken amongst the research team in order to identify the types of stakeholders that the survey would be distributed to. 'WASH-related stakeholders' were subsequently defined as:

- Non-Governmental Organisations (NGO), Ugandan NGO networks and forums, academic researcher's or institutions, and Ugandan government bodies or organisations were all included. Schools, universities and faith-based organisations were deemed beyond the scope of this study due to the number across Uganda and the ability to access them remotely.
  - Government bodies were limited to those who researchers already had a rapport and relationship with and who were therefore easily contactable.
  - Academics included those who had demonstrable online evidence of being involved in WASH and/or gender related research, teaching or responsibilities; at public and private universities or research institutions across Uganda; within the last 15 years.
  - NGOs and NGO networks or forums were limited to those with online platforms and websites that showed evidence of WASH and/or gender related projects in Uganda.
- Stakeholders included relevant organisations that were based both in Uganda or internationally. For example, stakeholders included international organisations with Ugandan based projects and initiatives.
- All stakeholders needed to have undertaken projects, work, research, or have responsibilities relating to the provision, development, maintenance, installation, or distribution of WASH and/or gender-related initiatives. As well as those involved in community engagement, fundraising or surveys relating to WASH and/or gender.
- The geographical scope of stakeholder's work was not restricted, and as such included anywhere across Uganda.

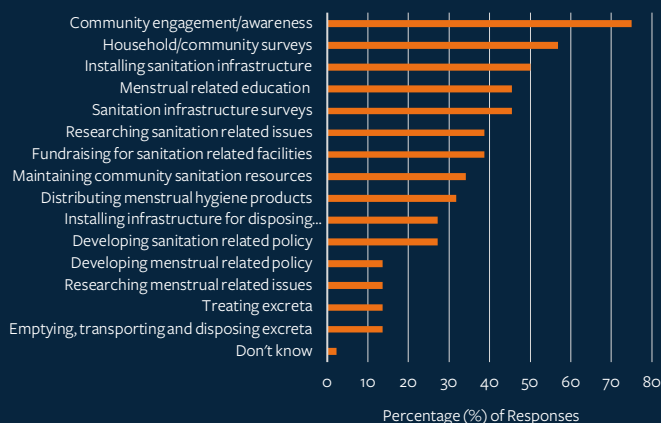
## Appendix C: Main Water-related Activities undertaken by Stakeholders



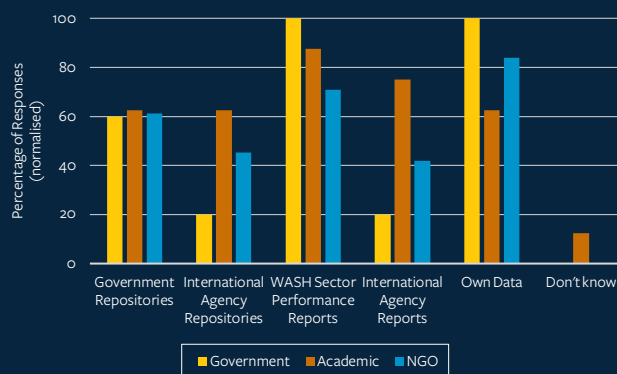
## Appendix D: Menstrual-related Activities undertaken by Stakeholders



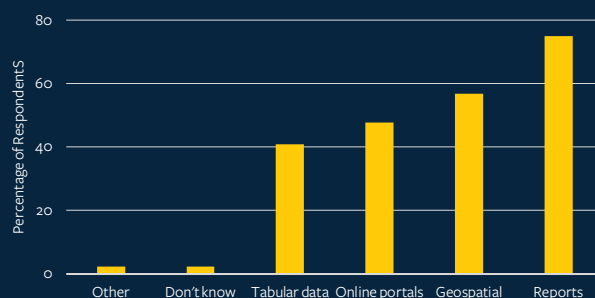
## Appendix E: Main Sanitation-related Activities undertaken by Stakeholders



## Appendix F: Data Sources Used by each Stakeholder Type

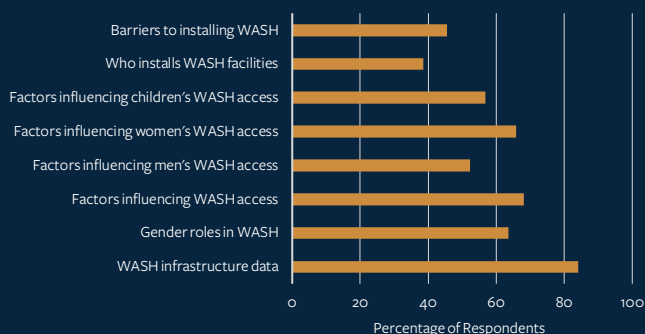


## Appendix G: Types of Data Used by Stakeholders

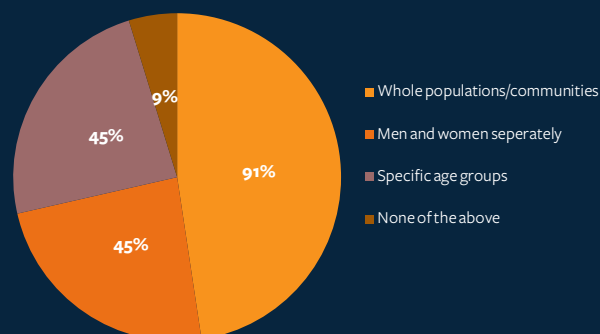




**Appendix H: WASH-related Data Used by Stakeholders**



**Appendix I: Stakeholder Use of WASH-related Indicators**



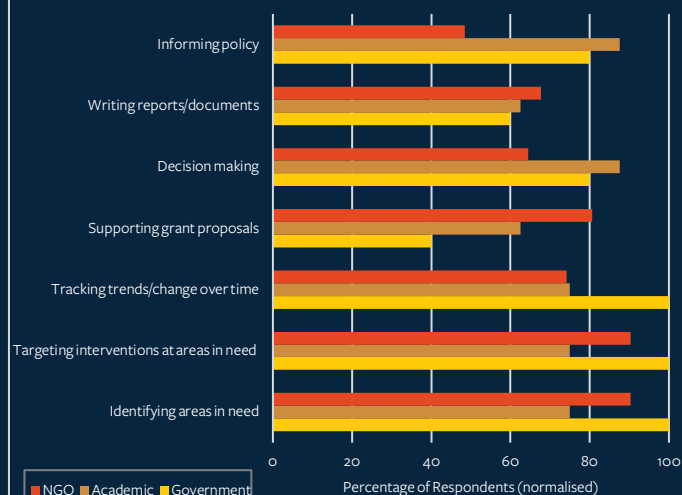
**Appendix J: Age-specific WASH-related Data: Stakeholder Suggestions and Needs**

Data on Children	Menstrual Hygiene related Data
<ul style="list-style-type: none"> <li>Water per Capita for children</li> <li>Children and youth in WASH</li> <li>Number of children under 5 who have suffered from a diarrhoeal related disease in the past 6 months</li> <li>Data on participation of youth in WASH</li> </ul>	<ul style="list-style-type: none"> <li>Data on Menstrual Hygiene Management (MHM) among rural women</li> <li>Access to MHM services among the age group 25 to 40 years</li> <li>Access to MHM services</li> <li>Data on menstrual management for adolescent girls who are in and out of school</li> </ul>
Data on Adolescents	School related Data
<ul style="list-style-type: none"> <li>Data on adolescents in relation to sanitation</li> <li>WASH data on adolescents, young people 12-24</li> </ul>	<ul style="list-style-type: none"> <li>Schools data and indicators per year</li> <li>Data on girl's hygiene regarding menstrual disposal in schools</li> <li>When do children drop out of school</li> </ul>
Data on Older People	General Age-specific Data
<ul style="list-style-type: none"> <li>Percentage of elderly people accessing water</li> <li>Above 60 years</li> </ul>	<ul style="list-style-type: none"> <li>In WASH, all ages matter</li> <li>Water related disease infections</li> <li>Gender related data</li> </ul>
Data on Disabled People	Male-specific Data
<ul style="list-style-type: none"> <li>People with disabilities in WASH</li> </ul>	<ul style="list-style-type: none"> <li>Men's involvement in WASH activities, aged 5-40 years</li> </ul>
WASH Access-related Data	Other Data Needed
<ul style="list-style-type: none"> <li>Age specific access to clean water</li> <li>Transboundary water issues and gender representation</li> <li>Access to water, sanitation and hygiene facilities</li> <li>Access to sanitation facilities</li> </ul>	<ul style="list-style-type: none"> <li>Updated lists of Community Development Officers (CDOs) water and sanitation</li> <li>Data on who funds WASH projects in Uganda/ worldwide</li> <li>Demographic data and age of existing facilities</li> </ul>

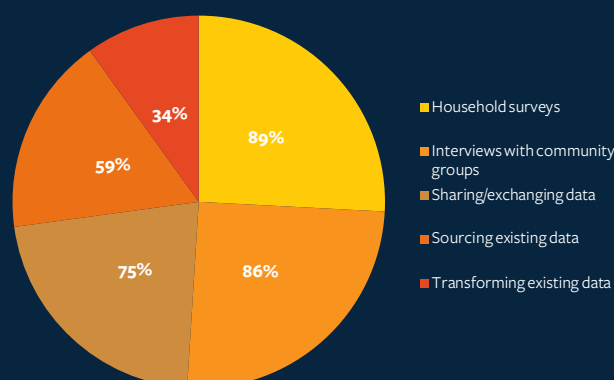
**Appendix K: Gender-specific WASH-related Data: Stakeholder Suggestions and Needs**

Data on Older and Disabled People	Menstrual Hygiene related Data
<ul style="list-style-type: none"> <li>Access to WASH for the disabled in non-school setting.</li> <li>Water design for disable persons</li> <li>Access to WASH for elderly</li> </ul>	<ul style="list-style-type: none"> <li>Gendered Menstrual Hygiene Management</li> <li>Data on the roles of men in promoting WASH especially menstrual management in rural households in Uganda</li> </ul>
Male-specific Data	School related Data
<ul style="list-style-type: none"> <li>Facts on low participation of men in WASH</li> </ul>	<ul style="list-style-type: none"> <li>WASH data on girls in and outside the school system</li> </ul>
Data on WASH Facilities and Services	Data on WASH Planning/Management
<ul style="list-style-type: none"> <li>Percentage of water sources managed by men and percentage of water sources managed by women</li> <li>Female roles in relation to WASH infrastructure maintenance and operation</li> <li>Who influences access and investment in WASH services at household level</li> </ul>	<ul style="list-style-type: none"> <li>Roles in planning/decision making and water management (operation and maintenance) of systems/facilities</li> <li>Composition of Water and Sanitation User committees</li> <li>Percentage of women taking key positions Water Management Committees</li> <li>Hygiene management</li> </ul>
WASH Access-related Data	Other Data Needed
<ul style="list-style-type: none"> <li>Access to water, sanitation and hygiene facilities</li> <li>Access to clean water</li> <li>Access, use, collection</li> <li>Access to hand-washing facilities</li> <li>Data on access to WASH services</li> <li>Barriers to women's access to clean and safe water</li> </ul>	<ul style="list-style-type: none"> <li>Gendered WASH data for 2010 to 2020</li> <li>All wash data should be gender disaggregated</li> <li>Roles of both men and women in WASH</li> <li>Data on women accessibility to WASH initiatives.</li> <li>Transboundary WASH data</li> <li>Disaggregated income to see how much women can contribute to operations and management</li> </ul>

**Appendix L: Stakeholder Uses of New Data**



**Appendix M: Respondent Views on Acquiring New Data**



## Appendix N: Workshop Agenda, Wednesday 17<sup>th</sup> March- Friday 19<sup>th</sup> March 2021

Time (EAT)	Session 1: Key Barriers to Gender Equity in WASH		Session 2: WASH Data Availability and Needs		Session 3: Priorities and Needs 2021-2030	
	Schedule	Speaker	Schedule	Speaker	Schedule	Speaker
10:00am	Introduction <ul style="list-style-type: none"><li>Welcome</li><li>Opening remarks from Gulu University</li><li>Workshop objectives</li><li>Team introductions</li></ul>	Dr Collins Okello (GU)	Introduction <ul style="list-style-type: none"><li>Welcome</li><li>Workshop objectives</li><li>Team introductions</li></ul>	Dr Claire Dooley (UoS)	Introduction <ul style="list-style-type: none"><li>Welcome</li><li>Workshop objectives</li><li>Team introductions</li></ul>	Dr Claire Dooley (UoS)
10:15am	Participants Activity: Introduce your organisation via our interactive map	Dr Claire Dooley (UoS)	Participants Activity: <ul style="list-style-type: none"><li><i>Who does your organisation work with?</i></li><li>Interactive polls</li></ul>	Dr Claire Dooley (UoS)	Participants Activity: Introduce your organisation via our interactive map	Dr Claire Dooley (UoS)
10:30am	Presentation: Overview of Key Barriers to Gender Equity in WASH	Dr Claire Dooley (UoS)	Presentation: Types of WASH Data and The Gaps	Dr Martine Nyeko (GU)	Presentation: WASH Priorities and Needs 2021-2030	Dr Andrew Dansie (UNSW)
11:00am	Participants’ Activity: Share Experiences <ul style="list-style-type: none"><li><i>We want to hear your stories and experiences about gender differences in access to WASH</i></li></ul>	Dr Claire Dooley (UoS)	Participants’ Activity: Open question and answer session	Dr Martine Nyeko (GU)	Participants’ Activity: Breakout rooms and mall group discussions <ul style="list-style-type: none"><li>Priorities Moving Forward</li></ul>	Dr Andrew Dansie (UNSW), Dr Claire Dooley (UoS) & Mair Thomas (UoS)
11:30am	<i>Break</i>		<i>Break</i>			
11:45am	Presentation: Stakeholders Use of Gendered WASH Data in Uganda: Online Survey Results	Mair Thomas (UoS)	Presentation: Examples of Data and How they can be Used	Dr Claire Dooley (UoS)	<i>Return from breakout rooms &amp; break</i>	
12:15am	Participants’ Activity: Exploring stakeholder’s own data via an interactive brainstorm <ul style="list-style-type: none"><li><i>We want to know what data you collect and how you use it</i></li></ul>	Mair Thomas (UoS)	Participants’ Activity: Open discussion session	Dr Claire Dooley (UoS)	Participants Activity: Reporting back from groups about priorities and needs moving forward	IRC WASH & ACTS Uganda
12:45am	Session summary and Closing remarks	Dr Andrew Dansie (UNSW) & Dr Martine Nyeko (GU)	Session summary and Closing remarks	Dr Andrew Dansie (UNSW)	Workshop summary and Closing remarks	Dr Claire Dooley (UoS) & Dr Andrew Dansie (UNSW)

*Note: Gulu University (GU), University of Southampton (UoS), University of New South Wales (UNSW)*





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## Collaborators

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