Undoing Inequity: inclusive water, sanitation and hygiene programmes that deliver for all in Uganda. Full mid-term review report.

Disabled woman investigating a movable wooden toilet seat design.

By Lisa Danquah
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Acronyms and abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ATC	Appropriate Technology Centre
CCDRP	Cross Cutting Disability Research Programme
CLTS	Community-Led Total Sanitation
CoU-TEDDO	Church of Uganda -Teso Dioceses planning and Development Office
CRPD	Convention on the Rights of Persons with Disability
DAPP	Development Aid from People to People
DFID	Department for International Development
FGDs	Focus Group Discussions
INESOR	Institute for Social and Economic Research
LCDIDC	Leonard Cheshire Disability and Inclusive Development Centre
LSHTM	London School of Hygiene and Tropical Medicine
MDGs	Millennium Development Goals
MTR	Mid-term review
NETWAS	Network for Water and Sanitation Uganda
SHARE	Sanitation and Hygiene Applied Research for Equity
UCL	University College London
UN	United Nations
WASH	Water, Sanitation and Hygiene
WAU	WaterAid Uganda
WAZ	WaterAid Zambia
WEDA	Wera Development Agency
WEDC	Water, Engineering and Development Centre

Glossary

Standard explanation of terms and technologies

Term/technology	Explanation
Access	People who are described as having access to a water or sanitation service if they can use a functioning facility within a reasonable distance of their home, and without exclusion on the grounds of race, tribe, religion, disability, age, illness, gender or other cause.
Borehole/tubewell	A cylindrical hole (usually greater than 20m deep and less than 0.5m in diameter) constructed to allow groundwater to be abstracted from an aquifer.
CLTS	Community-led Total Sanitation (CLTS) is an approach to the promotion of sanitation which brings about a collective community decision to reject open defecation. Communities strive to achieve Open Defecation Free (ODF) status. CLTS in its 'pure' form does not recommend or subsidise specific sanitation technologies
Coverage	The proportion or percentage of the population who have an 'improved' water or sanitation service, as defined by the WHO/UNICEF Joint Monitoring Programme (JMP).
Handpump	Devices which raise underground water to the surface and are operated by hand. They are available in various types (e.g. Afridev, India, Nira).
Hardware	The 'hard' or physical infrastructure (e.g. pumps, pipes, taps and toilets) which make water, sanitation and hygiene services possible.
Hygiene	Personal and household practices such as handwashing, bathing and management of stored water in the home, all aimed at maintaining cleanliness and health.
Inclusive design	Infrastructure design that takes into account the needs of women and men who have difficulties using standard infrastructure because of disability, age, chronic illness or other factors

Infrastructure	The basic physical and organisational structures needed for a society or enterprise to function. In this paper we refer to the 'hard' or physical infrastructure (e.g. pumps, pipes, taps and toilets) and the 'soft' infrastructure (especially community-level management structures).
Installed borehole	In the narrow sense in relation to this study, this refers to a borehole that has been driven, bored or drilled, with the purpose of reaching groundwater supplies within a community.
Menstrual Hygiene Management (MHM)	Women and adolescent girls use a clean material to absorb or collect menstrual blood, and this material can be changed in privacy as often as necessary for the duration of the menstrual period. MHM includes soap and water for washing the body as necessary, and having access to facilities to dispose of used menstrual management materials.
Open defecation	Defecation in fields, forests, bushes, bodies of water or other open spaces.
Open defecation free	Open defecation free – an aspiration in most total sanitation approaches.
PHAST	Participatory Hygiene and Sanitation Transformation
Pit latrine with slab	This is a dry pit latrine whereby the pit is fully covered by a slab or platform that is fitted either with a squatting hole or seat. The platform is solid and can be made of any type of material (concrete, logs with earth or mud, cement, etc.) as long as it adequately covers the pit without exposing the pit contents other than through the squatting hole or seat.
Rehabilitated borehole	Rehabilitation is the action taken to repair a borehole whose productivity has declined or that has failed through lack of monitoring and maintenance of the pump or well structure.
Sanitation	In the narrow sense, the safe disposal or re-use of human excreta. In the broad sense, excreta management together with solid waste and storm water management.
Sanitation technologies	Latrine designs including traditional pit latrine with concrete sanplat, traditional pit latrine without slab, ventilated improved

	pit latrine, waterborne toilet.
Sector	The arena in which the collective endeavours of governments, donors, the private sector and civil society collaborate to improve water, sanitation and hygiene services.
Software	Activities which mobilise households and communities and establish the 'soft' infrastructure (especially community-level management structures) which is necessary for the functioning of water, sanitation and hygiene services.
Surface water	Term used to describe rainwater that runs over land (i.e. does not infiltrate the ground). Surface water, unlike groundwater, is generally not safe for consumption because it accumulates pathogens, metals, nutrients and chemicals as it flows across contaminated surfaces.
Sustainability	Sustainability is about whether or not WASH services and good hygiene practices continue to work and deliver benefits over time. No time limit is set on those continued services, behaviour changes and outcomes. In other words, sustainability is about permanent beneficial change in WASH services and hygiene practices.
Tapstand	A distribution system of small diameter MPDE pipes, laid in trenches, feeds tapstands. A tapstand is a concrete post supporting a 15mm mild steel riser pipe from the pipeline to a bibcock.
Tippy tap	A low-cost water dispenser for handwashing, usually made from a plastic container
Traditional Pit Latrine with concrete sanplat	The sanplat is the cheapest and most basic pit latrine. It is a small concrete platform (usually 60x60cm or smaller), laid on top of logs or other supporting material traditionally used to cover the pit. The purpose of the sanplat is to provide a sanitary (san) platform (plat) which can be easily cleaned to limit the presence of helminths such as hookworm.
Traditional pit latrine without	This uses a hole in the ground for excreta collection and does not have a squatting slab, platform or seat. An open pit is a

slab	rudimentary hole.
Unprotected source	A source likely to provide water that is unsafe for drinking, e.g. an unprotected spring or hand-dug well, a street vendor or tanker.
Ventilated improved pit latrine (VIP)	This is a dry pit latrine ventilated by a pipe that extends above the latrine roof. The open end of the vent pipe is covered with gauze mesh or fly-proof netting and the inside of the superstructure is kept dark.
WASH	Water, sanitation and hygiene
WASH sector	The arena in which the collective endeavours of governments, donors, the private sector and civil society collaborate to improve water and sanitation services.
Water technologies	Boreholes and rainwater harvesting
Waterborne toilet	Household or public toilet that that disposes of human liquid and solid waste, by using water to flush it through a drainpipe to another location for disposal (Ministry of Health Uganda).

Sources:

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Executive summary

Background and methodology

Through this MTR study, undertaken in the Amuria and Katakwi districts of Uganda in May–June 2014, we sought to help build an evidence base on common environmental, attitudinal and institutional barriers to accessing WASH faced by vulnerable individuals. A researcher from the International Centre for Evidence in Disability based at the LSHTM led the review on behalf of WaterAid UK in collaboration with project collaborators including the WEDC at Loughborough University, WAU and the ATC. This research was funded by SHARE through funding received by UK aid from the DFID.

The initial baseline data for the study was collected in 2012 by the LCDIDC.

The intervention comprised three components, including water technologies involving the construction of new and rehabilitated boreholes in schools and communities and sanitation and hygiene approaches.

Sanitation and hygiene approaches included the Umoja approach (a combination of community-led total sanitation and Participatory Hygiene and Sanitation Transformation), with mobilisers structuring discussions around a 'barrier analysis'[3] to raise awareness of differing access requirements. Information about latrine design options, including seats (static and moveable), was also made available. At the institutional level, latrines were made accessible to provide privacy for girls to wash their bodies during menstruation, and wash stained clothing and any re-usable pads. Various latrine designs for households were publicised through demonstration toilets. Information was developed in accessible formats and in appropriate language so everyone could access the relevant information.

The intervention was delivered by the Church of Uganda – Teso Dioceses planning Development Office (CoU-TEDDO) and Wera Development Agency (WEDA). ATC are the major research body acting through the Ministry of Water and the Environment whose aim is to undertake action research, promotion and dissemination of appropriate technologies and approaches for water and sanitation. Within the context of this study, ATC were the main in-country research partners at baseline and mid-term.

The purpose of the mid-term review was to assess the early impacts of the intervention and to test and refine the baseline data collection tools for the project evaluation in 2016.

Responding to inequity and inequality, inclusive WASH– an important new concept in international development – seeks to understand and address the varying needs of people and local contexts, rather than promoting a one size fits all approach.

For the purposes of this study, we include in the 'vulnerable people' group people who live with a disability, people with chronic illness and older people – groups that are consistently found to have difficulty accessing WASH services (see box 2.1). Specifically we sought to understand what barriers exist to the equitable use of WASH services and how experiences of vulnerable individuals might differ from those of non-vulnerable individuals in the same households and communities.

This study used a mixed methods approach, which employed of both quantitative and qualitative methods, including questionnaires, interviews, focus groups, surveys and structured observational tools. Information was collected from:

- Vulnerable individuals and heads of their households
- Members of their communities
- Community leaders
- Teachers
- Officials within ministries and local government
- Experts and advocates in civil society working both in the WASH sector and in groups representing people with disabilities, those who live with chronic illness and older people.

The mid-term sample re-visited 57 households in areas in which the way in which the intervention had been delivered varied, to assess the early impacts of the intervention on the target communities. The baseline tools were redesigned and refined, with new additional areas and new questions to assess the early mid-term impacts to ascertain whether changes had occurred. All households in each area were re-visited and all tools from baseline were re-administered as part of this review.

Among our key findings are:

Access to new water technologies

- 24 of the 57 (42.1%) households at mid-term reported that they were using waterpoints (i.e. boreholes; herein referred to as new water technologies) that had been constructed, installed or rehabilitated in their community within the last two years since baseline.
- Of the households reporting using new water technologies, three quarters included a vulnerable member and the same proportion reported now exclusively using the new or rehabilitated facility during both the rainy and dry seasons.
- The number of vulnerable individuals reporting that they could access potable water at mid-term had increased since baseline. At mid-term 76% of vulnerable individuals reported being able to access drinking water compared to 65% at baseline.
- Only one vulnerable person reported being consulted in the design of the new water technology. This is surprising, given that one of the objectives of this research was to encourage meaningful participation. This result should be further explored at endline and mapped against the construction of actual facilities as

determined from the project implementers, to investigate reported changes against actual changes.

- At baseline, nearly 70% of vulnerable individuals reported experiencing difficulty collecting water. This reduced to 54.6% at the mid-term.
- Only one vulnerable individual reported being told not to touch water or water sources because they had a disability or sickness or were older. This was a significant reduction from baseline when 19% of vulnerable people reported being told not to touch water sources. Although this is not a direct comparison, the findings are notable.
- All six of the households that reported not having enough water to drink included a vulnerable member. Most of the people reported to not receive enough drinking water were older people and children.
- In more than 40% of the waterpoints assessed, no barriers caused by the path surface, obstacles or steepness of the path were observed.
- Major barriers, such as high steps and challenging access, were reduced from baseline. In most instances (over 80%) the handpump was easy for all to use.
- One rainwater-harvesting jar was installed in a household with a person with a severe disability and an older person. The rainwater-harvesting jar had an overwhelmingly positive benefit for the whole household who now have greater access to water.

Access to new sanitation technologies

- 18 of the 57 households at mid-term had constructed, installed or rehabilitated a new or existing latrine within the past two years. Of those 18, 89% were now using this new or rehabilitated latrine as their main or only toilet facility.
- Over 70% of the households that had installed a latrine included a vulnerable member.
- The number of households reporting taking five minutes or less to reach the toilet facility significantly increased between baseline and mid-term – by 23%, from 21% to 44%.
- 70% of vulnerable individuals indicated that they primarily used the same toilet facility as other household members. This was an increase from baseline, when 67% of vulnerable individuals reported using the same facility.
- Open defecation was still a challenge with about 19% of households identified to be practising this, based on results from the Latrine Observation Checklist. In the 11 households who practised open defecation, eight included a vulnerable member.
- The percentage of vulnerable individuals who could reach the toilet facility in less than five minutes increased from 21.6% at baseline to 44.4% at mid-term.
- The percentage of vulnerable individuals who reported being able to use the toilet facility without assistance increased from 75% at baseline to 89.2% at mid-term review.

Menstrual hygiene management

- At the household level, more than 80% of women and girls reported being able to bathe or wash themselves throughout the month. The main materials mentioned included soap, water and pieces of cloth.
- Access to a system to discretely dispose of sanitary protection waste was poor. The main disposal place reported was in a pit latrine.

Physical safety and security

- Mixed results were reported regarding physical safety and security when accessing latrines, with some respondents saying they felt safe and comfortable and others reporting that they felt unsafe because the latrine area had bushes around or was too far away. Fear of snakes was a commonly reported issue, especially among those who practised open defecation.
- Over 70% of respondents reported being aware that women and girls felt safe to use the latrine at night. For those who reported that women and girls did not feel safe, the main issues reported included attacks by strangers, rape and the latrine being far from the main household. However, this finding must be interpreted with caution because the respondent might have been answering on behalf of another household member so the answer might represent opinion rather than fact.

Access to hygiene

- At the household level, over 80% of household heads reported that they could bathe or wash themselves every day.
- 94.8% of vulnerable individuals reported that they could wash or bathe themselves every day, compared with 80% at baseline. The level of satisfaction with the regularity of bathing and performing personal hygiene activities slightly decreased since baseline, from 63% to 59%.
- Only 21% of households had access to a handwashing facility near the latrine or dwelling.

Policy and institutional arrangements

- There are strong working relationships between organisations working in the WASH, disability, HIV and aging sectors.

Recommendations

The recommendations emerging from this MTR are presented to follow the format of the results. These recommendations are based on the findings and observation of the delivery of the intervention in target communities.

Recommendations for WAU

Access to water

- Long distances to waterpoints continue to be a problem for many older people and people with severe disabilities. Further exploration is needed to assess whether alternative options, e.g. rainwater harvesting, can be made available to those most in need.

Access to hygiene and sanitation

- Accessibility and safety audits should be routinely conducted after the construction of new school WASH facilities, as part of the quality control and sign off process.
- Project implementers include providing information on accessible latrine options, which should emphasise the benefits to all users of user-friendly designs. Staff should also emphasise the labour-saving benefits and consult vulnerable groups, not only people with disabilities, but also groups including older people and people with chronic illnesses.
- Emphasis should also be placed on effective monitoring of community mobilisation and information dissemination about sanitation and hygiene and subsequent changes implemented by households and communities.

Recommendations for the endline

Continued investment

- The intervention was not as advanced as expected at the time of the mid-term (see table 3.1). Continued investment and emphasis on carrying out the inclusive WASH approach within the 52 villages included in the baseline survey is vital so that outcomes and potential impacts can be measured during the endline.

Access to water

- To ascertain the reach of the intervention on target communities, it will be important to establish and understand the number of new or rehabilitated water technologies installed in each of the target communities by the implementing partners. At mid-term, apart from the self-reported questions asked and waterpoint observation, it was difficult to verify the number of new or rehabilitated water technologies.
- Further exploration of why new water technologies have been installed should be explored at endline to assess whether communities are aware that the installation of such technologies formed part of the intervention.
- For households not accessing new water technologies, the reasons why new technologies were not constructed in their communities should be explored.

- The number of households with vulnerable members using alternative water technologies e.g. rainwater harvesting systems is important to assess the reach of the intervention.
- At endline, it would be helpful to assess why particular households continue to use unprotected water sources despite protected water sources being within distance of their households. This was observed at mid-term.
- The waterpoint observation tool might need adjusting at endline, to capture information about inclusive design modifications (e.g. increased space, ramps, container stands, etc).
- At endline, the results of the process monitoring during the project cycle should be analysed to provide background and context.
- The development of a set of key indicators in relation to water will be important at endline to enable refinement of data-collection tools and monitor the project objectives.

Access to sanitation

- The degree to which households are accessing new latrines should be assessed at endline through incorporation of the same questions used at mid-term to assess how many households have installed or constructed latrines. This should also include the development of a set of key indicators for use at endline so questions can be further refined.
- The reasons why households are continuing to practise open defecation should be explored, and the extent to which the triggering and follow up has addressed this during the Umoja approach should be investigated to assess why the practise continues. Further exploration of why open defecation is more common among vulnerable households should also be explored.
- At endline all households should have a household latrine observation checklist administered to assess their latrine facilities.
- For households with a vulnerable member who have not made specific changes to their latrine facilities, the reasons why not should be explored further in in-depth interviews.
- At endline, to ascertain what has been done, it will be important to understand whether any activities have been conducted in the areas where no intervention was identified at mid-term.

Access to hygiene

- Further questions should be incorporated at endline to assess whether changes have been made to access to hygiene facilities at the household level, and the information received about such options.
- Further exploration of the low presence of handwashing facilities should be explored at endline, and the reasons for this.
  MHM at household level requires more detailed exploration because this was reported to be poor at mid-term. It would be worthwhile to explore opportunities for integrating messages to improve MHM at household level using the Umoja

approach and initiatives to train women, for example in how to make low-cost sanitary pads, with appropriate messaging and links to income generation.

School WASH

- At endline, it would be useful to visit all the schools included at baseline, including the three assessed at mid-term, to assess the status of the intervention. It would also be useful to compare enrolment rates in schools of children with and without disabilities where there has not been an inclusive WASH focus in the community or school with schools where there has been an inclusive WASH approach.
- To assess the impact of the intervention specifically on children with disabilities and girls in terms of MHM, in-depth interviews could be undertaken with children to assess the impact of the facilities.
- Information on why children with disabilities choose to enrol within the three specific schools visited at mid-term, in particular the school which reported a five-fold increase in enrolment of children with disabilities, would be of interest to explore. The home location of children would be useful to assess whether they are within the school's geographical catchment area.
- Interviews with local ministry officials to discuss the impact of WASH facilities in schools should be included at endline.

Caregivers

- The role of caregivers in providing assistance to vulnerable household members WASH needs could be examined in greater depth and suggestions of how their role could be supported or reduced from the perspective of an inclusive WASH approach.

Levels of participation and empowerment

- Investment and emphasis on improving meaningful participation and empowerment of vulnerable groups should continue until the endline. Any changes resulting from this continued focus should be assessed across all target communities at the endline.

Evaluation of data-collection tools for endline

- The development of a set of key indicators at endline in relation to the objectives of the research should be completed. Such indicators will then enable more focused data analysis.
- All tools should be re-administered, but quantitative tools should be substantially refined to reduce the time burden on respondents and data collectors, and also to ensure only relevant information is collected. Sets of key indicators will enable this refinement.
- The MTR established that many more vulnerable individuals were identified by a detailed roster and screening questions than the original sampling identified. It would be useful to explore and understand the impact of the intervention on these groups also.

- Further questions should be included in the individual questionnaire (Tool 2), in the section on access to sanitation facilities that includes the type of toilet facility used by vulnerable individuals who do not use the same toilet facility as other household members. This would ascertain whether vulnerable individuals are using inferior facilities to other members of their households.
- The individual level questionnaire (Tool 2) should also include an additional question on the level of difficulty experienced by vulnerable individuals reporting being able to use the toilet facility without assistance. The current question only captures whether assistance is needed.

Contents

Figures

Tables

1 Undoing Inequity research

This was a MTR of the Undoing Inequity project. Before presenting the MTR, this section provides an overview of the approach and background of the research project, the inclusive WASH approach and the WASH intervention component of the project.

1.1 Approach and background

The Undoing Inequity project is an action research project implemented in 13 sub-counties in the Amuria and Katakwi districts of North Eastern Uganda. The baseline and MTR are key components of this project.

An initial pre-intervention baseline study for the Undoing Inequity project was done in 2012 in, Zambia and Uganda, led by LCDIDC in collaboration with WaterAid UK, WAU, WAZ, WEDC and other implementing partners to gather quantitative and qualitative baseline data. This report focuses on the MTR of the Undoing Inequity project in Uganda only. The research was funded by SHARE through funding received by UK Aid from DFID.

This body of research has its origins and foundations in a roundtable meeting initiated by WaterAid in 2011 alongside the SHARE consortium and Leonard Cheshire Disability's DFID-funded CCDRP, with the participation of researchers and policy makers with expertise in WASH, equity, inclusion and disability. From this roundtable meeting a briefing note was developed: "Including disabled people in Sanitation and Hygiene Services",[4] which outlined existing knowledge and practices on WASH for disabled people, chronically ill and older people (referred to as 'vulnerable' in the protocol due to potential challenges they might face when accessing standard WASH facilities), evidence gaps and key research priorities. The roundtable meeting laid the foundation for the 'Undoing Inequity: inclusive sanitation and hygiene programmes that deliver for all' research project.

Key suggested priorities and actions were to assess interventions designed to benefit disabled people within mainstream sanitation approaches such as CLTS and to undertake in-depth quantitative and qualitative research with disabled people, their families and communities in two countries. Further key priorities were to develop guidelines regarding baseline questions, indicators and outputs for other organisations to replicate and scale up.

1.2 Research aim and questions

1.2.1 Research aim

The aim of the Undoing Inequity research is to develop and test an approach that aimed to improve access to WASH for all, and thereby provide equal access to people who are marginalised and vulnerable.

1.2.2 Specific research questions

The specific research questions of the overall Undoing Inequity project are:

1 What are the problems and opportunities experienced by vulnerable people and their households in accessing and using WASH facilities?
2 What solutions and approaches improve access to WASH for all within a community WASH intervention?
3 What are the benefits of improved access to WASH for vulnerable individuals and their families?
4 What are the additional programme costs linked to undertaking an inclusive WASH approach?
5 What tools can be used in future research and in the programme cycle to support WASH programming that reduces intra-household disadvantage, and measure the impact of an inclusive approach to WASH?

1.2.3 Research methodology

The Undoing Inequity research is a straightforward action-research design, carried out in three phases[5–8] (Figure 1.1). The Phase 1 pre-intervention baseline data collection was designed to answer the first research question. This was led by LCDIDC as part of the DFID-funded CCDRP, in partnership with WaterAid and WEDC. Data was collected from January to August 2012.

Both quantitative and qualitative methods were used to gather evidence. This included quantitative surveys of households and communities, and qualitative in-depth individual interviews and focus group discussions to complement the quantitative data.

Phase 2 of the study involved developing, implementing and testing an inclusive WASH programme to address barriers faced. Based on the analysis of the baseline data, a set of actions was designed and implemented to make the subsequent WASH intervention more inclusive and accessible. This phase ran from March 2013 to April 2014. The MTR followed the development and testing of an inclusive WASH approach and forms part of the second phase.

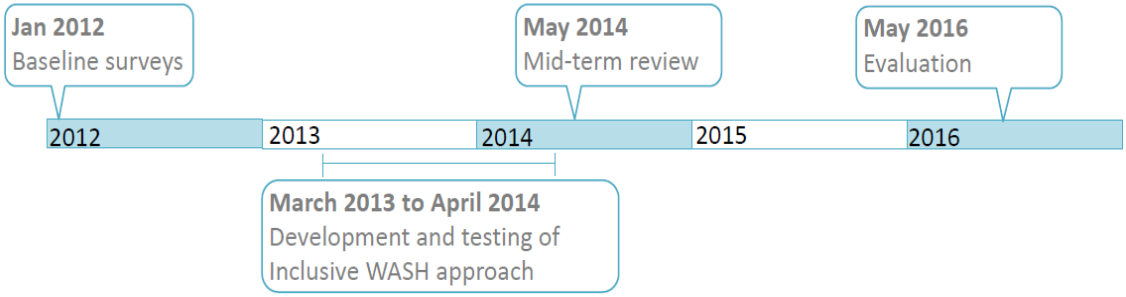


Figure 1.1: The project cycle

Box 1.1: The inclusive WASH approach

Inclusive policies and guidelines: A policy framework that ensures that plans, budgets, guidelines, implementation of programmes and performance monitoring take into account the different needs and aspirations of vulnerable groups and those in hard to reach locations.

An inclusive approach means that:

1. The **capacity of practitioners** to design an inclusive WASH intervention to address barriers faced by vulnerable people **is developed over several stages.** Mechanisms include awareness-raising and technical training, and participatory barrier analysis.
2. **Baseline study** conducted in the target population to understand the barriers faced by vulnerable people when accessing standard WASH facilities in low-income and middle-income countries.
3. Baseline study **findings are analysed**, and ways to address the issues are identified through the WASH intervention developed with key stakeholders (communities, implementing agencies, I/NGOs, and district and national governments).
4. **Community mobilisation** uses participatory approaches that enable different groups to take part, including those with less power.
5. **Information about sanitation and hygiene** includes facts about menstrual hygiene, disability and impairments and communicable diseases. It challenges stigma and discrimination and reinforces the need to provide access to all.
6. **Information is provided in local languages and accessible formats** with pictures for people who cannot read, and audio for people who cannot see. Everyone has access to relevant information about WASH technology options.
7. **WASH facilities that provide privacy** for women to wash their bodies, and clean stained clothing and any cloths used for MHM.
8. **Public water sources** are located and installed in a way that makes them as accessible and user-friendly as possible for everyone.
9. **Public or institutional latrines** in markets, schools and health centres have separate and accessible facilities for males and females. Water is provided inside the women's cubicles for MHM.
10. There are arrangements for the **disposal of sanitary napkins**.
11. **Water-user committees** include women and members of other marginalised groups, such as people with disability. Meetings are facilitated to ensure meaningful participation.
12. **Tariffs include options** for the poorest and people who cannot pay.

1.3 The inclusive WASH approach

WaterAid advocates that, to be inclusive, a WASH intervention or programme should respond to the differing needs and requirements of people and the local context, rather than promote a 'one size fits all' approach. One of the key features of the Undoing Inequity project was to learn what an inclusive WASH approach looks like, and the possibility of such an approach, together with its effectiveness and whether it would be realistic, doable and scalable. Box 1.1 provides a list of suggestions of what such a programme could consist of.[9]

1.4 Study setting

The baseline study (Phase one) was conducted in 52 selected villages in the districts of Katakwi and Amuria in Uganda, which have an estimated total population of 600,000. Phase two of the project – the implementation component of the study – was implemented in 52 communities with a total population of 21,758 people. WaterAid worked with the District Local Governments and partner NGOs WEDA and CoU-TEDDO to implement the WASH intervention across the selected communities. ATC were the in-country research partners at baseline and mid-term.

Figure 1.2: Map of Uganda showing the study districts.

1.5 The WASH intervention

The implementation component of the project ran from March 2013–April 2014 (Figure 1.1). WAU partners are implementing WASH programmes in Amuria and Katakwi districts in Uganda. Mainstreaming inclusive WASH is a key strategic priority in WAU's plans (2011–2016) and they are passionate about realising their ambitions. WAU had previously carried out projects which piloted inclusive WASH, and had learnt from the small-scale approaches. They wanted to take a more systematic approach to mainstreaming inclusive WASH at scale and being able to generate the evidence to convince others to do the same. WAU is a respected and credible player in the national and district WASH sector. They can draw on existing relationships with key stakeholders as part of this project.

One of the key drivers of the Undoing Inequity project was to improve meaningful participation of vulnerable groups. Mechanisms to encourage this include the sensitisation of communities to issues around rights and inclusion, along with a mobilisation process that seeks to identify vulnerable individuals living in the target communities. Work then focuses on ensuring that meetings, training sessions and

planning forums involve these individuals, and that they have the opportunity to express their needs and contribute to decision-making. Last, different accessible WASH facilities are discussed and developed, with monitoring and support provided as people learn how to create and maintain new designs.[10]

1.6 Intervention delivery

The implementation phase of this project, undertaken by CoU-TEDDO[1] and WEDA[2] in partnership with WaterAid, was applied across the study target communities as part of a larger post-conflict project funded by the European Union Water Facility. The wider project was being implemented across post-conflict communities, including the Amuria and Katakwi districts.

The CoU-TEDDO were implementing in the communities of Orungo and Morungatuny in Amuria district and Ongongoja, Ngariam, and Magoro in Katakwi, which are all extremes of the sub-region. WEDA were implementing in Asamuk, Kapelebyong, Wera, Apeduru and Akoromit in the Amuria district, and Omodoi and Usuk in Katakwi district.

The project output reports from the CoU-TEDDO and WEDA provided specific information about what has been delivered as part of the project. Box 1.2 and Box 1.3 provide a general overview of CoU-TEDDO and WEDA implementation activities. This includes villages both within and outside the areas included in this study.

Box 1.2 General summary of overall project deliverables – CoU-TEDDO[1]

Access to water

- 19 boreholes (10 in Amuria and nine in Katakwi) were built, reaching 9,540 people (inc. 5,171 women).
- Eight rainwater-harvesting jars were constructed in households of vulnerable people living far from community water sources, reaching 51 individuals.
- To enhance sustainability of water sources (boreholes), water and sanitation committees (WSC) comprising cluster heads from 19 communities (nine in Katakwi and 10 in Amuria) were trained in their roles and responsibilities, general WASH, operation and maintenance and simple book-keeping.

Access to sanitation and hygiene

- Hygiene and sanitation promotion in 40 communities in Amuria and Katakwi
- 18,697 people (8,559 males, 9,837 females, 152 males with disabilities and 149 females with disabilities) are now accessing improved sanitation.
- 2,617 new latrines
- 2,218 tippy taps
- 2,312 bath shelters
- 2,626 dish racks
- 2,656 rubbish pits
- Improved hygiene and sanitation in communities enhanced through sensitisations, participatory community monitoring of project activities and community advocacy meetings

Construction of WASH facilities in schools

- The construction of a five stance drainable pit latrine at Ongongoja Secondary School. The facility also included a separate WASH room for girls.

Box 1.3 General summary of overall project deliverables – WEDA[2]

Access to water

- Eight boreholes were drilled and cast. The construction of these boreholes has reduced the walking distance and time spent collecting water, and benefited a population of 2,400 people, of whom 94 have disabilities.
- Eight rainwater-harvesting jars were completed, one of which was in the Omodai sub-county, which formed part of the study areas.
- Several activities were conducted in relation to the operation maintenance follow up of previously constructed water sources.

Access to sanitation and hygiene

- Mobilisation and triggering of communities using the Umoja approach [Box 1.4]. In total 60 communities were triggered; however, from available data it is not possible to ascertain the specific number from the MTR sample.
- As a results of the Umoja approach, the general findings are as follows:
    - 1,083 new latrines
    - 1,427 handwashing facilities
    - 1,125 disk racks
    - 966 bath shelters
    - 1,283 rubbish pits
    - Mobilisation and training of hygiene educators and water and sanitation committee
    - Radio talk shows

Construction of WASH facilities in schools

- Construction of four units of five stance drainable pit latrines with furnished washrooms for girls were completed in four schools of the Akoromit, Katakwi, Bulangira and Gogonyo sub-county. One of the schools (Angodingod Primary School) was one included in the study sample and visited for the MTR.
- Identification of schools to benefit from ferro-cement tanks was in Usuk county. In total, five ferro-cement tanks were constructed.
- Training of school health clubs.

In Uganda, everyone in the project communities was invited to participate, but specific efforts were made to involve vulnerable people and ensure that they effectively participated in all phases of the project cycle. The intervention comprised three components: water technologies, sanitation and hygiene approaches and the Umoja approach.

1.6.1 Water technologies

New and rehabilitated accessible boreholes were constructed in schools and communities. The location of waterpoints was established through facilitated community participation. The water infrastructure was designed to reduce physical barriers to access: access ramps built leading up to the handpump apron, entrances widened and circulation space created around the handpump. Rainwater-harvesting jars were also constructed to bring the water closer to the homes of people with mobility issues. In schools, ferro-cement tanks were constructed to help children, including girls during menstruation, to access water.

The criteria to identify households that benefitted from the rainwater-harvesting jars included:

- Income level of the household
- Existence of vulnerable person, i.e. elderly person, chronically ill person, person with HIV or AIDS, or disabled person
- Distance to the community water source
- Water-stressed communities where drilling was unsuccessful

CoU-TEDDO distributed iron sheets that were used to construct a roof where water was collected, while WEDA identified households with iron-roofed houses or encouraged the target households to buy iron sheets. In some cases a rainwater jar was constructed in the neighbourhood whereby the target household or individual could easily access water.

1.6.2 Sanitation and hygiene approaches

The Umoja approach followed the same steps as any other CLTS programme (i.e. triggering, developing community action plans and training hygiene promoters), but mobilisers structured discussions around a 'barrier analysis'[3] to raise awareness of differing access requirements. Dialogue included facts about menstrual hygiene, disability, and communicable disease. This reinforced the need to provide access to all, and challenged false beliefs that result in discrimination against vulnerable people. Information about latrine design options included seats (static or movable or both), handrails and access ramps. Institutional latrines in schools were installed and made accessible for children with disabilities by addition of handrails for support and separate washrooms for girls to provide privacy to wash their bodies, and clean stained clothing and any cloths used for MHM. The different low-technology designs for households were publicised, e.g. wooden handrails versus galvanised iron handrails in a latrine.

Information was developed with pictures for people who could not read, with audio for people who cannot see and in appropriate language(s) so everyone could access the relevant information.

1.6.3 The Umoja approach

Box 1.4 The Umoja approach

'Umoja' is a Swahili word that means unity. In the context of sanitation promotion it is applied with a twofold meaning. It means unification of sanitation approaches – i.e. CLTS, PHAST, and use of the cluster system, while building on the strengths of each approach to accelerate community action. It also means joint action or cooperation within a community to improve their sanitation and hygiene situation. 'Umoja' is therefore an abridged sanitation promotion approach that uses the strengths and benefits of CLTS, PHAST and clustering to harness the commitment needed to make communities responsible for improving sanitation and hygiene practices and behaviour among households in a specific village.

The Umoja approach,[11] as set out in Box 1.4, is an approach modelled by WAU and partners (CoU-TEDDO and WEDA) that embraces the aspect of community unity in ensuring that all households in a village practice appropriate sanitation and hygiene behaviours. It was initiated by WaterAid to bridge the gap between the various approaches that are being implemented such as CLTS, PHAST and cluster-led approaches used to enhance demand for improved hygiene and sanitation.

In areas where it has been applied, the target aim is for households to transcend from open defecation to improved sanitation and hygiene behaviour on the sanitation ladder.[11]

The Umoja implementation process consists of four crucial steps: community entry, enhancing participatory community action, capacity-building for community structures and community-based follow-up or monitoring and evaluation (see Annex 1 for a detailed overview).

2 The mid-term review – methodology

The MTR ran from April to June 2014. Its main objectives were to learn how the project had impacted the lives of the target groups, to learn what interventions have been effective, to enable interventions to be applied in other contexts, and to test and improve the endline data-collection tools for application across the intervention areas in Uganda in 2016 as part of an external evaluation.

2.1 Study setting

The MTR study was conducted in selected villages in Amuria and Katakwi districts, where WAU partners WEDA and CoU-TEDDO implemented the intervention phase of the Undoing Inequity research (Section 1.40).

2.2 Data-collection tool development

The MTR used the same mixed methods approach as the baseline data collection. The nine data-collection tools developed and administered at baseline were refined and redeveloped for the MTR. The overall entirety of the data-collection tools was kept for comparisons to be made between baseline, mid-term and endline. The purpose of refining and redeveloping the tools was to simplify the initial baseline tools and add additional areas to assess during mid-term. Adjustments were mainly to the head of household questionnaire (Tool 1) and the questionnaire for the individual identified as vulnerable (Tool 2).

Tools were refined and redeveloped following feedback from LCDIDC, WaterAid and WEDC. Minor changes were made to the tools to improve the quality of data; however, any changes took into consideration the need for comparisons between baseline and endline to ensure the validity of the data collected.

The additional areas included:

- Access to new water and sanitation technologies
- Reasons why changes or adaptations had been made
- Sources of information on latrine design options and funding
- Gender-based violence and physical safety
- Inclusive WASH participation and awareness
- MHM for women and girls (including those with a disability)
- Meaningful participation in the programme cycle

The re-developed tools were sent for review and feedback and finalised before the main data collection. Further feedback on the tools was obtained during training of field staff and during pilot data collection in selected villages before the main data collection. Relevant changes were made where necessary before the tools were finalised.

Table 2.1 summarises the nine tools with a description of the purpose of the tool and the method.

Tool	Description	Type	Purpose and method	MTR target sample size
1	Head of household questionnaire	Quantitative	Gather demographic data from heads of households with a vulnerable member and a matched cohort of heads of households without a vulnerable member in the same community. This allowed for comparisons between vulnerable and non-vulnerable households to be made.	60

2	Vulnerable individuals questionnaire	Quantitative	Tool 2 was administered in conjunction with Tool 1. In households with a vulnerable member, tool 2 was administered to the vulnerable individuals. Questions mirrored those in Tool 1: access to drinking WASH, but tool 2 included additional questions about barriers faced by the vulnerable individuals, and their perceptions and opinions of current WASH practices.	30
3	Semi-structured key informant interviews, ministry officials	Qualitative	To understand how vulnerable individuals fare within the community from a policy and practice perspective.	(about 3–6)
4	Focus Group Discussion (FGD): community members/disabled older people/chronically ill	Qualitative	Supplemented Tools 1 and 2, by further exploring perceptions, pursuing issues related to household and community access to WASH for vulnerable individuals.	2 FGDs (6–8 participants each – four vulnerable and four non-vulnerable individuals in two villages)
5	Semi-structured interviews: local officials/ community leaders	Qualitative		Local official – dependent on each area. Community Leaders – in each community.
6	Schools questionnaire and observation checklist of WASH facilities	Quantitative	To assess levels of accessibility of local school WASH facilities	4
7	Semi-structured in-depth interviews with selected vulnerable respondents who had completed Tool 2	Qualitative	For a greater understanding of the barriers that vulnerable people face.	8–12
8	Household latrines – structured observation checklist	Quantitative	Structured Observational Checklist of household latrines.	All households
9	Waterpoint inspection tool	Quantitative	Water Source Observational Inspection of communal water sources, to provide information about the nature, state of repair and accessibility of existing water sources.	In each community

Table 2.1: Summary of data-collection tools

2.3 Sampling

The initial sampling approach of study participants for the original baseline survey was a systematic sampling approach of 175 households with a vulnerable member and 175 control households (households in the same geographical area not including a vulnerable household member).

These individuals were identified using village-level lists of households maintained by the government. The current validated total number of households or individuals identified as vulnerable or non-vulnerable (after the initial baseline in both countries following data cleaning and analysis by LCDIDC in 2014), was 131 households identified as vulnerable and 183 households identified as non-vulnerable. The total sample was therefore 314. This was due to an inconsistency in identifying and ascertaining vulnerable individuals among the study tools, namely the head of household questionnaire (Tool 1) and the individual level questionnaire for the identified vulnerable individual (Tool 2). This resulted in several households being excluded on this basis.

2.3.1 Study population

The MTR used the same study definition of 'vulnerability' as defined during the baseline, with only a slight change in definition, which was related to the category for older people, which was reclassified as 50 years and above and not 65 as stated in the original baseline. This is due to the definition of 'older' in the context of the country following discussions with LCDIDC, and feedback following baseline data collection. Box 2.1 shows the study definition.

Box 2.1 Study definition of 'vulnerable'

For the purposes of this study, those who are included in the group that is considered to have difficulty in accessing WASH are: older people (50+); chronically ill people; people with physical disability, sensory disability or intellectual disability; and people with mental health problems. These people will have different challenges in accessing WASH; however, the categories do not cover everyone who has difficulties accessing WASH. These groups are herein referred to as 'vulnerable individuals' or 'vulnerable people'.

2.3.2 MTR sample

The mid-term sample size was not designed to assess statistically significant differences. The target sample size was 60 households in Amuria and Katakwi districts. The households were selected from a census list compiled from the baseline data. The 60 households comprised a similar number of non-vulnerable and vulnerable households, and individuals were selected from across the pre-selected and study districts or villages following discussion with study partners and assessment of the level of intervention delivery across the study districts. The target household sample was set at 30 non-vulnerable and 30 vulnerable households.

Participants were representative by gender, age, socio-economic characteristics and level of severity of disability. These households or individuals were then selected from the finalised verified list of vulnerable or non-vulnerable households provided from the initial baseline survey analysed by LCDIDC. Before the data collection, participants were informed that a survey team would be visiting the area.

The intervention areas were chosen after discussion and consultation with the project partners, ATC, WEDA and CoU-TEDDO, based on the delivery and rollout of the intervention and level of need of the areas. The re-developed tools from baseline were re-administered within the selected households in the selected villages. This included the head of household questionnaire (Tool 1), individual questionnaire for the identified vulnerable person (Tool 2), community focus groups (Tool 3), key informant tool with local officials or community leaders (Tool 5), in-depth semi-structured interviews with vulnerable individuals (Tool 7), latrine observation checklist (Tool 8) and the water source observation tool (Tool 9).

For the other study components, the same key informants or other identified informants from national government – including Health, Water and Environment, Education and Gender, Labour and Social Development ministries, and those that represent people with disability or older or chronically ill people – were interviewed. This was to understand policies and regulations surrounding vulnerable groups including older people, people with disabilities and chronically ill people.

2.3.3 Ethics

Ethical approval for the study was sought and gained from LSHTM. In-country ethical approval was gained via the ATC, the in-country research lead who was involved in the initial baseline data collection in 2012. As ATC are a department of the Ministry of Water and Irrigation, they do not require ethical clearance to undertake research in the country; however, a letter confirming this was obtained.

3 Findings

This section of the report presents the findings from MTR data collection conducted in Amuria and Katakwi districts. The findings are presented first through a general overview of the characteristics of the study sample and the vulnerable individuals identified, and then in a more detailed analysis of the findings. The findings in relation to WASH are set out as follows:

- Access to water
- Access to sanitation
- Access to hygiene

The barriers to accessing facilities, adaptations to improve accessibility and the costs of making adaptations in relation to WASH are also addressed in each section. The environmental, attitudinal and institutional barriers are discussed in relation to WASH, together with an analysis of the level of participation and empowerment.

The qualitative findings are used to support the quantitative findings from the focus group discussions, interviews with community leaders and expert interviews. The findings from school WASH are also presented.

3.1 Current status of the intervention

The current status of the intervention was ascertained through discussion with project partners CoU-TEDDO and WEDA. A traffic light system (Table 3.1) was used to rank the 52 villages, selected from a finalised list provided by LCDIDC, according to the degree to which they had received the intervention.

Summary of colour coding

Green 'More intervention' – villages that had been sensitised on equity and inclusion issues mainly through the Umoja approach (see section 1.6.2), and in which new or rehabilitated waterpoints had been installed.

Amber 'Little' intervention' – villages that received little to no hardware component, but had received some follow up using the Umoja approach. The definition 'little' is, however, rather arbitrary, and requires caution in interpretation. These were areas in which, according to project implementers, the main form of intervention was sensitisation of several villages on equity and inclusion, mainly using an Umoja approach, and some installation and rehabilitation of waterpoints.

Red 'No intervention' – villages in which no intervention had been implemented even though the intervention was proposed in those areas.

Summary village ranking	Colour code	Village ranking	Number included in MTR 2014
More intervention		10	4
Little intervention		24	18
No intervention		18	1
Total		52	23

Table 3.1 Summary of intervention status of target villages

The MTR review included 23 villages from the 52 identified and ranked according to the level of intervention received. The villages selected for the MTR included those that had received 'little' or 'more' intervention. The decision was taken to include the one village classified as having received no intervention, because other villages selected in that area had either a large number of people that had died or moved, and the inclusion of this village meant that for that area, all villages were visited.

Villages that had received different levels of the intervention (e.g. high, medium and low levels of implementation) were selected to assess and document the early impacts and extent of the intervention.

The villages included in the MTR sample were distributed across CoU-TEDDO and WEDA targeted list of study implementation villages. A total of 17 of the 23 villages were CoU-TEDDO implementation villages and six were WEDA implementation villages.

Table 3.2 shows the level of intervention received in CoU-TEDDO target study villages included in the MTR sample. Of the 17 villages, 14 were classified as having received 'little intervention', two as having received 'more intervention' and one village as having received 'no intervention'. Nine were in Amuria and eight in Katakwi.

District	Village	Implementer	Status
Amuria	Adakun	CoU-TEDDO	
Katakwi	Agurur	CoU-TEDDO	
Katakwi	Akomotukoi (Ongongoja)	CoU-TEDDO	
Amuria	Akora	CoU-TEDDO	
Katakwi	Akwamor	CoU-TEDDO	
Amuria	Alela	CoU-TEDDO	
Amuria	Apuret	CoU-TEDDO	
Amuria	Obajai	CoU-TEDDO	
Katakwi	Odepai	CoU-TEDDO	
Amuria	Ogongora	CoU-TEDDO	
Katakwi	Oigo Imomwa	CoU-TEDDO	
Katakwi	Oolir	CoU-TEDDO	
Katakwi	Oriau A	CoU-TEDDO	
Katakwi	Oriau B	CoU-TEDDO	
Amuria	Abakuli	CoU-TEDDO	
Amuria	Alupe A	CoU-TEDDO	
Amuria	Olwa Corner	CoU-TEDDO	

Table 3.2 Summary of level of intervention received in selected MTR CoU-TEDDO implementation villages – see summary of colour coding on p36

Table 3.3 shows the six target villages included in the MTR sample that are under WEDA. These included four villages classified as having received 'little intervention' and two classified as having received 'more intervention'. Four villages were in Katakwi and two were in Amuria.

District	Village	Implementer	Status
Amuria	Ajota	WEDA	
Katakwi	Akisim	WEDA	
Katakwi	Apuuton-Okinyang	WEDA	
Katakwi	Moruinyamat	WEDA	
Katakwi	Okerisio	WEDA	
Amuria	Onino	WEDA	

Table 3.3 Summary of level of intervention received in selected MTR WEDA implementation villages

3.1.1 Data-collection activities

Table 3.2 summarises the MTR data-collection activities. The following sections present the findings from the data-collection instruments.

Tool		No.
1	Head of household questionnaire	57
2	Individual questionnaire	40
3	Ministry level interviews	4
4	Focus group discussions	2
5	Semi-structured interviews with local officials or community	13
6	School questionnaire and observation checklist of WASH	3
7	Semi-structured in-depth interviews with selected vulnerable	4
8	Household latrine structured observation checklist	57
9	Waterpoint inspection tool	18

Table 3.4 Summary of MTR data-collection activities

3.2 Characteristics of the study sample

The final sample for the mid-term review was 57 households across Amuria and Katakwi districts. In total, 40 households had a vulnerable member and 17 did not have any vulnerable members. 22 of the households were in Amuria and 35 were in Katakwi.

In Amuria, 10 villages were visited across three sub-counties, and in Katakwi 12 villages were visited across six sub-counties. Four individuals had died and many were not found because they had relocated to different villages.

Due to inconsistencies between data tools from the initial baseline sample, several households had to be excluded from the final sample. This led to an imbalance between

vulnerable and non-vulnerable households available for the mid-term review sample. Therefore, the decision was taken to include all households within selected villages so the full impact of the intervention on all households could be established to have an equal number of vulnerable and non-vulnerable households from a range of different villages.

3.2.1 Sample demographics

404 individuals were enumerated in the 57 households that formed the sample for the MTR. This included members of both vulnerable and non-vulnerable households, and the 40 vulnerable individuals themselves. The enumerated sample with full demographic data available included 200 males (51%) and 193 females (49%) . The mean age of participants was 24 years.

Marital status information was collected for individuals aged 15 years and older. Data were available for 216 individuals. 100 individuals (46%) were classified as married or living together, 10 (5%) were divorced or separated, 19 (9%) were widowed, 79 (37%) had never married or cohabited and the eight (4%) were not classified.

Data on education status was also collected for individuals aged five years and older. Of the 342 individuals with available data, 62 (18%) had no education, 195 (57%) had some primary education, 22 (6%) had completed primary, 49 (14%) had some secondary, eight (2%) had completed secondary school, three (less than 1%) had been to college and three were defined as not applicable (1%).

The main source of income was agriculture, followed by other activities and manual labouring work. Table 3.5 shows the main source of income of households as reported in Tool 1.

	N	Percent (%)
Agriculture/livestock	41	73.2
Trader (food/non-food)	2	3.6
Craftsman	0	0.0
Small business/shop owner	2	3.6
Manual labourer	5	8.9
Other	6	10.7
Total	56	
Missing	1	-
Overall total	57	

Table 3.5 Main source of income

3.2.2 Types of vulnerability

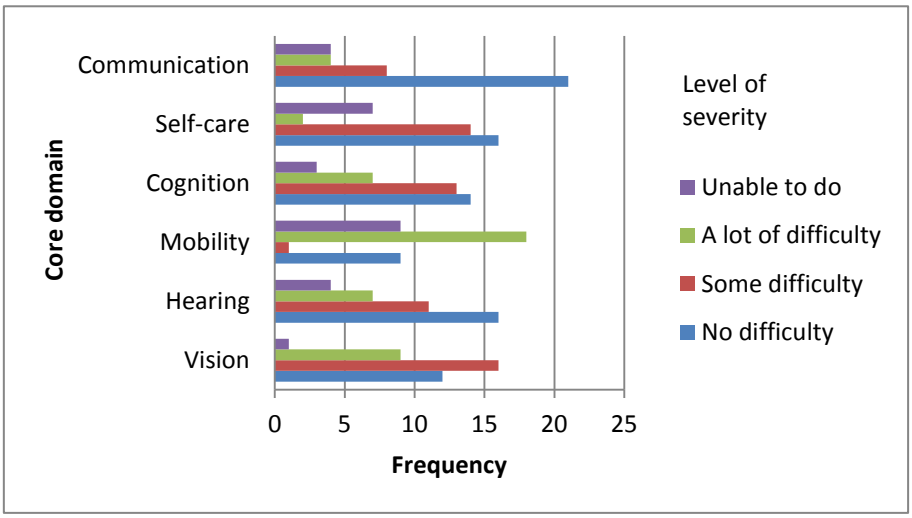
The type of vulnerability was ascertained through a self-report question directly to the individual identified as vulnerable at baseline. The question referred to the nature of their condition that causes their limitation. Disability was reported as the main condition that caused a limitation by 17 of the 40 respondents identified as being vulnerable responding to Tool 2, followed by chronic pain, being older, other cause, epilepsy and chronic illness. Of the 40 vulnerable individuals included in this sample, 29 (more than 70%) reported that the nature of their condition made it difficult for them to fetch or use water, use the toilet or latrine and perform personal hygiene related activities, e.g. washing and bathing.

Information about the level of severity of the impairment was collected as per the baseline using the Washington Group Short set of six core questions.[12] The six core domains were seeing, hearing, mobility, cognition, self-care and communication. The results for this question are presented in Table 3.5. The overall results show that the main core domain in which individuals reported that they experienced a lot of difficulty or inability was in the core domain of mobility, vision, hearing and cognition. The core domains with the least difficulty reported were communication and self-care. The domains in which most respondents reported inabilities were mobility and self-care.

	No difficulty	Some difficulty	A lot of difficulty	Unable to do
Vision	12	16	9	1
Hearing	16	11	7	4
Mobility	9	1	18	9
Cognition	14	13	7	3
Self-care	16	14	2	7
Communication	16	14	2	7

Table 3.6: Level of severity using the Washington Group Short set

Figure 3.1: Reported level of severity of disability among vulnerable individuals only.



The main forms of assistive devices used are a cane or walking stick (n=11), someone's assistance (n=nine), other (n=nine) – mainly reported as eye glasses, a hearing aid (n=5) and a walker or zimmer frame (n=3). More than a third of respondents (13/36) reported that other members of their household also need of help to use water or the latrine because of having a disability, being older or chronically ill.

Figure 3.2: A data collector conducting an interview

One important finding emerging from the mid-term review is the identification of additional individuals or households that identified themselves as vulnerable as per the study definition of vulnerable in the baseline survey. However, for the purpose of the MTR, the status as ascertained at baseline – i.e. individuals or households initially identified as vulnerable and non-vulnerable were the ones used at MTR. Therefore, any newly identified households at MTR were identified by the status ascertained at baseline. Among the 57 households in the MTR, 20 individuals were identified as vulnerable in addition to the 40 identified at baseline.

3.3 Access to water

The findings in this section present the overall baseline findings and the results from the MTR in relation to access to, and use of, drinking water from the main head of household questionnaire. Findings from the specific areas related to the vulnerable individual regarding access to, and use of, drinking water are also presented. Information on household access to water was obtained for all households included in the MTR sample including non-vulnerable and vulnerable, and for the specific individual identified as vulnerable at baseline.

A series of questions on individual level water use and access were also posed to the individual identified as vulnerable at baseline. These included whether the individual had enough drinking water, the source they used and whether it was different from other household members, the time taken to collect water and return, water user committee involvement and levels of awareness of the needs of people with disabilities and other vulnerable groups.

Additional questions relating to whether everyone in the household had enough access to drinking water every day, use of water sources and general water consumption by the vulnerable household member(s) and whether the vulnerable member(s) assisted with carrying drinking water were also asked.

3.4 Evidence of the impact of access to new and rehabilitated water technologies

The main objective of the MTR was to establish the early impacts of the project on the target groups, and to test the endline data collection tools for application across the intervention areas. To ascertain whether households were using new or existing water sources since the pre-intervention baseline study in 2012, a series of new questions on access to new or rehabilitated water technologies were asked to all households (both vulnerable and non-vulnerable) included in the MTR sample. The questions were asked at two levels: to the head of household using Tool 1, and directly to the vulnerable individual (Tool 2), to ascertain use at the household and individual level.

The purpose of questions on access to new and rehabilitated water technologies was to assess if community waterpoints were constructed as set out in the intervention plan.

The question was asked as follows: "Have any waterpoints (i.e. boreholes) been constructed, installed or rehabilitated in your community in the last two years?"

The results presented are for households that reported using newly constructed, installed or rehabilitated waterpoints in the past two years. Households using existing sources (i.e. their sources had not changed since baseline) are not presented, although the numbers are stated.

Intervention – water technologies

The original proposed intervention implemented by WEDA and CoU-TEDDO is described in section 1.6.1.

The results presented in this section assess the extent to which households included in the MTR sample are using new or rehabilitated waterpoints constructed or rehabilitated in their communities in the past two years. The findings presented in this section report the results of the new questions.

Indicator	Level	Timepoint
% of households reporting that new water technologies have been constructed, installed or rehabilitated (waterpoints) in the last two years	Household	MTR 2014
% of households using new or rehabilitated waterpoints	Household	MTR 2014
% of time spent collecting water at new or rehabilitated waterpoints	Household	MTR 2014
% of households using new water technologies that report treating their drinking water	Household	MTR 2014
% of households reporting the construction of alternative water technologies e.g. rain water harvesting	Household	MTR 2014

Table 3.7 Summary of key indicators – Household access to new water technologies

3.4.1 Household level access and use of new water technologies

These results present the household-level findings for households using new or rehabilitated waterpoints in the past two years since the baseline in 2012 (herein referred to as 'new water technologies') and general findings from baseline. The findings at the individual level are presented later in this section.

The findings are structured as follows:

- Access to new water technologies
- Use of new water technologies
- Time taken to get to the waterpoint
- Household water treatment

Box 3.1 Summary of main findings on household access to new water technologies

- Over 40% of households (24/57) reported that new water technologies had been constructed, installed or rehabilitated in their community or village in the past two years.
- Of the households using new water technologies, 75% reported now exclusively using this new facility during both the rainy and dry seasons.
- Of the households using new water technologies, three-quarters were households with a vulnerable member.
- Treatment of household drinking water was low, with only 16% of households using new water technologies reporting that they treated their drinking water.
- The households in which a vulnerable member is present spend more time collecting drinking water than do those without
- Over 50% of households answering a question on whether someone who is older, has a disability or is sick (n=51) reported that the household member who is vulnerable does not help to carry drinking water, and nearly 40% reported that they do.

The results from baseline in both the Amuria and Katakwi districts indicate that the distance to the water source varied. Only 20% of household heads reported being able to go and return in 15 minutes or less, approximately a quarter took 15–30 minutes and most (39%) took 30–60 minutes. The time needed by vulnerable individuals to collect water was considerably longer – on average over a quarter of vulnerable individuals in both districts reported taking an hour or longer to collect water and return.

At MTR, of the 57 households included in the sample, 24 (42.1%) households reported that waterpoints (i.e. boreholes) had been constructed, installed or rehabilitated in the community within the past two years since baseline.

Inclusive apron design borehole by WEDA in the Omodai sub-county.

The findings indicated that, of the 24 households using new water technologies, 18 (75%) had a vulnerable person and six (25%) did not. This indicates that more households with a vulnerable person are reporting that new water technologies have been constructed, installed or rehabilitated in their communities than non-vulnerable households. This does not necessarily mean that the vulnerable person themself is accessing the waterpoint, but the assertion can be made that they are likely to be benefiting from it.

At first glance these findings might suggest that the intervention has unintentionally excluded non-vulnerable people through focusing on vulnerable people. However, if the data are analysed in a different way the contrast is less stark: 45% (18/40) of vulnerable households reported that they were accessing new water technologies compared with 35% (6/17) of non-vulnerable households. This is not a significant difference. It is also important to note that more households with a vulnerable person were included in the study than were non-vulnerable households.

Further findings emerging from the in-depth interviews revealed that older adults in particular experienced difficulties accessing water and were reliant on other family members and friends to collect and provide them with water. Two respondents reported having to wait for water to be provided for them until they could obtain water for drinking and other purposes, e.g. personal hygiene.

3.4.1.1 Main sources of drinking water at the household level

18 (75%) of the 24 households that were using new water technologies reported that they now exclusively use this facility for drinking water during both the rainy and dry seasons. One household (4.2%) reported using the new water technologies in the rainy season only, two (8.3%) reported not using the source at all and the three (12.5%) specified other. The review could not establish what sources the two that reported not using the source at all were using, because further questions were not asked.

3.4.2 Collection of drinking water at the household level

The people primarily responsible for collecting water, identified through the main head of household questionnaire, were women aged 15 years and older. The second most common group was female children under 15 years of age and male children under 15 years of age.

The head of household questionnaire featured a question for respondents who reported that there was someone who is older, has a disability or is sick (i.e. a vulnerable individual) regarding whether the vulnerable person helps to carry drinking water. 51 respondents answered the question, of whom 30 (58.8%) reported that the vulnerable individual does not help to carry water, 20 (39.2%) reported that the vulnerable individual does help to carry water and one respondent (2.0%), reported 'other'.

3.4.3 Time taken to collect water at the household level

The results in Table 3.8 show the time taken to collect drinking water for those households using new water technologies. Overall, the results show that most households were spending between 30 minutes and one hour collecting water and returning. The results show that households with a vulnerable person spend more time collecting drinking water than do households without a vulnerable member. These findings are consistent with those identified at baseline whereby vulnerable individuals were identified to spend more time collecting water.

	Overall (n)	Overall (%)	Vulnerable (n)	Vulnerable (%)	Non-vulnerable (n)	Non-vulnerable (%)
Inside the house	0	-	0	-	0	-
‹15 minutes	0	-	0	-	0	-
15–30 minutes	5	20.8	4	22.2	1	16.7
30 minutes to 1	10	41.7	7	38.9	3	50.0
›1 hour	9	37.5	7	38.9	2	33.3
Missing	0		0	0	0	-
Total	24		18		6	-

Table 3.8: Time taken to collect water (for those using new water technologies)

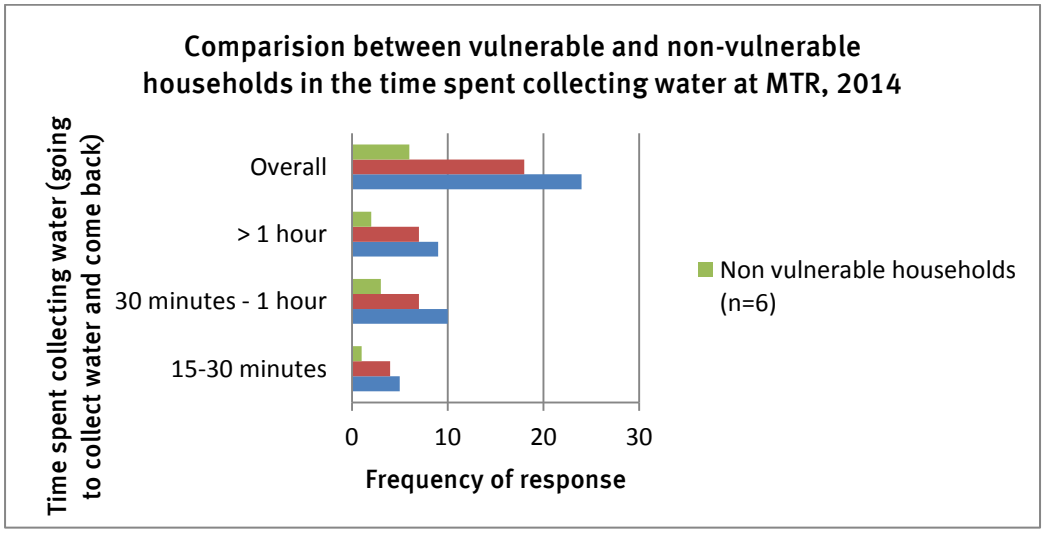


Figure 3.3: Comparison between vulnerable and non-vulnerable households using new water technologies in the time spent collecting water at MTR, 2014

A comparison of time taken to collect water at baseline with the MTR results showed mixed results. The general results show that the time taken to collect water for vulnerable individuals increased. This might be explained by the way in which the question was formulated in 2012, where it was not explicit that the time taken was to collect water and come back. Therefore respondents might have reported the time for going to collect water rather than the return journey. The findings emerging from the qualitative data indicate that, although several waterpoints had been installed or rehabilitated in the communities visited, the distance to collect water was still a challenge, and older people in particular faced difficulty accessing water. Distance was a key area identified during interviews with community leaders.

	Overall baseline (2012) n=131		Baseline (2012) n=40		Mid-term (2014) n=40	
	N	%	N	%	N	%
‹15 minutes	12	16.4	2	9.5	0	-
15-30 minutes	21	28.8	7	33.3	3	13.6
30 mins – 1 hour	17	23.3	6	28.6	8	36.4
›1 hour	23	31.5	6	28.6	11	50.0
Total	73		21		22	
Missing	58		19		18	
Overall total	131		40		40	

Table 3.9: Time spent collecting water (vulnerable individuals) comparing baseline with mid-term*

*The formulation of the question in 2012 was different and did not explicitly state that the time taken to collect water includes going to collect water and coming back.

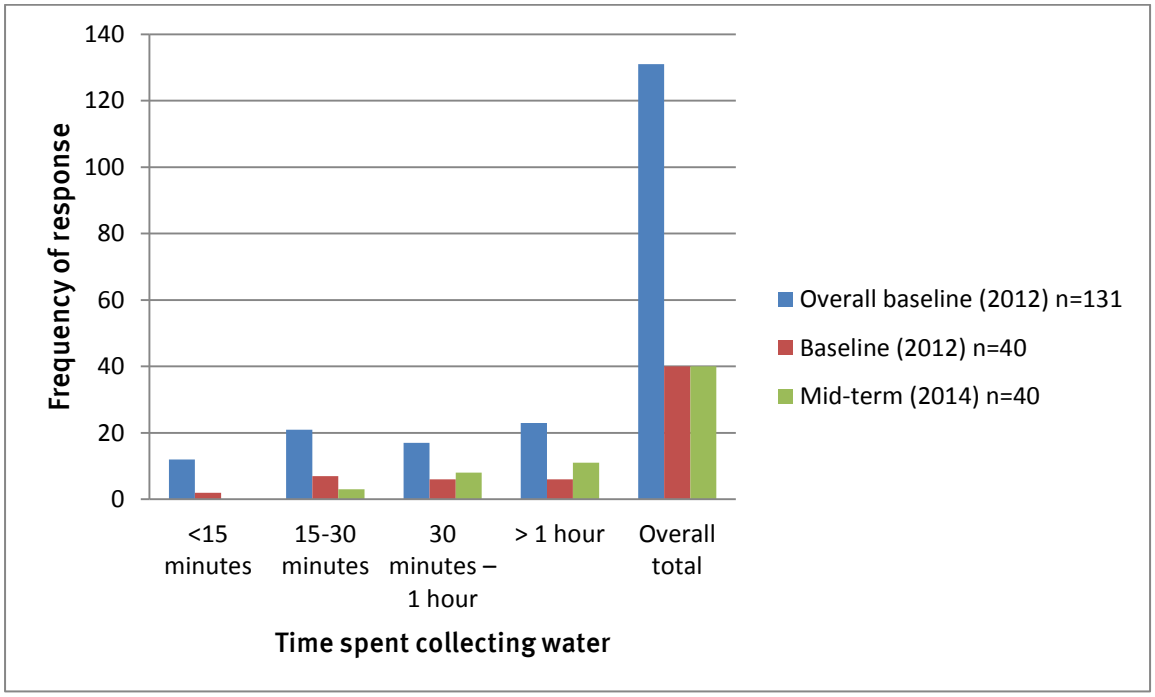


Figure 3.4: Reported time spent collecting water by vulnerable individuals only at baseline and MTR

3.4.4 Household water treatment

Questions on household water treatment were included in the main head of household questionnaire. These questions were posed to households using new water technologies and also those that were not using these and mainly using other sources for drinking water.

Of the 24 households using new water technologies, only four households (16.7%) answered the question and reported that they did not do anything to make their water safer to drink. Two households reported that they added bleach, chlorine or aqua tablets and two reported that they used a water filter (ceramic or sand).

3.4.5 Households using existing water sources (i.e. households not using new water technologies)

33 households (57.9%) reported that new water technologies had not been installed, constructed or rehabilitated in their community or village within the past two years. The specific information received from the project implementers did not specify the exact communities in which new water technologies were installed, therefore it was difficult to triangulate what was reported from interviews with what was actually installed within the community. This is an area that needs further exploration.

A series of questions on the main source of drinking water for households not using new water technologies was answered by the 33 households not using new or rehabilitated

sources. The main source of drinking water in the rainy season reported for members of these households was from a protected source (borehole), with 97% (32) households reporting this source and 1 (3%) an unprotected source (surface water). The results at MTR were similar to those reported at baseline, when the main source of drinking water in both the rainy and dry seasons was a protected source.

The main source reported in the dry season was similar to the sources reported in the rainy season. The predominant source was a protected source (borehole), with more than 90% (n=32) of households reporting that they used this source, and 3% reporting using an unprotected source (surface water) (n=1).

Household water treatment among the 33 households not using new or rehabilitated water technologies was low. Of the 33 households not using new or rehabilitated sources, 32 responded to a question on whether they did anything to make their water safer to drink. Four respondents (12.5%) reported that they did something to make their water safer to drink. The main methods reported were boiling and adding bleach or chlorine or using aqua tablets; each method was reported to be used by two respondents.

3.5 Access and use of new water technologies by vulnerable people

A series of questions on individual level water use and access were also asked to the individual identified as vulnerable at baseline. This included whether the individual had enough drinking water, the source used and whether it was different from other household members, time taken to collect water and come back, and water user committee involvement and levels of awareness of the needs of people with disabilities and other vulnerable groups.

Additional questions were also asked about whether everyone in the household had access to enough drinking water every day, use of water sources and general water consumption by the vulnerable household member(s) and whether the vulnerable household member(s) assisted with carrying drinking water.

Box 3.3 provides a summary of the key findings in relation to access and use of new water technologies by vulnerable people. In brief, we can conclude that these findings indicate that the installation and rehabilitation of new water technologies has addressed, to a substantial degree, several issues: simply increasing the number of waterpoints; installing in them key locations, thereby increasing availability; and, to an extent, reducing the distance travelled to collect water among households where access to water was previously an issue.

Box 3.2: Summary of main findings on access to new water technologies by vulnerable people

- Half (20) of vulnerable people sampled reported that new water technologies had been constructed, installed or rehabilitated in their community in the past two years.
- 80% of those 20 reported that they exclusively used this facility during both the rainy and dry seasons.
- 80% of the 20 reported that they were aware of why the facility was constructed.
- Only one person reported being consulted in the design of the new water technology.
- Over 56% of vulnerable individuals surveyed reported collecting water themselves, compared with 50% at baseline.
- Of the 22 respondents who reported fetching water themselves, 54.6% reported that they experienced difficulties collecting water. The general findings at baseline indicated that nearly 70% of vulnerable individuals reported that they experienced difficulty collecting water. This indicates a substantial reduction since baseline and is a key finding at MTR.

3.5.1 Access to new water technologies by vulnerable people

In response to Tool 2, 20 vulnerable individuals (50%) reported that new water technologies had been constructed, installed or rehabilitated in their community in the past two years. This was higher than what was reported at the household level (40%).

16 of the 20 vulnerable individuals who reported new water technologies (80%) reported that they exclusively used this new water technology during both the rainy and dry seasons.

80% of individuals (16/20) reported that they were aware of why the facility was constructed and, when asked to describe why it was constructed, the most commonly cited reasons were to provide safe and clean water, because a water source was not previously nearby, or for the school and to reduce water-related diseases.

However, only two individuals reported that there had been any changes or adaptations to the waterpoint, and only one reported being consulted in the design of the facility. Given that one of the objectives of this research was to encourage meaningful participation, this is surprising. This result should be further explored at endline and mapped against the construction of actual facilities, as determined from the project implementers to, investigate reported changes against actual changes.

3.5.2 Collection of drinking water by vulnerable people

At baseline, the general findings indicated that only 37% of vulnerable individuals reported fetching water. At MTR, however, over 50% of the vulnerable individuals included in this sample reported that they collected water themselves (n=22; 56.4%). A total of 17 (43.5%) reported that they did not fetch water themselves and one individual did not answer.

A further question asked whether the vulnerable individuals who reported that they fetched water themselves experienced any difficulties fetching water. Of the 22 respondents who reported fetching water themselves 12 (54.6%) reported that they experienced difficulties fetching water. The general findings at baseline indicated that nearly 70% of vulnerable individuals reported that they experienced difficulty in collecting water.

3.6 Barriers to water collection

This section discusses the general barriers to water collection faced at both household and individual level.

Box 3.3 Summary of barriers to water collection

- Over 90% of the heads of households with vulnerable members surveyed reported that the vulnerable person used the same source as did other household members.
- Over 50% of the household heads surveyed reported that the vulnerable household member used the same amount of water as did other household members.
- The main difficulties reported in relation to collecting water were physical difficulties and distance to the water source.
- Only one vulnerable individual reported that they were told not to touch water or water sources because they had a disability, were sick or older. This was a substantial reduction from what was identified at baseline, where 19% of vulnerable people were told not to touch water sources.
- Over 50% of vulnerable individuals reported that their need for water had remained the same.

In the household questionnaire, a general question was posed to all respondents who reported that there was a vulnerable member in the house, about whether the vulnerable person used the same water source as other household members. This question was answered by 50 heads of households because the MTR identified more vulnerable individuals who had not been classified as such at baseline. We wanted a clear picture of who lived in each household, and to ascertain their vulnerability status; therefore an additional number were found at MTR who also met the criteria. 45 (90%) of these heads of households reported that the vulnerable person used the same water source as other household members.

When asked about the level of water use of the vulnerable person, 28 (59.6%) of the 47 household heads responding to Tool 1 reported that the individual used the same amount of water as others, 12 (25.5%) that the person used less, four (8.5%) reported that the person used more and three (6.4%) reported 'other'. The number of household heads being higher than the 40 heads of households of the sample of 40 vulnerable individuals included in the MTR sample was because more heads of households reported having a vulnerable household member than did those identified at baseline.

For the 12 individuals with difficulty collecting water (section 3.7.2), the main difficulties reported were physical difficulties and distance to the water source.

The general findings from the in-depth interviews with community leaders and local officials supported this finding. Distance was reported as the main factor, and some community leaders reported that people with disabilities experienced problems accessing water.

One local council one leader described the issue of distance: "It's an issue of concern because of long distances to the borehole."

A question probing the issues faced by the vulnerable member to ascertain why they did not fetch water themselves, or experienced difficulty, found that the main reason reported by 19 of the 40 individuals was being weak or having a disability. Other less-cited reasons included water collection being the responsibility of other household members, the waterpoint being too far and getting tired of queuing or waiting in line to collect water. At baseline, various reasons were given, including these.

Only one individual reported being told that they could not touch water or water sources due to having a disability, being sick or older. At baseline general findings indicated that 19% of vulnerable people were told not to touch water sources. Although this is not a direct comparison, the findings are interesting to note.

In general, the qualitative findings showed a general shift in the way in which disability is understood and viewed both within the community by villagers themselves, among local leaders and those working at the district, and at national level. The consensus was captured in one ministry level interview in which the participant said: "Attitude is not a big threat. The concept of disability is known."
This highlights one of the general findings emerging from the MTR. This participant described that disability was previously associated with evil spirits, but because of increased awareness and the representation of people with disabilities at national level – e.g. as members of parliament –awareness of people with disabilities has generally increased.

Findings from in-depth interviews with vulnerable individuals highlighted that, although people with disabilities are still marginalised, misconceptions of the origin and onset of disabilities generally seem to have changed.

For example, being born with a disability was reported in one in-depth interview as no longer being viewed as a curse, and that being born with a disability was not believed to be thought to be due to spiritual issues.

Similar findings emerged from interviews with key stakeholders, who noted that there seemed to be more acceptance towards people with disabilities and those who are chronically ill or sick, particularly people living with conditions such as HIV, who formed a substantial portion of the MTR sample.

People were identified to be more generally open about their status, and a change in attitude and perceptions was reported among local officials and in the ministry-level interviews. It was widely acknowledged that people with disabilities were often excluded from mainstream WASH activities and that their needs were overlooked.

One important finding was that older people continued to face social exclusion because of decreased mobility and ill health and to face issues of poverty, e.g. not having enough food. Social exclusion was found to be both within communities and sometimes at a household level by family members and friends. Children with disabilities were often socially isolated, especially those with severe disabilities.

One older man described being reliant on his grandchildren to assist with activities and said he had to wait for them to pass by to provide him with drinking water: “My grandchildren pass by, but only when they have time.”

Another older person described feeling that other members of the community were no longer interested in visiting because he had nothing to offer them. This resulted in feelings of low self-worth, social isolation and depression.
They said: “There are changes, I see myself as useless. I am unable to cultivate and have no energy...People no longer visit. People think I have nothing to offer...It makes me feel bad. I feel worthless, like I am dead.”

A question about whether the need for water had changed was asked of vulnerable individuals who now need help at present but who, before the onset on their condition (disability/old age/illness or pain) did not require any help. 21(50%) of these individuals reported that their need had remained the same, nine (21.4%) reported that it had increased and the nine reported that it had decreased. Three individuals did not answer the question.

3.6.1 Uses of alternative sources of water

The head of household questionnaire also featured a section on whether other water collection facilities had been constructed in the community, e.g. rainwater-harvesting jars. Only one person reported that rainwater-harvesting jars had been constructed in their

community. This result was consistent with what was identified during data collection, where one household had a rainwater-harvesting jar.

A household with a rainwater-harvesting system installed as a result of the intervention.

3.7 Adaptations to improve accessibility to water

3.7.1 Household level

At baseline, a series of environmental barriers were identified. This included paths that were slippery and steep or which had uneven surfaces so made it difficult or impossible for some vulnerable individuals to collect water, and water sources that were too far from the homestead. Several changes were recommended at baseline to improve waterpoints, which are summarised in Box 3.4.

A household with a rainwater-harvesting system installed as a result of the intervention.

Box 3.4 Recommended changes to waterpoints at baseline

- Make path and steps more accessible
- Make pump handles lower and more easily pumped
- Have tables or raised areas where people with physical limitations or who are weak could rest heavy cans and jars
- Supply jars and cans for water collection that could be pulled/wheeled rather than carried
- Have new protected water sources constructed by governments or NGOs
- Address community attitudes, particularly the time taken waiting to collect water in long queues
- Have networks of support or community support of paying people to bring water in

At MTR, of the 24 households (42.1%) that reported that new water technologies had been constructed, installed or rehabilitated, a further question was asked as to whether any changes/adaptations had been made to the facility. This question was not answered by many respondents. Over 80% (19) of the 23 respondents answered a question on awareness as to why the facility was constructed. An open-ended question about the reasons identified common responses: the scarcity of water in the areas; to provide communities with access to safe drinking water; or the water technology was installed for use by the local school.

3.8 Access to potable water

The main head of household questionnaire featured questions on whether everyone in the house has enough drinking water every day and, if the answer is no, an open-ended question asking who in the household did not have enough drinking water and why.

Box 3.5 Access to potable water

- Over 80% of the heads of households reported that everyone in the household had enough water to drink.
- Of the six of the 52 households that reported not having enough water to drink, all households were had a vulnerable member. The main people reported to not receive enough drinking water included older people and children.

At MTR, the overall findings indicate that, of the 52 of the 57 households responding to the question, 46 (88.4%) reported that everyone had access to enough drinking water. The six households that reported that not everyone in the household had access to enough drinking water were all households where a vulnerable person was present.

The main people said to not get enough drinking water included older people and children. Other reasons included problems the water source, namely the borehole having fallen into disrepair. Whether the borehole that had fallen into disrepair was a borehole that had been constructed in the past two years is not clear.

At baseline, of the directly comparable 57 households that were also selected at MTR, including 40 vulnerable and 17 non-vulnerable, 91% (52) reported that everyone had enough drinking water. Among the 40 vulnerable households, 36 (90%) of the household heads reported that the vulnerable household member has enough drinking water every day. The figure was higher among non-vulnerable households, with 16 (94%) of the 17 households reporting that all household members had enough water to drink.

3.9 Barriers to potable water access in the household

The MTR also explored barriers to potable water access within the household. Box 3.6 summarises the key findings and suggestions for improvement raised by vulnerable individuals.

Box 3.6 Summary of barriers to potable water access in the household

- Over 70% of the vulnerable individuals surveyed reported that they could access drinking water from the container (i.e. pot/jar/tap) by themselves when they needed it.
- The main reasons cited by those who were unable to access drinking water were mainly reported as being due to their own limitations, e.g. being too weak, being visually impaired or blind or not being able to grasp or hold the cup.
- Suggested modifications made by vulnerable individuals to make it easier for them to access drinking water themselves included providing an alternative water source or jerry can, provision of a wheelchair, provision of a seat at the water source and cleaning the path to the protected source.

76% (n=26) of the 34 vulnerable individuals who answered the question reported that they could access drinking water from the container (i.e. pot/jar/tap) by themselves when they needed it. The main reason cited by those who could not access drinking water from a container was due to their own limitations, e.g. being too weak, being visually impaired or blind or not being able to grasp or hold the cup. At baseline, among the same selected sample of vulnerable individuals (fewer people answered this question), 65% (26) reported that they could get drinking water (i.e. pot/jar/tap) by themselves when they needed it. The main reason reported at baseline was the individual's own limitations.

At MTR the suggestions made by vulnerable individuals for modifications to make it easier for them to access drinking water themselves included providing an alternative water source or jerry can, provision of a wheelchair, provision of a seat at the water source and clearing the path to the protected source. The change since baseline indicates that a higher proportion of individuals were now able to access drinking water since baseline.

3.10 Accessibility of the waterpoint

The accessibility of the waterpoint was assessed through the Tool 9 – the Water Source Inspection Tool.

A summary of the key findings are shown in Box 3.7.

In total, 18 waterpoints were assessed in the villages included in the MTR sample. A scaling system was used to determine whether barriers existed in terms of the path to the waterpoint, whether there were obstacles or trip hazards and the steepness of the path.

In over 40% of the waterpoints assessed there were no barriers with respect to the path surface, obstacles or trip hazards and steepness of the path. However, in the other waterpoints, both minor and obvious barriers were observed with respect to the path surface and obstacles or trip hazards. At four waterpoints the path was observed to be quite a bit up and down, as in un-level. For one waterpoint there were major barriers with respect to the path surface and obstacles or trip hazards. At baseline, 12 waterpoints were assessed and the areas in which they were assessed for MTR were different, therefore it is difficult to make direct comparison between the two results.

However, one of the key findings is that major barriers, such as high steps and challenging access, have reduced.

A waterpoint accessibility audit.

Box 3.7 Summary of key findings – accessibility of waterpoints

- In over 40% of the waterpoints assessed, no barriers were observed in terms of the path surface, obstacles or the steepness of the path.
- Major barriers, such as high steps and challenging access, have reduced from the baseline.
- In most instances (over 80%) the handpump was easy for all to use.

Path surface		Obstacles or trip hazards, e.g. rocks, vegetation, rubbish, etc		Steepness of path	
	N (%)		N (%)		N (%)
0 = no barriers	8 (47.1)	0 = no barriers	7 (43.8)	0 = flat	9 (52.9)
1 = minor barriers/obstacles	4 (25.3)	1 = minor barriers/obstacles	5 (31.3)	1 = reasonably level	4 (23.5)
2 =obvious barriers	4 (25.3)	2 =obvious barriers	3 (18.8)	2 = quite a bit up and down	4 (23.5)
3 = major barriers	1 (5.9)	3 = major barriers	1 (6.3)	3 = very steep	0
Total	17		16		17
Missing	1		2		1

Table 3.10: Accessibility of the path to the waterpoint (n=18)

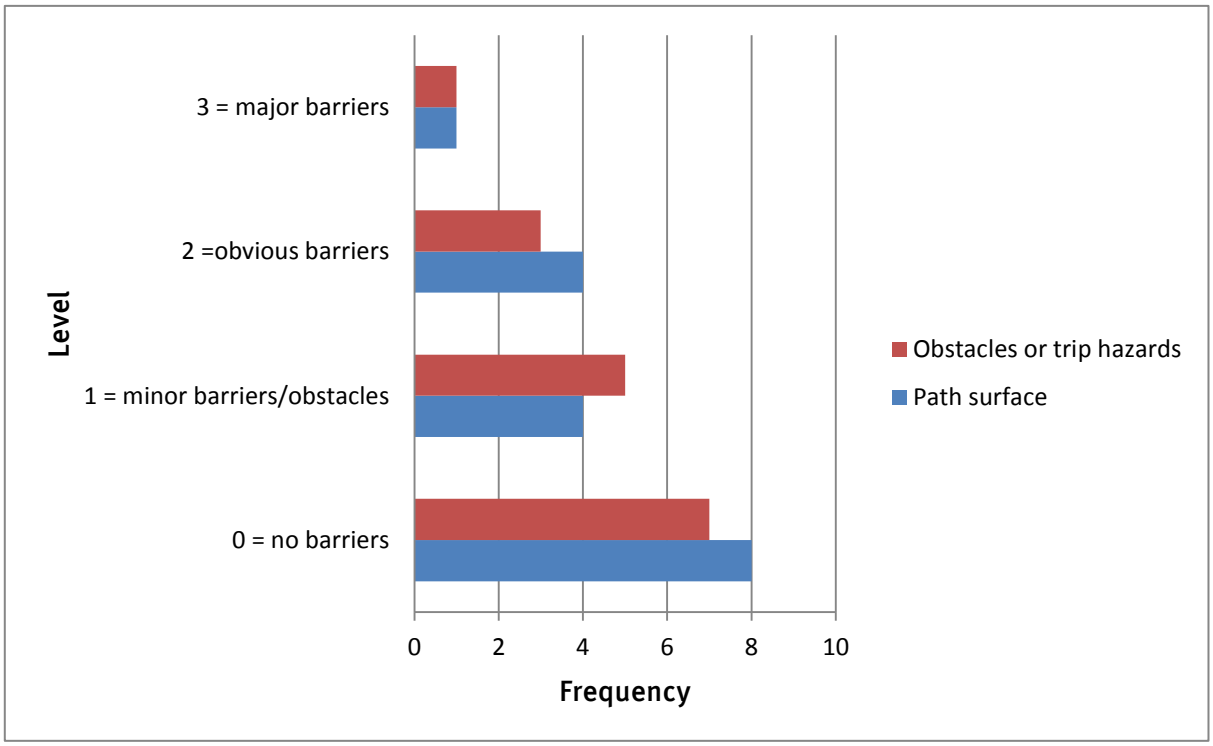


Figure 3.5: Accessibility of paths to the waterpoint

The operation of the handpump of the waterpoint was also assessed. Information was available for 16 waterpoints at MTR. In general, the handpump was easy for all to operate, with 14 of the 16 waterpoints being assessed to have this feature. The results are shown in Table 3.11. This is a major achievement as one of the key recommendations at baseline

was that the handpumps were difficult to use and the pump handle should be lowered to enable the handle to be pumped more easily.

The findings at baseline, although not a direct comparison of waterpoints, indicated that in eight cases (66.7%) the accessibility of the waterpoint was assessed as 'not bad'. In two cases (16.7%) it was deemed 'easy'. In one case observers assessed the accessibility as 'high step' (8.3%) and in one case 'challenging' (8.3%). At baseline, 12 waterpoints were assessed. A direct comparison of waterpoints at MTR was difficult because, at baseline, there was no unique identification of waterpoints. At MTR, where available, unique information, e.g. the identification number or the date of installation, was taken to enable comparison at endline.

Barriers and obstacles to easy access were also identified at baseline. In five of the eight cases (41.7%) 'no barriers' were found. In four cases (33.3%), observers registered good accessibility, and in three cases (25%) they recorded clear barriers. In seven of the 12 cases (58.3%), the platform surface was deemed 'not at all slippery' and in five cases (41.7%) it was deemed 'slightly slippery'.

	N	%
Easy for all to operate	14	87.5
Ok, for most, but not for children ‹five years or older people	1	6.3
Tiring – only the strongest and fittest can operate (difficult for pregnant women and people with a disability)	1	6.3
Requires more than one person to operate	0	-
Total	16	

Table 3.11: Operation of the handpump

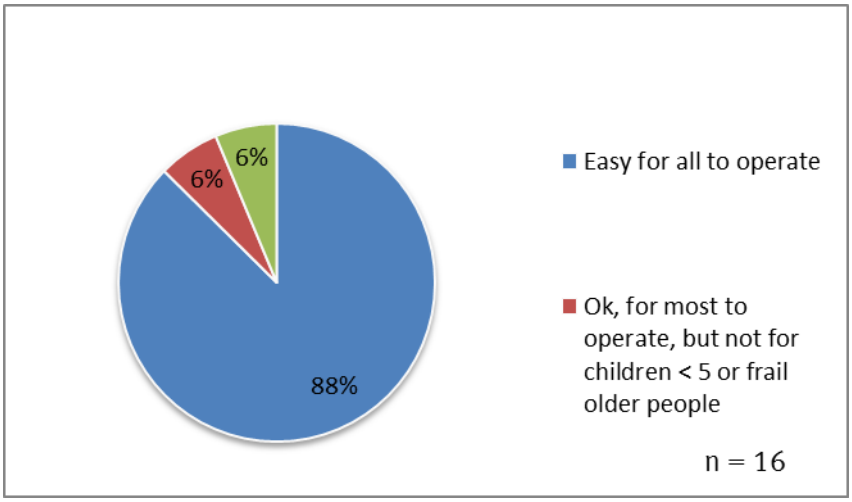


Figure 3.6: Operation of the handpump – waterpoint observation

Indicator. (Not all respondents answered the questions.)	Source	Baseline (n=57)	Mid-term (n=57)	Baseline vulnerable (n = 40)	Mid-term vulnerable (n=40)	Baseline non-vulnerable (n = 17)	Mid-term non-vulnerable (n=17)
Access to drinking water for all household members	Tool 1	52/57 (91%)	46/52 (88%)	36/40 (90%)	30/36 (83%)	16/17 (94%)	16/16 (100%)
Does the older/disabled/sick person in household use the same water source	Tool 1	53 (100%)	45/50 (90%)	38/38 (100%)	39/40 (98%)	15/15 (100%)	6/10 (60%)
Use of less water by the older/disabled/sick person	Tool 1	17/52 (33%)	12/48 (25%)	15/38 (39%)	12/40 (30%)	2/14 (14%)	0/8 (0%)
Vulnerable individuals who fetch water themselves	Tool 2	-	-	20/40 (50%)	22/39 (56%)	-	-
Difficulties experienced by vulnerable individuals in fetching water – yes	Tool 2	-	-	15/22 (68%)	21/28 (75%)	-	-
Vulnerable member able to get drinking water from a container by themselves	Tool 2	-	-	26/40 (65%)	26/34 (76%)	-	-
Vulnerable member told not to touch drinking water	Tool 2	-	-	5/38 (13%)	1/39 (3%)	-	-
Vulnerable member report of being able to get enough drinking water	Tool 2	-	-	23/40 (58%)	29/39 (74%)	-	-
Vulnerable member report of using the same source of drinking water as other household members	Tool 2	-	-	39/40 (98%)	37/39 (95%)	-	-

Table 3.12: Summary of comparison of indicators between baseline and mid-term

3.11 Access to sanitation

3.11.1 Type of toilet

The type of toilet used by households was identified through the household questionnaire and the Latrine Observation checklist. The findings presented here are from the head of household questionnaire (Tool 1), the individual questionnaire (Tool 2) asked directly to the vulnerable household member and Tool 8, the Latrine Observation Checklist.

Comparisons with the baseline are made where possible, but it is important to note that direct comparisons cannot be made for the Latrine Observation Checklist comparing baseline with mid-term because eight Latrine Observations were undertaken at baseline whereas at mid-term all households where possible had a Latrine Observation conducted to assess the facility and the extent to which changes had been made.

The main findings are summarised in Box 3.9.

Box 3.8 Summary of main findings for household latrines and open defecation

- The main type of toilet was a traditional pit latrine without a slab.
- The practice of open defecation was common, with 19% of households practising it. This may call into question the effectiveness of the Umoja approach.
- The distance to the toilet facility was mostly less than five minutes.

The Latrine Observation Checklist investigated the toilet facilities of all households included in the MTR. The findings indicate that over 73% (42) of the 57 households observed had access to a toilet. Open defecation was observed to be practised in 11 households (19%) because they had no access to a toilet facility, whereas three households reported using other facilities and information was missing for one household. These are based on findings from the Latrine Observation Checklist.

The findings are summarised in Table 3.13. The main type of toilet observed was a traditional pit latrine without a slab. The next most common were open defecation or no toilet facility and a traditional pit latrine with concrete sanplat or a non-ventilated sanplat.

	Frequency	%
Traditional pit latrine (TPL) without slab	33	57.9
Open defecation or no toilet	11	19.3
TPL with concrete sanplat or san plat not ventilated	5	8.8
Ventilated improved pit latrine	4	7.0
Other	3	5.3
Not reported	1	1.8
Total	57	

Table 3.13: Type of toilet facility among all households where a Latrine Observation was conducted

3.11.2 Open defecation

There is evidence of a slight reduction in open defecation since baseline, from 25% to 20%. At baseline, among the same selected sub-sample included in the MTR, based on the result from Tool 1 (the head of household questionnaire) open defecation was practised in 14 households (24.6%). 11 (78.6%) of the households included a vulnerable member.

At MTR, the pattern of open defecation was similar in Amuria and Katakwi, with the 11 households practising open defecation being equally distributed between the two districts. Six households (54.5%) were in Amuria and five (45.5%) were in Katakwi. Eight of the 11 (72.7%) households included a vulnerable member present. Five (62.5%) were in Amuria and three (37.5%) were in Katakwi.

A direct comparison of the Latrine Observation Checklist results cannot be made because eight were conducted at baseline and 57 were conducted at MTR.

3.12 Access to new latrines

The MTR sought to establish whether households had constructed, installed or rehabilitated a new or existing latrine within the past two years (herein referred to as 'new latrine'). The head of household questionnaire featured a question for all households included in the MTR sample: whether the person or their household had a new latrine between the end of the baseline survey and the completion of the implementation across the study villages. The main findings are summarised in Box 3.9.

Box 3.9: Summary of key findings on access to new latrines

- Over 30% of the households surveyed at MTR were using a new or rehabilitated latrine.
- Nearly 90% were now using this as their main or only toilet facility.
- Over 70% of the households using new latrines included a vulnerable member.
- Only two respondents reported adapting toilets to make them more accessible. This indicates that vulnerable individuals are using non-accessible toilets. This demonstrates a need to promote accessible designs more consistently during the implementation.

18 (31.6%) of the 57 study households had new latrines. Of those 18, 16 (89%) reported using them. Of the 15 households where reasons were given, the main reasons cited as to why the facility was constructed, installed or rehabilitated were to ensure hygiene and sanitation, to stop open defection and to reduce the outbreak of disease. Only three households mentioned that the facility was constructed for all household members to use. There was not an explicit exploration into whether the facility was constructed to make it more inclusive.

Over 70% (14) of the 18 households with a 'new' latrine included a vulnerable member.

When asked whether they used the same toilet facility, over 70% (29/40) of vulnerable respondents reported that they use the same toilet facility as other members of their household. These findings, when compared with baseline, indicate that vulnerable household members are accessing these new latrines. The findings at baseline indicated that 66.7% (26/39) of vulnerable members reported that they were accessing the same toilet facility as other members of the household.

3.12.1 Distance to the toilet

The distance from the main dwelling was asked to the person answering the head of household questionnaire. A separate question on distance to the toilet facility was asked for households using new and existing sanitation technologies. Table 3.14 shows the time taken to reach the new latrine.

Most of the new or rehabilitated toilet facilities were less than 5 minutes from the main dwelling, 64.3% (nine), 21.4% (three) of households had toilet facilities five to ten minutes from the main dwelling and for two (14.3%) households the toilet facility was 11-15 minutes from the main dwelling. It was not clear why these two facilities were constructed so far from the main dwelling.

A similar pattern was found among households not using new latrines – the time taken was predominately between less than five minutes to five to ten minutes.

Data from the latrine observation checklist also corroborated these findings – most facilities were observed to be less than five minutes from the dwelling (36/57; 63%).

	New facilities		Old facilities		All	
	N	(%)	N	%		
‹5 minutes	9	64.3	18	64.3	27	64.3
5–10 minutes	3	21.4	4	14.3	7	16.7
11–15 minutes	2	14.3	3	10.7	5	12
›15 minutes	0	-	1	3.6	1	2.4
Other	0	-	2	7.1	2	4.8
Total	14		28		42	
Missing	4		10		14	
Overall total	18		38		56	

Table 3.14: Time taken to reach the toilet facility (all households)

Because most new or rehabilitated latrines were among those households considered to be vulnerable, there is no analysis by non-vulnerable and vulnerable status.

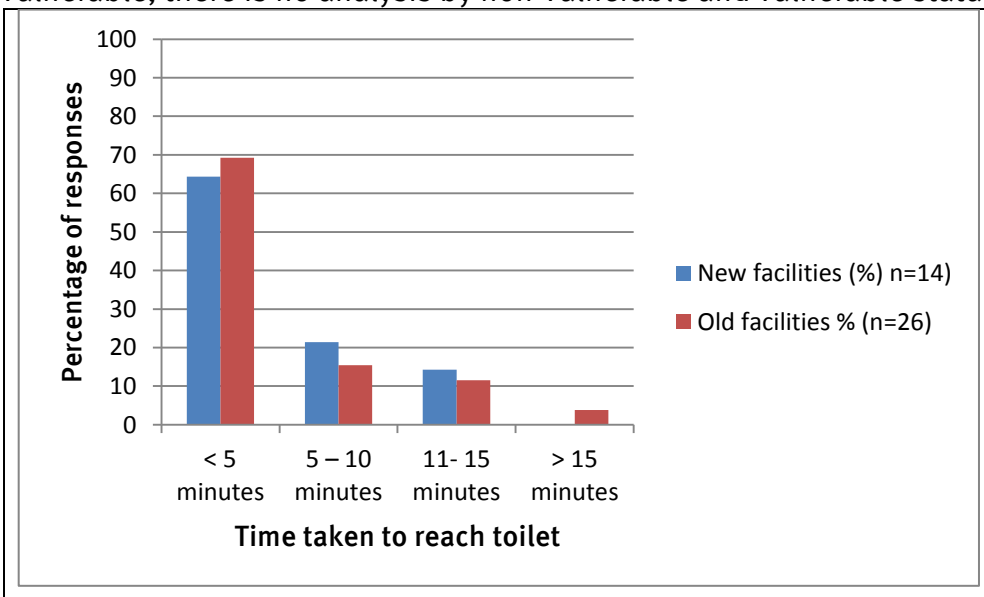


Figure 3.7: Time taken to reach toilet, showing comparison between old and new facilities.

3.12.2 Time to taken to reach the toilet facility – vulnerable individual only

In general, the percentage of vulnerable individuals able to reach the toilet in less than five minutes substantially increased from baseline. At baseline, in the same sample of households, 21.6% of vulnerable individuals reported taking five minutes or less. However, by mid-term this percentage had increased to 44.4%, as shown in Table 3.15 and the figures below (Figures 3.8 and 3.9).

	Overall baseline (2012) n=131		**Baseline (2012) n=40**		**Mid-term (2014) n=40**	
	N	%	N	%	N	%
‹5 minutes	42	35.0	8	21.6	16	44.4
5–10 minutes	38	31.7	15	40.5	8	22.2
11–15 minutes	18	15.0	6	16.2	10	27.8
16–30 minutes	15	12.5	5	13.5	2	5.6
›30 minutes	7	5.8	3	8.1	0	-
Total	120		37		36	
Missing	11		1			
Overall total	131		40		40	

Table 3.15: Time taken to reach the toilet facility (vulnerable individuals only)

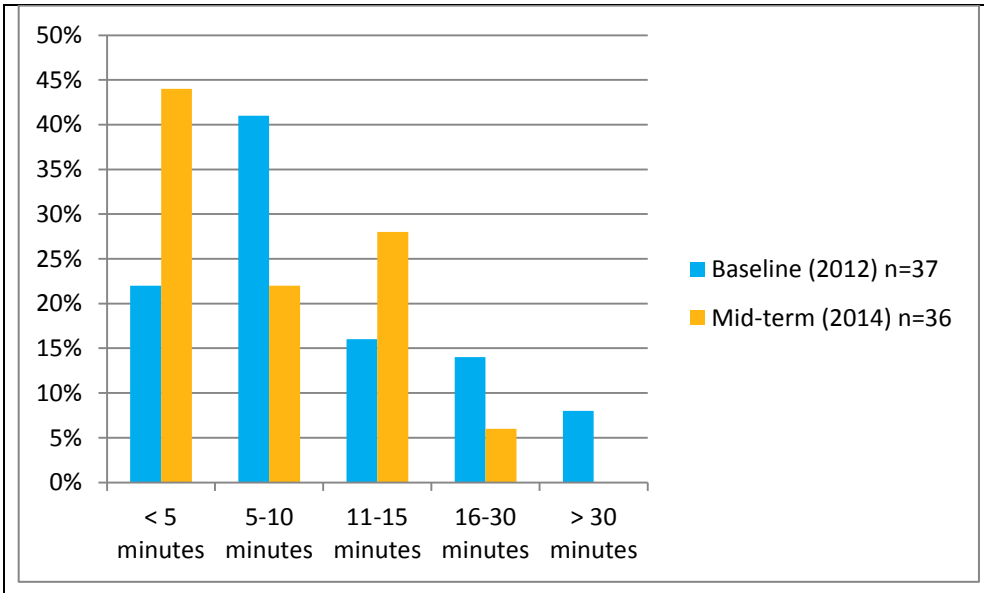


Figure 3.8: Comparison between the time taken to reach the toilet facility by vulnerable individuals at baseline 2012 and mid-term 2014

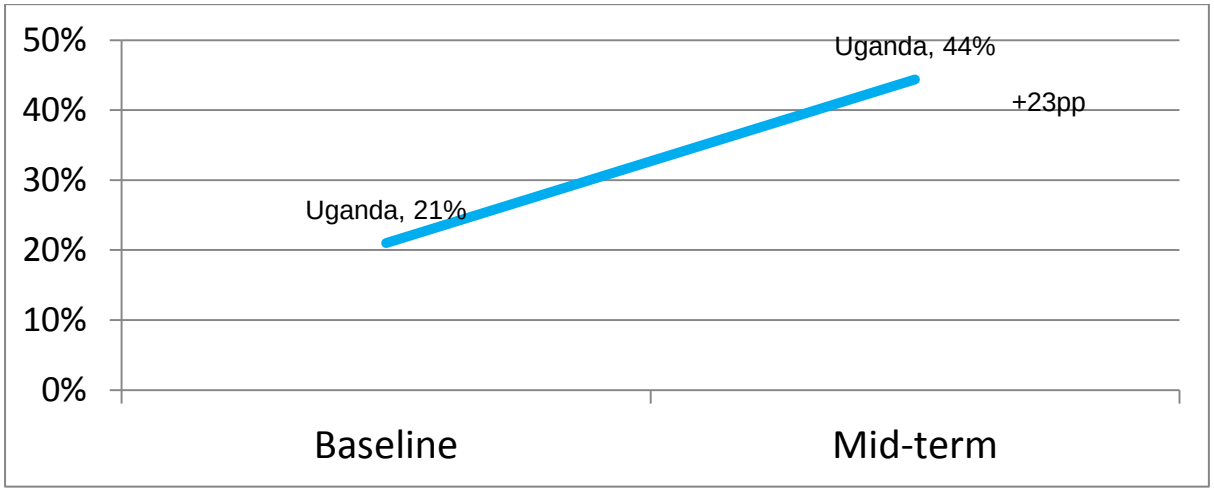


Figure 3.9: Percentage of vulnerable people reaching the latrine in less than five minutes

Accessibility of the latrine

The accessibility of the latrine was observed for all facilities, including both new and old. The results indicate that with regard to the surface of the path and obstacles or trip hazards, there were mostly no to minor barriers observed. In relation to the steepness of the path, the paths observed were mainly flat or reasonably level. In over 70% of facilities, the ease of entering was reported as being easy (33/47, 71.7%). In terms of usability supports inside the latrine, of the 47 households with available observations, only three were observed to have any support including handrails or other types of support to assist the user with entry, manoeuvring, sitting or squatting inside.

The findings are similar to those observed at baseline, with one of the major improvements at mid-term being the ease of entering, from 50% at baseline to 72% at mid-term. Although the findings are not a direct comparison because only eight latrines were observed at baseline, the baseline findings found that in three of the eight cases, the surface of the path was evaluated as 'firm' (37.5%), in two cases 'partially firm' (25%), and 'partially muddy' in three cases (37.5%).

In relation to obstacles, in four out of eight cases 'no barriers' were found (50%). For the remaining observations, the evaluation varied including all of the options – one 'good accessibility', one 'clear barriers', one 'major barriers' and one where the observation was missing.

In terms of the steepness, in four cases the path was evaluated as 'flat' (50%). In one case, it was considered 'reasonably level (12.5%), and in two cases it was indicated as 'up and down' (25%). In one case, the answer was missing. In four out of eight cases, the ease of entering was considered easy (50%). In four cases, the evaluations included 'low steps' (two cases, 25%), 'high steps' (one case, 12.5%) and challenging (one case, 12.5%). Support was not available in any of the eight latrines observed.

A levelled and cleared path to a household latrine.

3.12.3 Latrine design options

The four photographs below illustrate the latrine design options promoted by WEDA as part of the Undoing Inequity project. WEDA has been able to showcase through documentation and dissemination of the project outcome with other key stakeholders.[8] The following photos illustrate the designs promoted at the household level.[2]

A fixed latrine seat made out of unburnt bricks smeared with local cement.

A moveable chair with a hole in the seat placed over the latrine drophole.

A raised fixed latrine seat made out of cement.

A moveable stool with a hole in the seat placed directly over the latrine drop hole.

3.12.4 Anal cleansing

The questionnaire to vulnerable individuals asked whether water or other materials were available for anal cleansing after using the latrine or open defecation place, at a place that is accessible to the person. In total, ten of the 38 vulnerable individuals (26.3%) who responded to the question reported that such materials were available to them.

3.12.5 Barriers to accessing household sanitation facilities

11 vulnerable respondents (27.5%) reported that they do not use the same toilet facility as other members of their household. The main reported barriers were identified through questions directly asked to the vulnerable person about why they use a different facility.

Barriers included not being able to access the toilet facility, including not being able to get into the toilet facility (n=4), a lack of support to squat and nothing to hold on to (n=3), the toilet facility being too far away (n=2) and it taking too long to get there (n=1). The main reasons cited for using a different facility included it being easier to use another facility (n=6), greater independence because the individual can use the facility when they want and without help (n=3) and it being easier for the individual to use (n=1). It is not clear from the data whether these findings relate to people who have a new toilet facility or not.

Through focus group discussions and in-depth interviews with vulnerable people, older people reported facing difficulties with accessing WASH facilities, in particular toilet facilities. Although facilities had been constructed in these households, the findings from the in-depth interviews suggested people had difficulties in squatting to use latrine facilities and lack of support rails. This demonstrates that, among the individuals interviewed, accessible facilities have not been constructed. One older participant, when probed about the reasons why the latrine facility was not being used, said:

"I have a latrine. I have put a local slab and wall but there is no roof. I have to sit on the floor as there is no seat.... I have difficulty moving my shoulder, so I have to use a particular technique. I bathe near the household, but I have no specific place."

Another older individual described that he practised open defecation. The participant did not have a latrine and the reasons given were not having the physical strength to build the latrine.

"I cannot squat. I have to use a stick." This was a comment from an in-depth interview with an older person. The participant also described restricting going to defecate or urinate because of the difficulty faced in reaching the open defection place.

Nearly 90% (89.2%; 33/37) of vulnerable individuals reported that they were able to use the toilet facility without assistance from another person. Compared with the baseline figure where 75% (30/40) of vulnerable individuals reported that they could use the toilet facility without assistance, this is a substantial increase. For the four individuals who reported that they required assistance at mid-term, this included help to reach the toilet or toilet area, help with undressing or positioning on the toilet or in the bush and help throughout. Only two respondents reported that they occasionally had to wait for support to use the toilet or bush and one reported that they never had to wait because there is always someone to help. It is not clear from the data whether these findings relate to newly built toilets or existing facilities.

Only one participant reported that, because they required assistance, he or she restricted use of the toilet or went less frequently. None of the respondents reported that someone specifically stayed at home to assist them if they required assistance.

3.12.6 Adaptations to improve accessibility

Of the 18 households that reported that they had new latrines, only two reported that changes or adaptations had been made to the latrine. The main changes reported included the path to the facility being improved and the addition of grab bars, handrails or rope within the facility. These figures are low. It is important to note when analysing and interpreting this finding that the low figures might be due to the use of no subsidies for toilets for the intervention component in Uganda. The finding could also be because there is no immediate need for adaptations, because 90% of vulnerable individuals can use the toilet without assistance. At endline, these points would be worth exploring.

A question was asked within the main head of household questionnaire to all households regarding whether they had made any changes or additions to make it easier for anyone to use the toilet facility. Three (5.3%) of the 57 households reported that they had. The changes or adaptations cited included the path being improved, the addition of grab bars, handrails or rope and a seat.

These results are supported by responses from vulnerable individuals. When asked whether any changes or adaptations had been made to make it easier for the individual or anyone else in the household to use the toilet, only two vulnerable individuals reported that any changes or adaptations had been made. The main changes included simple additions or modifications to the existing toilet, for example a seat, grab bars, guide rope etc, significant changes to the design of the existing toilet or arrangement through a seat, grabs bars, guide rope etc and the toilet facility being nearer to the house or having a better path.

3.12.7 Costs of making adaptations

Information on the cost of making changes or adaptations was asked in the head of household questionnaire and the latrine observation checklist. The reported costs in the head of household questionnaire were stated by three individuals. The cost ranged from 75,000 to 1,000,000 Uganda shillings (£17–£233 at a rate of £1:UGX4,300). One respondent reported that there was no cost because the changes or adaptations were done by his son.

60% (24/40) of the vulnerable respondents reported that they would consider making changes to their existing toilet arrangement.

3.12.8 Menstrual hygiene management (MHM)

The MTR included new questions on MHM for girls and women aged 15 years and older. Questions were included in the individual questionnaire for the vulnerable person. There is no comparison with baseline because questions on MHM were not included at baseline. 12 girls and women responded to this question and ten reported

that they were able to bathe or wash themselves throughout the month. The main materials used included soap, water and pieces of cloth. Only three answered a question on how they access these materials, and they reported that this was either by themselves or their husband.

Four respondents answered a question on whether there was a system in place for discretely disposing of sanitary protection waste. The result of this question found that three quarters of girls and women had no system or place to discretely dispose of sanitary protection waste. This might be due to the focus of the implementing partners on the provision of menstrual hygiene facilities in schools rather than at the household level.

Answers to a question asking where sanitary protection waste is disposed of indicated that the main place was in the pit latrine. Five respondents answered a question on whether they have received any information within communities or schools about menstruation, sanitation and hygiene. Only two respondents (40%) reported that they have received such information.

3.12.9 Physical safety and security

A general question was posed to the heads of households on general feelings of physical safety for members of their household when collecting water, going to the toilet or performing other WASH-related activities. The overall consensus from this open-ended question was mixed, with some respondents reporting that they felt safe and comfortable and others that they felt unsafe because there are bushes around or the distance is too far. Fear of snakes was also a common issue.

A question regarding whether women and girls feel safe to use the latrine at night was answered by 56 of the 57 male and female respondents to Tool 1. 73.2% (41) of respondents reported that, in their opinion, women and girls feel safe at night to use the latrine. For those who reported that women and girls did not feel safe using the latrine at night, the main issues reported included attacks by strangers (two respondents specifically stated attacks by the Karamojong), rape and the latrine being at a distance from the main household.

An open-ended question was asked of the vulnerable person regarding the general feelings of safety for the vulnerable person themself and members of their household when collecting water, going to the toilet or performing personal hygiene activities. The commonly reported feelings included concerns about physical safety, for example, the journey to the latrine or water source being too far or dark and fear of snakes or animals. One respondent mentioned lack of privacy being an issue. Conversely, many respondents reported that they generally felt safe using the latrine and also mentioned the benefits of using a latrine, for example that they felt protected from germs and disease.

Of the 28 vulnerable individuals who responded to a question in Tool 2, on whether women and girls generally feel safe to use the latrine at night, 71.4% (20) reported that they believed that women and girls felt safe to use the latrine at night. This finding must be interpreted with caution as respondents may have been answering on behalf of another household member.

3.13 Access to hygiene

This section reports the general results of questions on person hygiene from the head of household questionnaire (Tool 1) and the individual level questionnaire (Tool 2) to the vulnerable individual. A question in the head of household questionnaire on the frequency of bathing or washing in relation to keeping clean on a regular basis identified that the vast majority of people bathe or wash every day – 47 (85.5%) of the 55 households answering the question. Over 70% of households reported that household members were able to bathe or wash themselves as often as they liked.

The findings among vulnerable individuals themselves indicated that there was a substantial increase from baseline in the number of vulnerable individuals bathing every day – from 80% at baseline to 95% at mid-term as shown in Table 3.16.

	Overall baseline (2012) n=131		**Baseline (2012) n=40**		**Mid-term (2014) n=40**	
	N	%	N	%	N	%
Every day	88	67.7	32	80.0	37	94.8%
Every other day	11	8.5	4	10.0	1	2.6
Twice a week	2	1.5			0	-
Once a week or less frequent	8	6.2	4	10.0	0	-
Other	21	16.2	0	-	1	2.5%
Total	130		40		39	
Missing	1		0		1	
Overall total	131		40		40	

Table 3.16: Self-reported frequency of bathing (vulnerable individuals only)

Please note a slight change in categories. Baseline featured a category of once every few weeks.

A comparison of 'vulnerable' households with 'non-vulnerable' households indicated that, in 'vulnerable' households, the head of household or person answering reported that they were not able to wash themselves as often as they liked. The wording of the question referred to the person answering and not the vulnerable member. It is important to note that there were more vulnerable than non-vulnerable households in the sample. Comparison of the results from baseline with MTR indicated that there was not much change in the level of satisfaction.

	Overall baseline (2012) n=131		Baseline (2012) n=40		Mid-term (2014) n=40	
	N	%	N	%	N	%
No	31	24.4	10	26.3	16	41.0
Yes	77	60.6	24	63.2	23	59.0
Not as often as I would like (same as other members of the household	19	15.0	4	10.5	0	-

Table 3.17: Level of satisfaction with regularity of bathing and performing personal hygiene activities (vulnerable individuals only)

The findings from the data from Tool 2 on the level of satisfaction with the regularity of bathing indicate a slight decrease in the level of satisfaction with bathing. The reasons why this was the case were not further explored in the quantitative tools. However, findings emerging from the in-depth interviews, especially among older individuals, highlighted the difficulty faced by older people in performing personal hygiene activities such as bathing. This might partly explain why the level of satisfaction decreased from baseline to mid-term.

The main locations reported as the usual location in which household members washed themselves was at home in a closed room (30/51; 64.7%) and at home in an open space or yard (10/51; 19.6%).

Access to a handwashing facility near the latrine or dwelling was reported to be low, with only 12 (21.4%) of the 56 households reporting that they had such a facility. 11 (91.7%) of the 12 households reported that they had water available at or near this place, and seven (58.3%) reported that they had soap, ash or another locally available cleansing agent available at or near this place.

3.13.1 Barriers to accessing hygiene facilities

The household questionnaire asked why those who were not able to bathe or wash themselves as often as they liked could not do so. The main reasons cited were a person being ill, bedridden, not having enough physical strength to perform the activity and there not being enough water, or that water is hard to access.

Specific questions were not asked on whether any adaptations or changes had been made to specifically access personal hygiene facilities or the costs of making adaptations to personal hygiene facilities.

Indicator (not all respondents answered the questions)	Source	Baseline (n=57)	Mid-term (n=57)	Baseline vulnerable (n=40)	Mid-term vulnerable (n=40)	Baseline non-vulnerable (n=17)	Mid-term non-vulnerable (n=17)
% of households reporting construction new sanitation facilities	Tool 1	N/A	18/57 (31.6%)	N/A	14/40	N/A	4/17
% of vulnerable individuals reporting using the same toilet facility as other household members	Tool 2	-	-	29/40	26/39	-	-
Time to reach the toilet facility (‹5 minutes) (vulnerable individuals only)	Tool 2	-	-	8/37 (21.6%)	16/36 (44.4%)	-	-
% of vulnerable individuals reporting being able to use the toilet facility without assistance	Tool 2	-	-	30/40 (75%)	33/37 (89.2%)	-	-
Self-reported frequency of bathing – everyday (vulnerable individuals only)	Tool 2	-	-	32/40 (80%)	37/39 (94.8%)	-	-

Self-reported level of satisfaction with bathing (vulnerable individuals only)	Tool 2	-	-	24/38 (63.2%)	23/39 (59%	-	-

Table 3.18: Summary of comparison of sanitation and hygiene indicators between baseline and MTR

3.14 Levels of participation and empowerment

The level of participation and empowerment was assessed through a series of questions within the individual tool for the vulnerable person about their level of participation in inclusive WASH and awareness. The results indicate that 50% of the 40 vulnerable individuals reported that they had taken part in local community meetings or events to raise awareness about sanitation and hygiene in their community delivered by agencies including WaterAid Uganda, CoU-TEDDO or WEDA.

12 respondents reported that they had been involved in local community meetings or discussions raising awareness of the needs of people with disabilities and 13 reported that they had been assisted in some way so that they could attend local community meetings on WASH related events or discussions.

Over 50% of individuals reported that they received information on sanitation and hygiene in their local community in different formats, e.g. in their local language, through pictures or audio tape. No comparison could be made with baseline because these questions were not included in the baseline questionnaires.

3.14.1 Addressing issues of service delivery – opportunities for participation, information provision etc.

The findings from the in-depth interviews with community leaders showed that communities had received information on improving hygiene and sanitation in their communities, and CoU-TEDDO and WEDA were commonly mentioned as delivering this.

“People have learnt how to keep improved hygiene and sanitation.” – In-depth interview, local council one.

“WEDA provided the water source. Sensitisation has been done by WEDA on WASH.” – In-depth interview, local council one.

Among the interviews with community leaders, sensitisation on hygiene and sanitation issues was widely reported. The needs of particular groups, e.g. individuals requiring wheelchairs, were also mentioned, as were technical design options.

At the community level, local community groups and social groups, including church and women's groups, were also described, and the important role they have in assisting individuals who experience difficulty accessing WASH facilities.

3.15 Caregivers

35 caregivers for the 40 identified vulnerable individuals responded to the caregiver questionnaire at mid-term. Over 50% (19) reported that they always helped the person being interviewed, 28.6% (10) reported that they sometimes helped the vulnerable individual and 17.1% (6) reported that they occasionally helped the vulnerable individual. The main form of assistance was with fetching drinking water.

Among the caregivers responding to the question, 42.8% (15) reported that they assisted the vulnerable member more than three times a day, and nearly half (48.7%) the sample reported that it kept them from performing other activities, reported mainly to be gardening and farming.

The findings at baseline indicated that, of the 40 caregivers that responded, 57.5% (23) reported that they always helped the vulnerable individual, 15% (6) reported that they sometimes helped, and 5% (2) reported that they occasionally helped and nine (22.5%) did not state an answer. In terms of the frequency of providing assistance, the most commonly reported frequency was many times a day (57.5%; 23/40), followed by 17.5% (7/40) not stated, 12.5% (5/40) assisting once a day, and 12.5% (5/40) assisting two to three times a day. The findings were similar compared with baseline. The findings are shown in Figure 3.10.

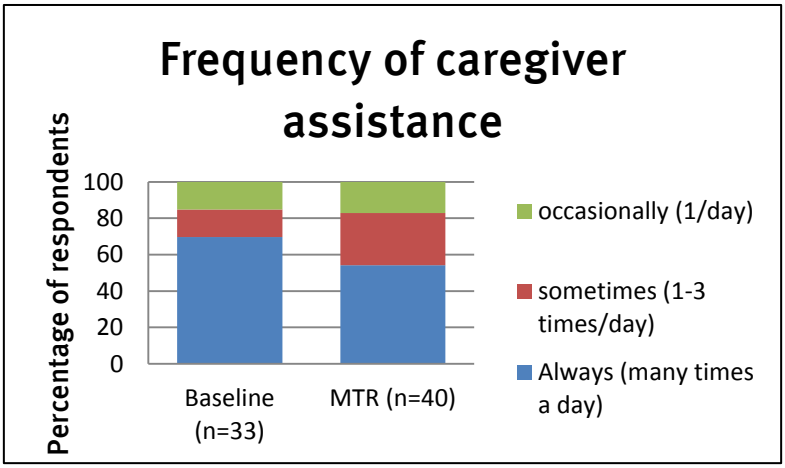


Figure 3.10: Comparison between levels of caregiver assistance at baseline and MTR

3.16 School WASH

At baseline, 12 schools were visited across the two study districts. A survey tool (Tool 6) comprising a school questionnaire and observational tool was used to better

understand how children in need of accessible WASH services are currently served, what adaptations schools had made and what barriers to WASH access still existed. An observation checklist was used to assess accessibility of latrines in each school. The same tool was re-administered at mid-term in three schools where the intervention had been implemented. This included the provision of new latrine facilities, including accessible facilities for children in need of accessible WASH facilities and washrooms for girls.

One of the key findings was that of the number of children with disabilities enrolled in school had substantially increased compared with baseline. In one school, this number increased by five times from 2012 to 2014.
Table 3.18 summarises the findings in relation to school enrolment, the number of children with disabilities and the type of disability. The change in school enrolment is also illustrated in Figure 3.21.

Several changes were observed to school latrine facilities. This included the construction of new toilet facilities for children and teachers and the construction of separate washrooms for girls. Specific cubicles, e.g. one cubicle in a block of latrines (five latrines), were also observed for children with disabilities, with the addition of hand and support rails in cubicles and access ramps leading up to the toilet. Separate facilities were available for boys and girls, and in some schools separate facilities were also observed for male and female teachers. Newly constructed handwashing facilities were also noted.

	Angodingod	Angodingod	Oaekere	Oaekere	Awelu	Awelu
	Baseline (2012)	Mid-term (2014)	Baseline (2012)	Mid-term	Baseline (2012)	Mid-term (2014)
Total number of pupils	505	581	570	605	669	819
Total number of children with disabilities	38	37	25	102	11	32
Visually impaired	13	9	8	35	3	4
Deaf or hearing impaired	12	15	7	21	2	11
Intellectually impaired	6	4	6	33	2	16
Physically disabled	4	2	4	13	2	12
Albino	0	0	0	0	0	0
Other	3	7	0	0	2	2

Table 3.19: Comparison of school enrolment between 2012 and 2014

Newly installed school latrine facility in Angodingod Primary School, with a separate washroom for girls. An accessibility audit has been conducted on this facility.

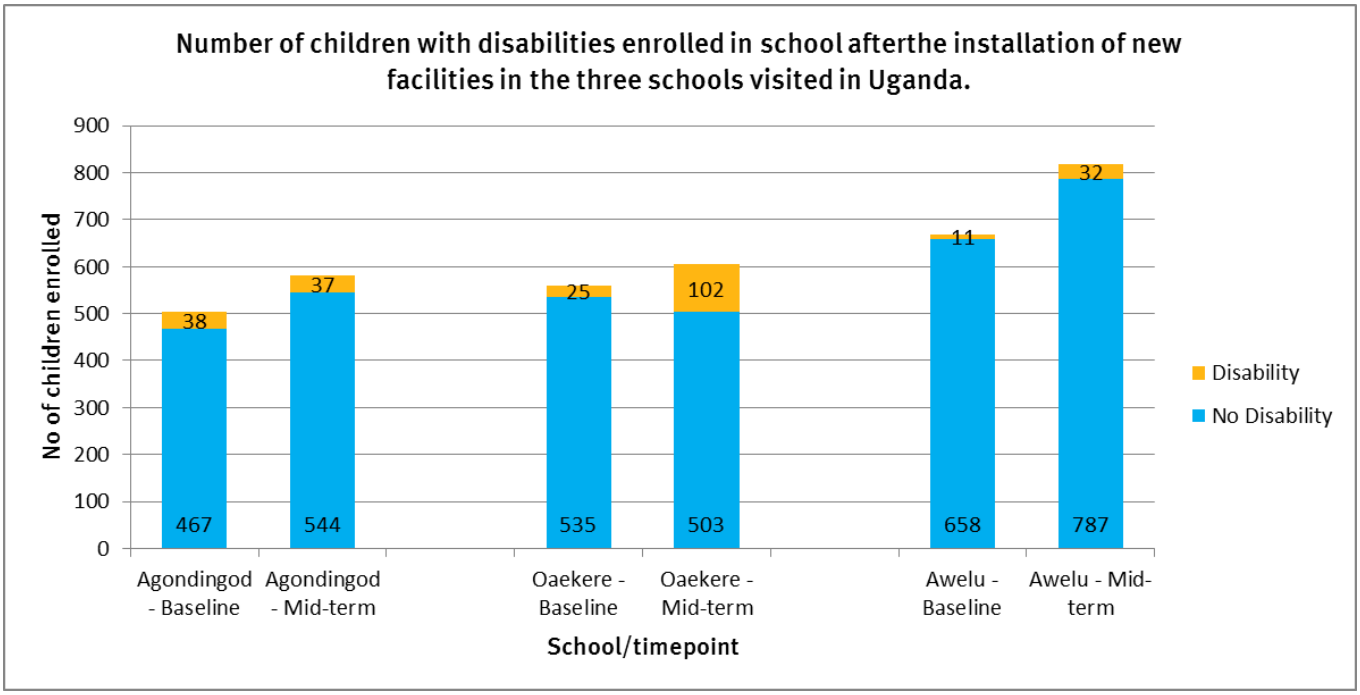


Figure 3.11: Comparison of school enrolment at baseline and MTR in three schools

The photograph above shows a school latrine with handrails. An accessibility audit of this facility identified that the handrails inside the toilet were long and stopped a wheelchair user from turning freely. These handrails were shortened accordingly, but the space in the stance for the person with a disability is still small.

One teacher reported the following: “Before we got the new blocks, girls that were in their menstrual cycles used to fear coming to school because they had nowhere to bathe from”. However, since the construction of separate washrooms for girls, the situation had now improved, as had the attendance of girls.

Interviews with teachers indicated positive findings, with a general awareness of why new facilities were constructed because of high pupil stance ratios and boys previously sharing toilets with girls. The interviews also reported that there was a reduction in issues for children with disabilities in accessing school WASH since the construction of the new facilities.

Both the attitudes of children without disabilities to children with disabilities were positive because of increased awareness in the schools. One teacher reported the following: “Children help each other, for example, provide guidance, hold those with epilepsy when they get attacked (have a seizure)”. It is difficult to tell whether this change can be attributed to the intervention or to other factors. This is an area that should be further explored at endline.

The general attitude of teachers indicated that they were sensitive to the needs of children with disabilities, but there are key areas in which further support is needed. This related particularly to the lack of skills of teachers for teaching children with hearing and visual impairments. One teacher interviewed reported that children with a visual impairment require support before their condition deteriorates to blindness. More general support in also supporting children with eye discharge was reported, as was a need for special needs teachers. The MTR was unable to ascertain the exact geographical area in which the children with disabilities were coming from. This is an area that could be explored at endline

3.17 Testing data-collection tools for use at endline

The MTR also sought to test the re-developed data-collection tools for the endline data for application across the intervention areas in Uganda in 2016 as part of an external evaluation. The findings in this section focus on main findings from the MTR.

One of the key challenges posed by the baseline data collection was the number of tools (nine) and the length of the questionnaires, particularly at the household and individual level. To refine the data-collection tools and address areas of concern, at the early stage of development of the MTR tools, discussions were held with LCDIDC who conducted the baseline and WaterAid UK, together with feedback and input from WAU, WEDC and SHARE.

One of the key challenges at baseline identified by LCDIDC was the ascertainment of household members and the correct identification of individuals who were classed as vulnerable. Because of the way the tools were administered, it subsequently became apparent that there were several households after the initial data collection at baseline where the tools, in particular tool 1, (the head of household questionnaire) and tool 2 (the individual questionnaire) did not match. For example households including a vulnerable member should also have had Tool 2 administered to the vulnerable individual; however, in several instances the Tool 2 was missing or there was no Tool 1.

Hence the initial sample size of 175 vulnerable households and 175 non-vulnerable households at baseline was not achieved, because of the mismatch of tools and the difficult of correctly ascertaining whether some members identified as vulnerable were actually vulnerable.

Although the household questionnaire at baseline did feature a roster, it was difficult to ascertain the identities of household members specifically because names were not collected for each member. A key modification at MTR was therefore to collect information on all household members in the form of a household roster, together with appropriate line numbers so that Tool 2, the individual questionnaire, could be administered directly to the individual identified as vulnerable or to a proxy if they were unable to respond.

Therefore, during the training of data collectors at mid-term, key areas highlighted for research assistants were the completion of the household roster and ensuring the correct individual was interviewed. This addition was beneficial and meant that all household members could be easily identified.

Similarly, at baseline, some of the water and sanitation categories used were not the standard definitions used in Uganda. Standard water and sanitation categories were therefore substituted at mid-term. To aid comparison, the categories used at baseline were mapped against the categories used at mid-term.

The addition of new areas to the questionnaires and reduction of questions after discussions with the study partners ensured that new important information could be collected. This included questions about access to new water and sanitation technologies since baseline to ascertain whether households were accessing and using new water and sanitation technologies. This information was key in ascertaining changes since baseline, and the general findings indicate that there have been several improvements.

If the vulnerable individual uses a different toilet or defecation location, it would be useful to find out whether this is lower or higher on the sanitation ladder within Tool two. Data from the question asking whether or not the vulnerable individual can use the toilet without assistance indicates an apparently high rate of independent use. This might be giving a misleading impression, because the data do not provide information on the level of difficulty they experience. A follow-up question to ascertain whether vulnerable individual can use the toilet with or without difficulty would be useful.

New areas of physical safety and MHM also provided further information and indicated that these were key areas that needed to be addressed.

At the household level, the latrine observation tool was administered in all households at mid-term. However, at baseline, the observation was undertaken in a selection of households and not all households. This made comparison at baseline and mid-term difficult.

3.17.1 National level findings

Strong working relationships with organisations within the WASH and disability sectors were identified including WaterAid, ATC, UNICEF, the African Development Bank (ADB), Sightsavers and national level organisations representing people with disabilities and other vulnerable groups, e.g. the Uganda National Union of Disabled Persons, the Uganda Society for Disabled Children, HelpAge International and community-based organisations.

4 Discussion

The overall results of the MTR showed that the early impacts of the intervention on the target communities were substantial, in that the intervention had been delivered and implemented by the implementing partners across several of the target communities that formed part of the study sample. Nevertheless, there were key areas in relation to the degree to which the intervention was delivered across target communities that are reflected in the findings, and in the way in which target communities responded to the intervention.

4.1 Intervention delivery

The status of the intervention at the time of the MTR in early May as shown in Table 4.1 indicated that, of the 52 target villages of the full study sample, the intervention had been delivered across 34, with 18 not having had any intervention delivered. Most areas in which the intervention had not been delivered were target villages in which WEDA were to be delivering the intervention. Of the 18 villages that had not received the intervention, two thirds were WEDA target villages.

Before the main data collection, discussions were held with project partners about why the intervention had not been delivered in specific target areas or villages. It should be noted that all the villages in the two districts fall within the post-conflict zone. However, the selection of villages is often informed by the applications sent to the sub-county for support. The most probable explanation could be that WEDA, in addition to targeting the study villages, tried to prioritise the villages that had expressed a need for support.

Summary village ranking	Colour code	Village ranking	CoU-TEDDO	WEDA
More intervention		10	7	3
Little intervention		24	15	9
No intervention		18	6	12
Total		52	28	24

Table 4.1: Summary of intervention delivery status

The MTR established that key factors in the delivery of the intervention were the level of understanding of the objectives of the Undoing Inequity project by the implementing partner, and the capacity of the implementing partner.

The CoU-TEDDO at mid-term were documented to have greater capacity on the ground and also integrated the overall Undoing Inequity project within their wider programme objectives. This could partly explain why the intervention was delivered differently by the project partners. WEDA were identified to have limited capacity on the ground, which might partly also explain why the intervention was not delivered across all of their target villages. The overall project was also identified to be viewed by WEDA as a standalone project which was not incorporated into the wider objectives of their programme.[10] However, in both areas where the project partners had delivered the intervention, the MTR established that the intervention that had been set out within the programme had been delivered on the ground.

The general findings are now discussed in relation to the specific areas set out in the findings section.

4.2 Access to water

4.2.1 Access to new water technologies

Of the 57 sampled households at MTR, over 40% reported that new water technologies had been constructed, installed or rehabilitated in their community in the past two years. Given that the intervention was implemented over a one year period, these findings indicate that access to water technologies had improved and facilities were identified to be present in communities. Of the households reporting that they were now using new water technologies, three-quarters were households identified to include a vulnerable member. This finding in itself shows that households with vulnerable members were reached by the intervention.

4.2.2 Accessibility of waterpoints

Accessibility of waterpoints was identified to have improved since baseline, where several barriers were identified and key recommendations were made to improve the accessibility of waterpoints for vulnerable groups.

Many of the waterpoints observed were identified to have had specific modifications made to improve accessibility and use of the waterpoint based, on findings from the waterpoint observation. It was also observed, but not recorded, that these waterpoints were ones that had been installed or rehabilitated by the project partners, being easily identifiable by their logos or date of rehabilitation or installation featured on the water source. This was also apparent in the case of the household installed with a rainwater-harvesting system, as shown in the photo in Section 3.6.1.The use of these new water technologies was also reported to be high, with three quarters of the 24 households that reported using new water technologies reporting that they now exclusively used this facility. However, only two individuals noted changes or modifications to the waterpoint, even though changes were actually observed and new water technologies installed. The discrepancy between reported changes or adaptations at the household and individual level with the observed changes actually seen at the waterpoint requires further exploration at endline.

In over 40% of the waterpoints assessed, no barriers were observed with respect to the path surface, obstacles or the steepness of the path. Major barriers, such as high steps and challenging access, were also observed to have reduced, and, in more than 80% of instances, the operation of the handpump was easy for all to use.

Households with a vulnerable member were still found to take more time to collect water than were households without a vulnerable member, and the ability of the vulnerable household member to participate in collecting drinking water was still identified to be an issue.

4.2.3 General summary

In general, the MTR established that distance to the waterpoint still continued to be an issue raised for both vulnerable and non-vulnerable households. This was supported by the qualitative findings, especially among the interviews with community leaders and local officials, who acknowledged that access to water had improved. However, distance was still a major issue for most households because they still had to travel a long way to collect water. Furthermore, specific groups – particularly those who are severely disabled and older people – were observed to also experience difficulties accessing water. This was especially the case in households with no close or immediate family who could assist them to collect water.

In two separate interviews older people, both of whom were unable to collect water due to their age and health conditions, reported having to restrict their use of water and having to wait for other, mainly younger, household members to deliver their drinking water. Both respondents reported having to sometimes wait a few days for water to be delivered to their households, thus having to reduce their intake and use of water.

4.2.4 Stigma and discrimination

A further key finding established by the MTR was that stigma and discrimination appear to have reduced since the initial baseline. This might be due to communities being sensitised on equity and inclusion issues during the delivery of the intervention, especially during Umoja and during facilitated community participation when the location of new water technologies was discussed with target communities. The qualitative findings indicated that because of high levels of sensitisation and awareness about HIV, understanding of the condition at the community level had increased. This was reported during discussions with community leaders and local officials. During an interview with one local official, the point was raised that community members within the locality were now more at ease to actively disclose and discuss their status than previously.

The MTR also established both through the qualitative and quantitative findings that further initiatives are still needed to address the particular access constraints faced by older people and those with severe disabilities, particularly those with conditions that limit their mobility. These groups were identified to experience particular difficulty in collecting water from the waterpoint, and often had to rely on household members. The interviews highlighted that older people reported feeling excluded and socially isolated from the community and sometimes from their own immediate family. Common reports included feeling ignored and not valued.

In relation to those identified with severe disabilities, particularly physical disabilities which limit their access to collecting drinking water, accessing the waterpoint was a key challenge due to their physical condition, and distance to the waterpoint was only a further hindrance. Therefore, the reliance on family members and other close friends

was high. Addressing such an area will be challenging unless these households could have access to alternative water technologies, e.g. rainwater-harvesting tanks, which would substantially reduce the distance to water and mean that water could be available 'on site' at the household level. The one household in which a rainwater-harvesting system was installed was a household in which a member had a severe disability. The installation of such a system in this household was overwhelmingly positive and had reduced the barriers faced by the vulnerable member in accessing water, and was also useful for other household members who were older but not identified as vulnerable during the initial baseline.

4.3 Access to sanitation

4.3.1 Access to new latrines

Over 30% of the 57 households included in the MTR sample had constructed, installed or rehabilitated a new or existing latrine within the past two years. Of those now using new latrines, nearly 90% were now using this as their main and only toilet. An important finding was that, of the 18 households now using new sanitation technologies, over 70% were households in which a vulnerable member was present. This indicates that vulnerable groups were in fact being reached by the intervention because those were households in which such facilities were needed. In most cases, the vulnerable individual reported using the same facility as other household members.

A key finding at MTR was the time taken for vulnerable individuals to reach the toilet. There was a substantial increase in the number of households taking less than five minutes to reach the toilet compared with at baseline. For example, at baseline, eight (21.6%) of the 40 households took five minutes or less to reach the toilet. However, by MTR, this figure had increased to 16 of 40 households (44.4%).

Most of the facilities observed were a traditional pit latrine without a slab. This latrine accounted for 33 (58%) of the 57 households sampled. A further finding was that open defecation still continued in 11 (19.3%) of the 57 households; however, why these households practised open defecation was not explored as part of this research.

4.3.2 Accessibility of latrine facilities

Accessibility audits of the latrines indicated that, with regard to reaching and entering facilities, few barriers were observed. The paths were reasonably level and free of obstacles, and over 70% of the facilities were reported as being easy to enter. Internally however, only three (6%) had any support structures such as handrail or seat to make it easier to manoeuvre, sit or squat inside.

4.3.3 Barriers

Nearly 90% of vulnerable individuals reported being able to use the toilet without assistance. For the 10% (four people) who were unable to use the toilet without assistance, the main reported barriers were their own condition or the facility being too far away. One important area to highlight is that adaptations to improve accessibility to the toilet were reported to be uncommon. This might be explained by the fact that no subsidies were provided, or that, for most people, adaptations were not needed.

However, qualitative data from FGDs and in-depth interviews indicate that many users experienced difficulties using latrines which were not captured in the questionnaire (Tool 2).

4.3.4 MHM

The results in relation to MHM were moderate. Of the 12 women and girls responding to a question on whether they were able to wash themselves throughout the month, ten reported that they were. However, the key finding was that, at a household level, access to a system to dispose of sanitary waste was low. Furthermore, only two respondents reported receiving information within the community or school environment on menstruation. These low results might be explained by the focus of the in-country partners (WAU, CoU-TEDDO and WEDA) on MHM in schools rather than at the household level.

This was supported by findings from school visits – MHM facilities were observed within all the schools visited.

4.3.5 Anal cleansing

The results in relation to access to anal cleansing materials were found to be low – only a quarter of vulnerable individuals reported that materials were available to them for anal cleansing.

4.3.6 Physical safety when using the latrine or toilet facility

The general findings in relation to physical safety when using the latrine indicated mixed results. Some respondents reported that they felt safe and comfortable whereas others reported that they felt unsafe because bushes were around or the distance was too far. Fear of snakes was commonly reported.

In relation to whether women and girls feel safe to use the latrine at night, over 70% reported that, in their view, women and girls feel safe at night. Specific questions asked to the vulnerable individual about their general feeling of physical safety for themselves and members of their households when collecting water, going to the toilet or performing personal hygiene activities found common concerns about physical safety, including the journey to the latrine or water source being too far or dark and fear of snakes and animals. Only one respondent mentioned lack of privacy as being

an issue. This finding must be viewed with caution as respondents might have been answering on behalf of another household member.

Conversely, many respondents reported that they generally felt safe using the latrine and they mentioned the benefits of using the latrine, e.g. feeling protected from germs and disease.

4.3.7 General summary

Overall, the results in relation to access to sanitation indicate that moderate improvements had been made at the household level to install or rehabilitate latrines, especially among households with vulnerable members. Over 30% of households in the MTR sample had installed or rehabilitated a latrine – a substantial achievement especially over a one year period in which the intervention was implemented. Furthermore, 14 of the 18 households with a new latrine were vulnerable households. 35% of the 40 vulnerable households in the MTR sample had installed or rehabilitated a latrine.

Questions still remain, however, about the extent to which latrines are sufficiently adapted to make them accessible and easy to use independently by vulnerable family members. Substantial levels (19%) of open defecation practice are continuing.

MHM at the household level is still an area that requires attention. The MTR found that MHM in schools had been addressed in the three schools visited through the provision of WASH rooms for girls and facilities to dispose of sanitary waste, but, at the community and household level, more work is needed.

The findings at endline will therefore prove vital in ascertaining whether open defecation among vulnerable individuals has reduced in comparison with the general rate of open defection. Furthermore, the endline findings will show whether vulnerable individuals are able to access the same facility as other family members and whether all reasonable measures have been made to enable to them to do this independently.

4.4 Access to hygiene

The findings regarding personal hygiene showed that there was an increase in the self-reported frequency of bathing from baseline to mid-term among vulnerable individuals. This was especially in relation to bathing every day. However, the level of satisfaction of bathing and performing personal hygiene activities decreased slightly. It would be interesting at endline to further explore why this is the case.

Access to a handwashing facility near the latrine or dwelling was low, with only 12 of the 56 households who answered the question reporting that they had such a facility.

In relation to barriers to accessing hygiene facilities, the main barriers identified were in relation to the limitation experienced by the vulnerable individual themselves. This included the person being ill or bedridden or through not having the physical strength to perform the activity. At endline, it would be interesting to assess whether any

adaptations or changes had been made to specifically access personal hygiene facilities or the costs of making adaptations to such facilities.

4.5 Levels of participation and empowerment

The MTR indicated positive findings regarding levels of participation and empowerment. Of the vulnerable individuals sampled, 50% reported that they had participated in local community meetings or events raising awareness about sanitation and hygiene in their community delivered by agencies including WAU, CoU-TEDDO and WEDA.

One of the components of the intervention was the delivery of information in accessible formats. Therefore, the findings that over 50% of individuals reported that they received information on sanitation and hygiene in their local community in different formats – e.g. in their local language, through pictures or audio tape – indicated that information was reaching these communities in accessible formats.

The wider findings at endline will be of interest to assess the degree to which all target communities have been reached.

4.6 Caregivers

The findings from baseline showed that caregivers played a substantial role in assisting vulnerable household members. This was still the case at MTR, with 42.8% of caregivers reporting that they regularly assisted the vulnerable household member more than three times a day, and nearly half of the sample reporting that it kept them from performing other activities, reported mainly as gardening and farming.

4.7 School WASH

The MTR results in relation to School WASH were among the most important findings. Of the three schools visited, all were observed to have had changes to school latrines. This included the construction of new toilets for children and teachers and the construction of separate washrooms for girls. Separate latrine cubicles for children with disabilities were also observed, as were newly constructed handwashing facilities. The MTR did not collect evidence of the effectiveness of the adapted school cubicles – e.g. whether there any follow up after the installation to assess if children with disabilities were able to use the facilities – through using an accessibility audit. This is an area that should be included at endline.

Interviews with teachers also gave positive results and indicated a general awareness of why new facilities were constructed.

One of the major findings was the increase in school enrolment since baseline. In one school, enrolment numbers indicated a five-times increase in the number of children with disabilities enrolling at the school over a two year period. The MTR was unable to ascertain whether these children with disabilities were from the surrounding

catchment area and were previously 'hidden', i.e. had not been attending school, or whether they had come from further afield. At endline, it would be important to explore where these children are coming from geographically and their reasons for enrolling in this particular school.

Furthermore, it would be useful to assess the increase in school enrolment across children with disabilities and children without disabilities after the construction of the facilities, compared with the enrolment levels of children with and without disabilities in schools where there has not been a focus on inclusive WASH in the community or school.

The nine schools in which the intervention had been planned had not received the intervention as set out in the original proposal at MTR. This should be further explored to find out why this is the case, and whether any future plans are in place to deliver the intervention or construct similar facilities to those set out in the intervention proposal. Given the positive impact demonstrated at MTR from the provision of school latrine facilities, washrooms for girls, facilities for children with disabilities and handwashing facilities, it is important to ascertain the intentions and plans of the partners delivering the intervention.

4.8 Institutional level

The findings from the in-depth interviews at ministry level indicated that further cross-sectoral work is required across the different ministries to address equity and inclusion issues and mainstream disability and aging issues more generally. General policies were identified at the national level and to some degree address the needs of vulnerable groups – e.g. older people, people with disabilities and those infected with HIV – particularly in relation to technical design for sanitation technologies and the construction of water technologies.

However, further work is required during the initial set-up of projects so that inclusiveness is a key feature of any project plan. Work across ministries on such issues will reduce each ministry working as an entity, and encourage working together to address issues in relation to equity and inclusion.

Strong working relationships with organisations representing vulnerable groups were identified, which included regular meetings and representation of such groups on committees.

5 Conclusion

The MTR sought to assess the early impacts of an inclusive WASH intervention on target communities, and to test and refine data-collection tools for the project evaluation in 2016. The aim of the Undoing Inequity research is to develop and test an approach that aimed to improve access to WASH for all, and thereby provide equal access to people who are marginalised and vulnerable. The results emerging from the MTR can therefore be articulated and discussed in relation to some specific research questions of the overall Undoing Inequity project, which are as follows:

1 What are the problems and opportunities currently experienced by vulnerable people and their households in accessing and using WASH facilities?
2 What solutions and approaches improve access to WASH for all within a community WASH intervention?
3 What are the benefits of improved access to WASH for vulnerable individuals and their families?
4 What are the additional programme costs of undertaking an inclusive WASH approach?
5 What tools can be used in future research and in the programme cycle to support WASH programming that reduces intra-household disadvantage, and measure the impact of an inclusive approach to WASH?

The MTR does not need to answer question 1, because this was the purpose of the baseline – to establish the key problems and opportunities experienced by vulnerable people in accessing and using WASH facilities. Therefore, the MTR can be discussed in the context of the second, third and fifth research questions.

5.1 Research question 2: What solutions and approaches improve access to WASH for all within a community WASH intervention?

This question can be best answered by addressing the following questions.

5.1.1 Point 1 – Has the inclusive WASH approach resulted in improved services within target communities?

The MTR established that overall the inclusive WASH approach has produced encouraging results, particularly among households in which a vulnerable member is present. Results from the sampled households indicate that access to water has improved, with over 40% of households reported to be using new water technologies. The vast majority of these were households including a vulnerable member.

The provision of new water technologies was identified to improve access, but it is important to note that distance to these sources is still a major barrier, especially among older people and those with severe disabilities that restrict their mobility.

This indicates a key need to address the particular constraints and issues faced by those who are unable to access these water sources. Although only one household was identified during the MTR to have been provided with a rainwater-harvesting system, this method of providing water closer to home requires further exploration because of the substantial reduction in the distance to the waterpoint.

At an institutional level, the findings that emerged from the in-depth interview with local officials and community leaders indicated that some areas were still underserved and communities still had to travel for longer than 30 minutes to obtain water.

To accurately assess the number of boreholes that have been installed or rehabilitated as part of this project, it would be important to quantify the exact number in each of the target communities and the estimated population sizes or catchment of those areas. The findings at MTR are only those reported, so it is important to substantiate these findings with the actual numbers in terms of the infrastructure installed.

With regard to access to sanitation, over 30% of sampled households had installed or rehabilitated a latrine within the past two years. Given that the majority of these households included a vulnerable member, these results are also encouraging. In addition, there also appeared to be a substantial increase in the number of vulnerable individuals taking less than five minutes to reach the toilet.

One area that does require attention is ensuring that households are aware of the different low-cost latrine design options, including handrails and seats, and the cost of building a latrine. The answers from the open-ended questions indicated that the main reason for building latrines was to reduce germs and contamination, and was not, in fact, because of the needs of the vulnerable household member.

Further work in relation to access to hygiene is required, as the result at MTR indicated that the hygiene facilities and modifications to hygiene facilities appeared to be lacking. The provision of handwashing facilities near the latrine facility or within the dwelling was low. This is an important area that should be emphasised to households when constructing latrines.

5.1.2 Point 2 – What has the wider impact of the inclusive WASH approach been on vulnerable and non-vulnerable people in these communities?

The wider impact of the inclusive WASH approach on the target communities sampled indicates that, in general, access to water and sanitation has improved since baseline. However, significant strides are still to be made in reducing the distance travelled to collect water and return and the number of households installing new latrines. The practise of open defecation was still found to be high at mid-term, with approximately 20% of households still practising it.

The level of participation and empowerment of vulnerable groups also demonstrated positive results, as did the general attitude towards vulnerable groups. The MTR results

indicated that communities had been heavily sensitised on equity and inclusion issues.

5.1.3 Point 3 – What can be done to improve the inclusive WASH approach so it is more effective and has a greater impact on the quality of WASH?

To improve the inclusive WASH approach so it has a greater impact on the quality of WASH, clear objectives for the delivery of such an intervention must be set to programme partners and implementers.

The approach needs to be adopted as part of an organisation's wider programme objectives so that such an approach is apparent throughout the whole project cycle and not just at the implementation phase. Wider communication with those at national level regarding the additional programme costs of delivering such an intervention should be actively communicated and the findings of such projects widely disseminated.

One of the major findings of this MTR following interviews with those implementing the intervention was an indication that the additional programme costs of an inclusive approach are minimal, especially when adaptations are included at the initial design phase.

At a community level, it is important that target communities are aware of the inclusive WASH approach, particularly regarding the design of water and sanitation technologies. The reasons identified and changes to facilities noted were identified to be minimal.

This could be achieved by project implementers actively involving communities in the design and installation of new WASH technologies. This includes specific emphasis on the need and purpose of such facilities, e.g. to benefit all community members including those with difficulties accessing WASH facilities.

The importance of addressing the needs in schools and providing inclusive facilities is important. Given the positive findings and increase in school enrolment after the provision of WASH facilities, it is important that such initiatives are rolled out more widely. Close monitoring of implementation is required during the projects, to ensure that such facilities are being provided according to the project schedule.

5.1.4 Point 4 – Technology design

The points in this section relate to four points: whether the new facilities are more user friendly as a result of the inclusive approach; whether these facilities are more satisfactory to the users than are 'standard' designs in terms of reducing the time taken; the difficulties experienced and the general user experience; and the wider impact on the lives of vulnerable individuals and their household members.

With regard to waterpoints, in most instances, some of the challenges identified at baseline were reduced, such as high steps and challenging access, and the handpumps were easy for all to operate. Changes to the waterpoints were noted by some households and it was apparent during the waterpoint observation that changes had been made.

The time taken to reach the waterpoint had not reduced from baseline; this might be due to the way in which the question was worded in 2012, which made comparison at mid-term difficult.

With regard to toilets, few households had made specific changes or adaptations to their toilet, although the time taken to reach the toilet had substantially reduced.

The new inclusive designed school WASH facilities were more satisfactory than were the standard facilities. In most of the schools visited the old facilities still existed so it was easy to make direct comparisons. More children with disabilities were enrolled at MTR. The teachers interviewed reported positive findings in relation to young girls and MHM. Further investigation is needed to understand the extent to which the increased enrolment of children with disabilities can be attributed to the project and the improved WASH facilities.

5.2 Research question 3: What are the benefits of improved access to WASH for vulnerable individuals and their families?

Several benefits have been discussed in relation to improved access to WASH for vulnerable individuals and their families, some of which are discussed in relation to Research question 2. The provision of new water and sanitation technologies, particularly those that are accessible to vulnerable individuals, firstly improves access, but also reduces the time taken to collect water and reach a toilet facility. Further work is necessary to reduce the distance travelled to collect water and provide accessible latrine facilities for vulnerable individuals. A significant finding arising from the MTR was the increase in the number of vulnerable individuals taking less than five minutes to reach a toilet facility.

The increased enrolment of children with disabilities in three schools following construction of accessible toilets and MHM facilities is also very interesting. There are also encouraging accounts of how increased awareness of disability in schools has improved the attitudes of children without disabilities to children with disabilities. Both findings require further investigation at endline to understand attribution to the project's intervention.

In general, the MTR also established that levels of participation and empowerment had improved and areas regarding stigma and discrimination had reduced. This indicates a positive impact on vulnerable individuals and their family members. It is unclear at this stage what impact these savings of time and effort have had on people's lives, e.g.

improved levels of hygiene, improved attitudes and perceptions towards vulnerable individuals and whether more time is spent doing productive activities. This should be explored in greater depth at endline.

5.3 Research question 5: What tools can be used in future research and in the programme cycle to support WASH programming that reduces intra-household disadvantage, and to measure the impact of an inclusive approach to WASH?

One of the objectives of the MTR was to test the data-collection tools for use at endline in 2016. At mid-term, all nine tools were re-administered following their redesign and redevelopment.

The areas that appeared to be problematic at baseline were addressed. The suggestions for the data-collection tools at endline include further refinement in terms of reducing the number of questions, particularly in the household and individual-level questionnaires. Feedback during data-collection indicated that, although the tools had improved, the length was still an issue given the other tools to be administered in the same timeframe.

A focus on the keys areas from baseline, including the provision of new water and sanitation technologies and the development of key indicators to assess at endline, will be helpful in reducing and focusing the tools.

At mid-term, identification of households and ascertaining the vulnerability status of household members increased the amount of time spent in target villages. It is advised that, before planned data collection at endline in 2016 commences, the status of the household is ascertained, i.e. whether the household is still present or has moved, and the mortality status of the vulnerable members.

The administration of the latrine-assessment tool to all households, as at mid-term, is important to verify that the categories used at baseline can be mapped to those used at mid-term.

6 Recommendations

The recommendations emerging as a result of this MTR are presented to follow the format of the results. These recommendations are based on the findings emerging from the MTR and observation of the delivery of the intervention in target communities.

6.1 Recommendations for WAU

6.1.1 Access to water

- Long distances to waterpoints continue to be a problem for many older people and those with severe disabilities. Further exploration is required to assess

whether alternative options, e.g. rainwater-harvesting, can be made available to those most in need.

6.1.2 Access to hygiene and sanitation

- Accessibility and safety audits should be routinely conducted after the construction of new school WASH facilities, as part of the quality control and sign off process.
- Project implementers providing information on accessible latrine options should emphasise the benefits to all users of user-friendly designs. Staff should also emphasise the labour-saving benefits and consult vulnerable groups – not only people with disabilities but also groups including older people and those who are chronically ill.
- An emphasis should also be placed on effective monitoring of community mobilisation and information dissemination about sanitation and hygiene and subsequent changes implemented by households and communities.

6.2 Recommendations for the endline

6.2.1 Continued investment

- The status of the intervention was not as advanced as expected at the time of the MTR (see table 3.1). Continued investment and emphasis on carrying out the inclusive WASH approach within the 52 villages included in the baseline survey is vital so that outcomes and potential impacts can be measured during the endline.

6.2.2 Access to water

- To ascertain the reach of the intervention on target communities, it will be important to establish and understand the number of new or rehabilitated water technologies installed in each of the target communities by the implementing partners. At MTR, apart from the self-reported questions asked and waterpoint observation, it was difficult to verify the number of new or rehabilitated water technologies.
- Further exploration of why new water technologies have been installed should be explored at endline to assess whether communities are aware that the installation of such technologies formed part of the intervention.
- For households not accessing new water technologies, the reasons why new technologies were not constructed in their communities should be explored.
- The total number of vulnerable households using alternative water technologies, e.g. rainwater-harvesting systems, would be important to know to assess the reach of the intervention.
- At endline it would be interesting to assess why particular households continue to use unprotected water sources even though protected water sources are within distance of their households. This was observed at MTR.

- The waterpoint-observation tool might need to be adjusted at endline, to capture information about inclusive design modifications (e.g. increased space, ramps, container stands etc).
- At endline the results of the process monitoring during the project cycle should be analysed to provide background and context to the results.
- The development of a set of key indicators in relation to water will be important at endline to enable the refinement of data-collection tools and to monitor the objectives of the project.

6.2.3 Access to sanitation

- The degree to which households are accessing new latrines should be assessed at endline through the incorporation of the same questions used at MTR to assess how many households have installed or constructed latrines. This should also include the development of a set of key indicators for use at endline so that questions can be further refined.
- The reasons why households are continuing to practise open defecation should be explored, and the extent to which the triggering and follow up has addressed this during the Umoja approach should be investigated to assess why this practice continues. Further exploration of why this practice is more common among vulnerable households should also be explored.
- All households at endline should have a household latrine observation checklist administered to assess their latrine facilities.
- For households with a vulnerable member who have not made any specific changes to their latrine facilities, the reasons why should be explored further during in-depth interviews.
- At endline, it will be important to understand whether any activities have been conducted in the areas where no intervention was identified at MTR.

6.2.4 Access to hygiene

- Further questions should be incorporated at endline to assess whether changes or adaptations have been made to access hygiene facilities at the household level and the information received on such options.
- Further exploration of the uncommon presence of handwashing facilities should be explored at endline, and the reasons why this is the case.
- MHM at the household level requires more detailed exploration as this was an area that was reported to be low at mid-term. It would be worthwhile to explore opportunities for integrating messages to improve MHM at the household level using the Umoja approach and initiatives e.g. to train women to make low cost sanitary pads with appropriate messaging and linkages to income generation.

6.2.5 School WASH

- At end line, it would be useful to visit all of the schools included at baseline including the three included at mid-term to assess the status of the intervention. A comparison of enrolment rates in schools of children with and without disabilities where there has not been an inclusive WASH focus in the

community or school with schools where there has been an inclusive WASH approach would also be useful in examining the role and impact of the intervention.

- To assess the impact of the intervention on children with disabilities specifically and on girls in terms of MHM, in-depth interviews could be undertaken with children to assess.
- Information about the reasons why children with disabilities choose to enrol at the three specific schools visited at MTR, in particular the school where a five-times increase in enrolment of children with disabilities was identified, would be of interest to explore. It would also be interesting to know their home location to assess whether they are within the geographical catchment area of the school.
- Interviews with local ministry officials to discuss the impact of WASH facilities in schools should be included at endline.

6.2.6 Caregivers

- The role of care givers in providing assistance to vulnerable household members' WASH needs could be examined in greater depth, and suggestions made of how their role could be supported or reduced from the perspective of an inclusive WASH approach.

6.2.7 Levels of participation and empowerment

- Investment and emphasis on improving levels of meaningful participation and empowerment of vulnerable groups should continue until the endline. Any changes resulting from this continued focus should be assessed across all target communities at the endline.

6.2.8 Evaluation of data-collection tools for endline

- The development of a set of key indicators at endline in relation to the objectives of the research should be completed. Such indicators will then enable the data.
- All tools should be re-administered, but there is a need to substantially refine the quantitative tools to reduce the time burden on respondents and data collectors, and to ensure that only relevant information is collected. Sets of key indicators will enable this refinement.
- The MTR established that a much higher number of vulnerable individuals were identified through having a detailed roster and screening questions than there were in the original sample identified. It would be useful to explore the impact of the intervention on these groups.
- Further questions should be included in the individual questionnaire (Tool 2), in the section on access to sanitation facilities, that capture the type of toilet facility used for vulnerable individuals who do not use the same toilet facility as other members of their households. The purpose of such a question would be to

ascertain whether vulnerable individuals are using inferior facilities to other members of their households.

- The individual-level questionnaire (Tool 2) should also include an additional question on the level of difficulty experienced by vulnerable individuals reporting being able to use the toilet facility without assistance from another person. The current question only captures whether assistance is needed, and not the level of difficultly that the individual might experience.
- The waterpoint observation checklist would be improved at endline by adding questions to capture the specific design changes made from the previous standard installation of water technologies. The purpose of this would be to assess what specific modifications have been made to improve accessibility. This would involve discussions with the project implementers on pre-intervention designs and the specific designs included as part of the intervention. The current focus of the checklist is on barriers in general to accessing waterpoints, so inclusion on the specific design changes made would be important to ascertain at endline.

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Annex 1: The Umoja implementation process

Critical steps in UMOJA	Purpose of the step	Detailed chronological steps (what is involved in each step)
1.Community entry	To enhance the participation of key stakeholders and create demand for hygiene and sanitation among the targeted communities	a. Conduct district consultative meetings to identify worst sub-counties with regard to WASH services. b. Conduct sub-county consultative meetings to identify worse-off parishes and villages. c. Vetting of villages for intervention at sub-county. d. Village application forms are distributed by the sub-county to the village leaders (e.g. Local Council) to create demand/interest for sanitation promotion. e. Dialogue meetings are held with the selected LCIs to introduce the external organisation and collect baseline information on HESAN. f. Baseline forms are distributed for baseline information collection. g. Mobilisation meetings are conducted to provide community feedback and build consensus.
2. Enhancing participatory community action	To stimulate demand for HESAN and its management for better behaviour change through CLTS and cluster system	CLTS and cluster system steps a. Rapport building b. Community mapping c. Transect walk d. Bottles experiment e. Faecal diagram f. Faecal calculation g. Emergence of natural leaders h. Community action planning i. Formation of clusters (5–15) and election of cluster heads and hygiene educators and bye-law formulation.
3. Capacity building for the established community structures.	To enhance local capacity, knowledge, learning and management of WASH facilities among the targeted communities.	Training hygiene educators and cluster heads on: a. Selected UMOJA (PHAST, CLTS and Cluster system) tools. b. Demonstrations on construction of WASH-inclusive facilities. c. Exchange visits for cluster heads and hygiene educators. d. Refresher trainings of hygiene educators and WSC (1^{st} level training five days and level 3 training two days)

4. Participatory monitoring and evaluation.	To support communities to analyse and review their HESAN status and actions respectively	a. Follow-up of community action plans, cluster action plans and individual household action plans. b. Data collection on new HESAN facilities installed by households by the hygiene educators. c. Evaluation of changes at household, cluster, and community levels. d. Joint monitoring to review progress of action plans by the cluster heads and hygiene educators, together with organisational field staff. e. Participatory community evaluation meeting.