

Towards Community Resilience, Focus on a Rural Water Supply, Sanitation and Hygiene Project in Swaziland

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Abstract The purpose of this paper is to assess the effectiveness of different approaches of water, sanitation, and hygiene (WASH) in reducing and mitigating against potential risk of disaster and promoting community resilience. Lack of access to safe water supply, inadequate sanitation, and poor hygiene practices are among the leading causes of illness, death and malnutrition in developing countries. Using a resilience conceptual framework in the design of research, pre and post Knowledge, Attitudes and Practices (KAP) surveys were administered to 450 randomly selected beneficiaries of a Non-Governmental Organization (NGO) supported WASH program in six constituencies that are prone to drought and water borne diseases. Guided direct observation was used to assess the status WASH infrastructure at project inception and completion. Results of the study indicated increases in the percentage of target population with access to safe water, water usage in litres per person and improvement in sanitation and hygiene practices. They were improvements in the community participation, learning and capacity in use and management of WASH infrastructure meaning that effective promotion of WASH during relief, recovery and development programming to build infrastructure and human capacity prepares communities to face future WASH related hazards.

Keywords: *resilience, water supply, sanitation and hygiene, DRR*

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1. Introduction

Water that is clean, good sanitation and hygiene are universal needs and basic human rights and are underpinnings of poverty reduction and general human advancement. The unrelenting struggle against sanitation and water poverty in Southern Africa continues to be the daily reality [26]. In 2011, the World Health Organization (WHO) indicated that the lack of access to safe water supply, inadequate sanitation, and poor hygiene practices are among the leading causes of illness, death and malnutrition in developing countries. The consequence of this deprivation can be disastrous to human and economic development globally. The United Nations Children Education Fund (UNICEF) and the World Health Organization in 2012 estimated that over 780 million people lack basic access to drinking water and approximately 1.1 billion people lack access to safe and basic sanitation, whilst 2.6 billion people do not have access to improved and adequate sanitation facilities. Inadequate water and sanitation amenities and unhygienic habits play a part to millions of deaths of children annually with almost 1.5 million children under five dying from diarrhoea each year [18].

In Swaziland over 3,000 boreholes were drilled since 1986, however, over 40 per cent of the population still do not have access to clean water [1]. The Swaziland

Vulnerability Assessment Committee in 2013 reported that in the Shiselweni region access to improved water services was on the decline with only 56 percent and 55 percent of households having clean water in the dry and rainy seasons respectively, which was followed by Lubombo region with 60 and 58 % clean water in the dry and rainy seasons respectively. Further to this an average of 83 % of the household did not have access to improved sanitation. Shiselweni and Lubombo regions had the highest number of households with poor sanitation facilities, with 80 and 81 percent of the households not having improved sanitation facilities respectively.

Sustainable water, sanitation and hygiene management is critical to addressing disaster vulnerability and strengthening the resilience of communities to water-related hazards. The Sustainable Development Goal 6: 'Ensure access to water and sanitation for all', amongst many targets, hopes to achieve by 2030, universal and equitable access to safe and affordable drinking water for all, access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations and support and strengthen the participation of local communities in improving water and sanitation management [15]. This will build on to the Millennium Development Goal (MDG) 7 which aimed to reduce by half the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015 [17]. Priority Number 3 of the Sendai

Framework for Disaster Risk Reduction 2015-2030 [20] is 'Investing in disaster risk reduction for resilience'. One of the targets of the Sendai Framework is to substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030. Some of the implementation strategies suggested by the Sendai Framework include mainstreaming disaster risk assessment, mapping and management into rural development planning and management [16].

Demographic pressure and migration is leading to a continual increase in the consumption demand for water, sanitation and hygiene services [6], and while at the same time the climatic conditions in the dry lowveld agro ecological region of Swaziland is limiting the availability of water due to low rainfall amounts received and long dry spells. One of the main causes of water supply shortages in rural Swaziland is drought [25, 5]; which is a cyclical phenomenon that reoccurs frequently. Drought results in low ground water supply which affects boreholes and amount of water collected in reservoirs. Other causes of water shortages include a high frequency of breakdown of hand pumps and high demand which results in households not getting the amount they require per day [2]. Water shortages during the year normally influence the type of water source used by a household.

Without water, sanitation and hygiene, the risk to WASH related disasters is high and sustainable development is impossible. The objective of the study was to assess the impact of water, sanitation, and hygiene (WASH) programs in the lowveld of Swaziland in building community resilience to the prevailing WASH challenges that have resulted due to infrastructure decline, low investment in WASH infrastructure, and drought.

2. Theoretical Context

UNISDR [21] defined resilience as: "The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions". According to [10] resilience has emerged as a fusion of ideas from multiple disciplinary traditions including ecosystem stability, engineering infrastructure, psychology, the behavioural sciences and disaster risk reduction.

The intimate connections between disaster recovery by and the resilience of affected communities have become common features of disaster risk reduction programmes since the adoption of *The Hyogo Framework for Action 2005-2015* [8] and the *Sendai Framework for Disaster Risk Reduction 2015-2030* [23]. *The Sendai Framework* is the successor instrument to the *Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters*.

Building community resilience requires an integrated approach to building community capitals that will enhance the capacity of communities for collective action in the areas of disaster risk reduction [4]. More attention is now paid to the capacity of disaster-affected communities to 'bounce back' or to recover with little or no external

assistance following a disaster [8]. Resilience in this study was seen as the ability of rural communities, WASH systems, infrastructure and institutions to uphold and improve their functioning after a project intervention necessitated to minimise risk to disaster, allowing communities recover from setbacks resulting from water, sanitation and hygiene related hazards. The concept of resilience was perceived in line with the Sendai Framework for Disaster Risk Reduction 2015-2030 [20] and [20] suggestion that resilience can be achieved through supporting water, sanitation and hygiene services that consider all risks, including those additional risks posed by climate change, and build the adaptive capacity of communities themselves to deal with shocks and stress.

The study adopted a framework (Fig 1) proposed by [7] for promoting resilience in WASH interventions during disaster recovery periods. The framework was based on linkages between WASH systems, infrastructure the communities and institutions.

The framework characterised resilience through *Learning and Knowledge, Institutional Capacities, Social Participation and Sectoral Integration*, which allow for the effective use of the available opportunities to determine the process of building resilience over a period of time, with or without external assistance [7].

The components of resilience as proposed in the framework were:

- *Learning and Knowledge: Social Learning, Technological Innovations and Local Knowledge*

A suggested measurement of resilience in the Hyogo Declaration is "the degree to which the social system is capable of organizing itself to increase capacity for learning from past disasters for better future protection and to improve risk reduction measures [13]. Learning at community level can be realised through trainings, workshops, and on-the job experience for various community actors' thereby allowing attitude and behaviour change which allows accepting technological innovation, information dissemination and sharing and learned decision-making [13].

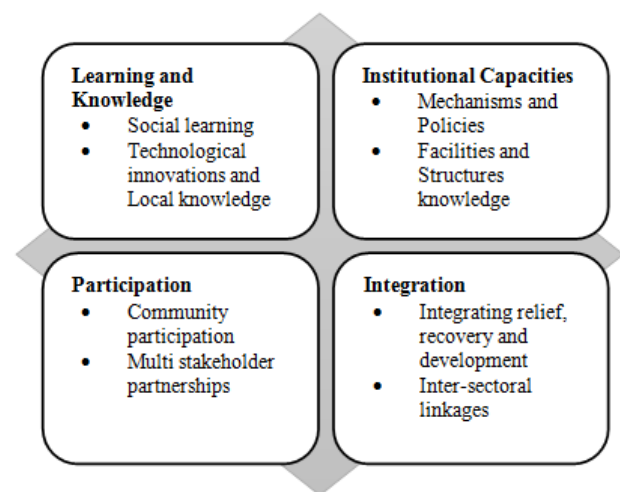


Figure 1. Conceptual framework for promoting resilience in WASH during recovery. Source: Krishnan et al. 2013

- *Institutional Capacities: Mechanisms, Policies and Facilities*

A strong institutional background is essential for the promotion of resilience in the face of hazard events.

Establishing such institutions that provide facilities to communities, technical expertise and build community capacities will be helpful in learning, adapting and promoting disaster resilience [8].

- *Participation*

Access to and participation in networks, groups, formal and informal institutions is a critical component for social capital. This is important in resilience building as participation influences learning, adaptation and decision making. Involving communities in program design, implementation, monitoring and evaluation is known to help communities prioritise resources, effective targeting, enhances community ownership and sustainability.

- *Integration*

Building community resilience requires an integrated, multi sectoral approach that will enhance community's capacity for collective action in the areas of disaster risk reduction [4]. UNISDR (2005), the *Hyogo Framework for Action* calls for the use development of capacities that reduce disaster risk in the long-term, incorporating the sharing of expertise, knowledge and lessons learned [7].

The objective of this research was to assess the effectiveness of different approaches of water, sanitation, and hygiene (WASH) in reducing and mitigating against potential risk of disaster and promoting community resilience. Resilience in the research was assessed through analysing *Learning and Knowledge, Institutional Capacities, Social Participation and Sectoral Integration* all which are factors that warrant efficacious utilization of opportunities defining the process of building resilience over time, with or without external assistance.

3. Methodology

3.1. Study Population and Sampling Procedure

A mixture of quantitative and qualitative research methodology was used for the study. The quantitative approach method used structured questionnaires to collect data while the qualitative method used checklists for observation of the WASH infrastructure that included latrines, rainwater harvesting systems and boreholes. A two stage systematic random sampling was used to select the households and the communities where they were coming from. In 2012, at project inception, a WASH knowledge, attitudes and practices (KAP) survey was conducted targeting approximately 10 % of the beneficiary population (450) households, randomly selected in 6 randomly selected constituencies. After project completion in June 2015, a KAP survey questionnaire was administered to 450 randomly selected project beneficiaries. The questionnaire solicited information pertaining WASH indicators as per USAID/OFDA Proposal Guidelines WASH Indicators [24].

Indicators for WASH impact/ community resilience were used to assess interventions that included community *Borehole Rehabilitation, Replacement, Rain Water Harvesting (RWH) at household level and Participatory Hygiene and Sanitation Transformation (PHAST)*. Indicators used in the study included:

- Percent change of households that use an improved drinking water source
- Water usage of target population in litres/person/day
- Percent of target population demonstrating good hand washing practice
- Percent of target population demonstrating correct water usage and storage
- Percent change in knowledge pertaining to sanitation topics
- Participation in/ of water point committees, community water technicians

Water quality in the homestead was used as an indicator of the type of water sourced and sanitation and hygiene practices of the household. Water quality was tested for coliform bacteria (the number of households with a thermotolerant faecal coliform (TTC) of 0/100 ml) before households were trained on construction of household Rainwater Harvesting Systems (RWHS) and after construction and collection of water in the systems. Water quality was also tested for coliform bacteria before and after installation from 36 randomly selected boreholes (hand pumps) installed within the project period. Water samples from RWHS and boreholes were collected at source and tested within 8 hours after collection. An in situ membrane filtration test kit (Paqualab 50) was used to determine the microbiological quality of water in the water samples. To test bacterial contamination in storage and transportation, additional water samples were collected from 8 randomly selected households in 4 communities at Pre Intervention, hereafter PI and 8 samples from another 4 communities at Post Intervention, hereafter PoI. From storage containers within the households' 50 ml water samples were collected into sterile 100 ml plastic containers from the previous day's water collections and transported within 4 hours of collection to the laboratory to undergo testing for coliform count.

KAP survey data collected was entered and analysed using SPSS for Windows Version 20.0 SPSS, Inc., Chicago, IL. Descriptive statistics including and frequencies formed the main output for analysis.

3.2. Study Area

The study area (Figure 2) located in the Lowveld agro ecological region covering about 40% of the country and is the hottest, driest and the most vulnerable to drought. The study was conducted in six constituencies (Mhlangatane and Madlangempisi, from the Hhohho region, Mkhweni from the Manzini region, Lubuli and Hlane from the Lubombo region and Shiselweni 1 from Shiselweni region. The constituencies were randomly selected based on the WASH interventions that were implemented by one international Non-Governmental Organization (NGO) between June 2012 and June 2015.

4. Results and Discussion

4.1. Household Demographics

Sixty four percent of the respondents were male, 70.3 % were in the age group of 30-64 years. The average

Access and use of reliable, affordable potable water supply is essential for good health and important for sustainable development. The increase in the number of households using improved water sources will contribute to the reduction of water-borne illnesses as approximately 88% of all diarrhoea infections worldwide are attributed to unsafe water supply, as well as the lack of safe hygiene practices and basic sanitation infrastructure [3].

Source of drinking water: The increased frequency and duration of droughts results in diminished water supplies in both the short and long-term. Drought effects are critical in the project area and ensuring adequate and sustainable supply of water is therefore critical. Diversification is key to increasing resilience and adaptive capacity to drought hazard on water supply. Availability and use of various water sources gives households a variety of options and choices. Of the different water sources in the rainy season, at PoI, the main improved water sources the households used were boreholes, which was followed by rainwater harvesting (Table 2).

Respondents attributed the high percentage of households collecting water from rain water harvesting systems to the fact that most households had at least one house that is roofed with corrugated iron sheets so harvesting rain water became easy after they were trained on construction of household rainwater harvesting systems. Respondents indicated that during both the rainy and dry season if available they preferred using water from rain water harvesting systems as this was less salty than that from some of the boreholes. Of the different water sources in the dry season at PoI, the main improved water sources of the household used were boreholes. It is important to note that the main sources of water used both in the rainy and dry season were improved water sources. This was a clear indication of the learning acquired through the practical and theoretical training, as well as input supply (cement, wire mesh and corrugated iron sheet) provided by the NGO.

Table 2. Main sources of drinking water for members of the household during the rainy and dry season

| Water source | Percentage of households | |
|-----------------------|-----------------------------------|---------------------------------|
| | Water sources during rainy season | Water sources during dry season |
| Piped into yard/plot | 19 | 19 |
| Public tap | 10 | 13 |
| Open well in dwelling | 0 | 1 |
| Open public well | 2 | 1 |
| Protected public well | 4 | 3 |
| Borehole | 20 | 27 |
| Spring | 3 | 4 |
| Protected spring | 2 | 2 |
| River/stream | 13 | 15 |
| Pond/lake | 2 | 1 |
| Dam | 4 | 8 |
| Rain water harvesting | 19 | 1 |
| Water vendor | 2 | 7 |

Duration of water availability at source

Duration of water availability at source is a function of durability and sustainability of the water supply infrastructure as well the availability of ground, surface

and rainwater. Table 3 shows the duration of water availability in the rainy and dry season.

Table 3. Water availability in the season

| Duration of water availability | Percentage of households | | | |
|--------------------------------|--------------------------|-----|--------------|-----|
| | Dry season | | Rainy season | |
| | PI | PoI | PI | PoI |
| 1-2 months | | 2 | 1 | 10 |
| 3-4 months | 10 | 13 | 4 | 11 |
| >5 months | 84 | 85 | 78 | 79 |

The rehabilitation, replacement of non-functioning hand pumps with new hand pumps and the construction of household rainwater harvesting systems resulted in more water sources being available. This also led to an increase, both during the rainy season and the dry season, in the availability of water resulting in households having water in periods that they did not previously have water.

For both seasons, over 78 % of the households water from the main sources, that included boreholes, rainwater harvesting systems, and piped water systems, water was available for over 5 months (equated to all year round). The longer the period the water is available at improved water points, the lower the chances the households will source water from unimproved water sources both in dry and rainy periods.

Distance to water source

Time spent at water source affects time availability for agriculture, health welfare, and other economic activities. Sixty four percent (Table 4) of the households took less than 30 minutes to collect water and back at PoI compared to 58% at PI, during the rainy season. In the dry season, there was a reduction in the time taken to and from a water point, with more households taking less than 30 minutes.

Table 4. Time taken to go to water point and back to the homestead

| Time | Percentage of households | | | |
|--------------------|--------------------------|-----|--------------|-----|
| | Dry season | | Rainy season | |
| | PI | PoI | PI | PoI |
| 30 minutes or less | 48 | 49 | 58 | 64 |
| 31-60 minutes | 30 | 30 | 30 | 25 |
| 61-180 minutes | 14 | 14 | 9 | 8 |
| More than 3 hours | 7 | 7 | 2 | 3 |

The sphere guidelines indicate that queuing time at a water source should not be more than 30 minutes. The potential negative results of excessive queuing times are reduced per capita water consumption, increased consumption from unprotected surface sources and reduced time for other essential survival tasks for those who collect water [9]. At PoI there was a reduction in time taken and spent during collection and transportation of water from source back to the homestead. This was attributed to more water sources being available, as well as the water sources being more productive, i.e. more water available throughout the year thereby minimizing waiting time during collection. UNICEF (2009) studies show that when water sources are more than 30 minutes away from their homes, people and especially children are highly vulnerable to hygiene related diseases

Water collection, storage and use

Water use: Quantity of water used per household reflects the accessibility of water to the household. Access

to safe and clean water for domestic consumption is essential for any household; the more accessible the water is a higher volume of it is used. There was an increase in water usage between the PI and PoI by 16.7 litres per household per day from 57.4 litres per day to 73.9 litres per day. This water was used for all household needs that included cooking, drinking, washing and bathing.

The average daily use per individual also increased by 1.8 litres from 8.3 litres to 10.1 litres per household per day. The increase in the usage of water can also be taken as a proxy indicator of an improvement in personal and food hygiene habits resulting from increased supply and improved access to potable water and increase in awareness of hygienic practices. Despite the increase in household and individual water consumption, the water usage is still significantly lower than the globally acceptable volume of 15 litres/person/day [9] for people staying in hot areas like the study area.

Water Collection: When households were asked on the amount of water collected for use in the kitchen, the last time they collected water, there was a significant difference in the amount collected from the PI to the PoI.

There was an increase in households that collected between 1-20 litres from 7.8% at the PI to 61.6% at PoI. There was a decrease in the number of household that collected a large amount of water each time they collected water. This could be attributed to more water sources being available and accessible. For the household, there is no longer a need to collect water in bulk, as they can easily collect fresh water the following day.

Storage container hygiene: Water contamination causes are numerous; however, they can be easily managed, through cleanliness of utensils as well as the hygiene of the handler. Regardless of the source of water, the manner in which the water is managed/stored in the household remains critical, if contamination is to be kept minimal. Seventy percent of the households had a specific container for storing water whilst 30% did not separate drinking water with water for other household uses. Ninety six percent of the households washed their containers before filling them with water. Forty three percent (Table 5) washed their containers each time before use and 30% of the households washed their containers daily. The period the container was washed was indicative of the period water was collected, except in the case where the container wash not washed.

Table 5. Time when container is washed

| Frequency of cleaning | Percentage of households |
|----------------------------|--------------------------|
| Daily | 30 |
| 2 days | 9 |
| >2 days | 16 |
| Each time before we use it | 43 |
| Do not clean | 1 |

The main media used for cleaning the containers were soap, water only, and mud and/or sand. The majority of the beneficiaries (39%) used mud and/or sand and 36% used liquid soap. All (100%) of the households used water in isolation in cases when soap or sand were not available.

The width or the mouth/inlet is a factor that can regulate quantity of solid particles or bacteria entering a container. Analysing the proportion of households that

stored water in the house, the percentage of households using narrow mouth (≤ 10 cm) water containers increased by 12% from PI to the PoI, similarly the proportion of household that used wide mouth containers decreased by 6% in the same period.

The mechanisms used to protect the container mouth from any external particles from contaminating the water varied from using a spigot, a lid and a filtration cloth. There was a 31% increase in the number of households that used a spigot from the PI to the PoI and increase by 7%, at PoI, in the number of households that protected their containers with lid.

The quality of water consumed and the knowledge of practical purification methods such as boiling, filtration, and chlorination were assessed. The water purification method reflected the type of water source used and the hygiene training received. Considering that the majority of households used borehole water, the majority of the households (83%) at PoI did not treat their water, a 10% increase from the PI. There were increases in the number of household that treated their water through use of Jik (Jik is a brand name for a sodium hypochlorite based detergent), 11% at PI to 17% at PoI, and boiling from 5% at PI to 9% at PoI.

Hygiene Promotion and Sanitation and Behaviour changes: Human contact with faecal excreta is a serious threat to human health because of the high amounts of disease causing pathogens. Using a properly designed and sited latrine can prevent groundwater from faecal contamination. Despite the knowledge of latrine importance, 28.7% of household still practiced open defecation, mainly in the bushes or fields. There was an increase however in the number of household with latrines from PI (34.9%) to PoI (71.3%). This could be attributed to the sanitation trainings, as well as the Community Led Total Sanitation (CLTS) campaign conducted by the NGO [11].

There was an increase by 14% in the number of household using improved latrines. The proportion of household using ventilated improved pit latrines (VIP) increased while the number of household using open pits significantly reduced from 15% at PI to 1% at PoI.

Sustainable practice of hand washing after defecation and before handling foods is an easy, but effective measure in preventing the transmission of pathogens. It blocks the third contamination pathway of faecal pathogens to humans: contaminated hands that touch food, eyes, mouth, or nose. The results of the PoI study show an increase in the awareness and practice of hand washing of the head of the households. When assessed on the key moments when they wash their hands, the study indicated increases in the proportion of household washing their hands at PoI by 6.4% before eating, 36.85% after eating, 28.9% before cooking or preparing food, and 26.9% after toilet use. Sphere Minimum Standards in Humanitarian Response state that people wash their hands after defecation, after cleaning a child's bottom, before eating and preparing food [9]. It is critical to note that there were eight occasions that household practiced good hand washing practices and in five of these eight occasions, over 50% of the household practiced good hand washing practices regularly. This is a proxy of good knowledge of sanitation and hygiene practices. The study showed that 87% of the household used bar soap for hand washing and

13% used liquid soap. Through observation it was determined that the majority (75.5%) of the household had soap and ash and sand in the kitchen, or outside the main house, which was used during hand washing.

Water quality was tested for coliform bacteria before households were trained on construction of household Rainwater Harvesting Systems and after construction. Before the trainings, 61% of the household water samples had coliform bacteria and 39% did not. At PoI, 75% of the sampled water had no coliform bacteria and only 25% had coliform bacteria.

At PI before installation of hand pumps, all water samples taken from their sources from 36 boreholes indicated a vast number of coliform bacteria. At PoI, 92% of the household tested negative for coliform bacteria. Even though communities had access to improved water sources, access to a safe source alone does not ensure the quality of water that is consumed. Water may be contaminated after collecting, either during transportation or storage of the water in the home. Water samples from 8 households in 4 communities at PI and another 8 samples from another 4 communities at PoI were tested for bacterial contamination in storage. The study showed that there was an increase by 99% in the number of household whose water was not contaminated indicating good water storage and handling practices.

Water Point Management Committees: Taking care of the WASH infrastructure not only reduces the risk on deterioration, it also improves the appropriation of the water and sanitation infrastructure by the community, and ensures a longer operation period without a serious breakdown. To do this most water points elected water point management committees who were responsible for the day to day management of the operation and maintenance of the water points. All assessed water points had water point management committee. In these, 95% of the water point users contributed either in cash or in kind towards the upkeep and maintenance of the water point one month preceding the survey. The maintenance of a high percentage of water point committees is an attribute of good community mobilization and dynamics, which generally ensures sustainability of the water points. The main roles of the committees were perceived by the respondents to be, cleaning of the water point (99%), operation and maintenance of the water point (95%), to hold meetings (88%) and manage finances (86%). The water point management committees were said to be active and well-functioning by 98% of the respondent with 1% not so happy and convinced with their functioning. Only 0.3 % of the respondents indicated that the committees were not active or functional.

5. Conclusion

The WASH interventions implemented by the NGO were effective in improving access and availability of potable water. The interventions also helped improve the knowledge, change attitudes and practices towards hygiene and sanitation. The overall impact of the interventions helped in enhancing community resilience to the prevailing WASH challenges that had resulted due to infrastructure decline, low investment in WASH infrastructure, and drought. The thematic components of

the resilience conceptual framework adopted for this study shows that the WASH project helped to build resilience of the community through:

Learning and knowledge-There were improvements knowledge, attitudes and practices regarding use of improved water supply, hygiene and sanitation practices. The key improvements achieved after project intervention were:

- *Percentage of target population with access to safe water-* There were improvements to access of water from improved water sources
- *Average water usage of target population in litres per person-* There were increases in average water usage per day per individual and per household.
- *Percent population cleaning containers before use -* The majority of the household washed their containers before filling them with water for domestic consumption.
- *Percent population demonstrating good hand washing practices-* The awareness about good hand washing among the household was high, the majority of the household washed hands before eating, after eating, after latrine use, when dirty, and before preparing meals and feeding infants..
- *Percent of target population demonstrating correct water usage and storage-* The majority of the household collected and stored their water in containers with narrow mouths
- *Reduction in travelling time when collecting water-* Travelling time for fetching water was reduced, more household were now travelling less than 30 minutes to fetch water and return to the homestead.
- *Latrine construction and use-* There was an increase in households that used improved sanitation.
- *Water Quality -* The water quality at household level improved, the majority of the stored water sources had significantly reduced coliform bacterial presence.

Institutional capacities-The training of water technicians from government and community level improved the institutional capacity at both community and district level. Strengthening of the WASH committees using government approved and supported constitutions, improved the linkage between community and government.

Participation-The project allowed community and multi-stakeholder partnerships during implementation through inclusive mechanisms for the selection of beneficiaries within local communities. The involvement of both women and men allowed for active decision making by all members of the community

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