Most Significant Change – WASH in Watersheds, Eastern Cape, South Africa

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CONSERVATION SOUTH AFRICA
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Cover Photo: ©CSA/photo by Caroline Rose
Caption: Mabheleni Village in Mvenyane

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ACRONYMS

ANDM	Alfred Nzo District Municipality
CI	Conservation International
CSA	Conservation South Africa
MSC	Most Significant Change
NGOs	Non-Government Organizations
UCP	uMzimvubu Catchment Partnership
WASH	Water, sanitation, and hygiene
WM	Water Monitor
WiW	WASH in Watersheds

ACKNOWLEDGMENTS

CSA would like to acknowledge the traditional leaders and the community members who shared their views in the interviews and who participated in the conservation activities offered in their villages. CSA respects and values the relationships held with traditional leadership, the local municipality, and the Alfred Nzo District Municipality. As part of the uMzimvubu Catchment Partnership, these entities work to realize the vision and commitment to bettering the lives of people through conserving nature.

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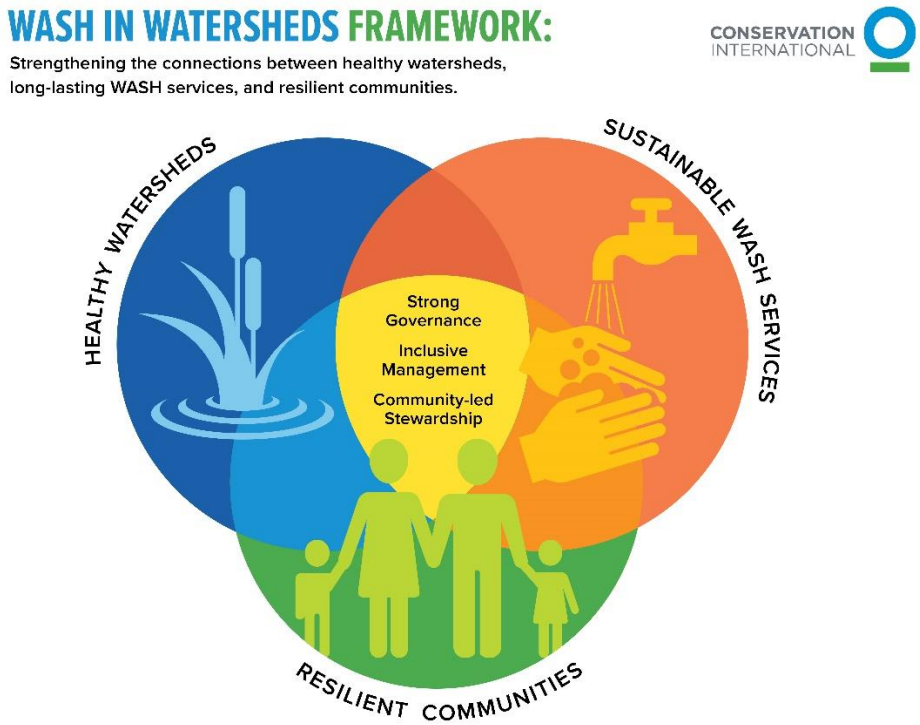
EXECUTIVE SUMMARY

Conservation International (CI) believes that the long-term protection of freshwater ecosystems can only happen when local people are healthy and empowered to be the guardians of the catchments that sustain them. The WASH in Watersheds (WiW) approach provides one pathway for reaching that vision. WiW strengthens the connections among healthy watersheds, sustainable water, sanitation, and hygiene (WASH) services, and resilient communities. The WiW theory of change assumes that these three dimensions must all be supported by strong governance, inclusive management, and community-led stewardship.

Figure 1: WASH in Watersheds Framework



CI and affiliate Conservation South Africa (CSA) have worked in the Eastern Cape of South Africa for almost a decade. From 2015 to 2021, CSA implemented a WiW project, in close collaboration with the Alfred Nzo District Municipality (ANDM) and communities in this water scarce area. The ANDM has the mandate for water service provision within the district. Upon completion of several activities in the catchment, the team reflected on the successes and challenges in implementing the integrated freshwater conservation and WASH approach. The overarching question guiding this process was: *To what extent have WASH in Watersheds interventions improved the quality of life for participating communities?*

To address this question, CI and CSA staff developed the methodology drawing on Most Significant Change (MSC) standards and adapting the questions to the Eastern Cape context. Two local consultants (from the area and conversant in the local language) were recruited and trained prior to conducting key informant interviews and focus groups in five villages (Ndakeni, Msukeni, Nkawuleni, Magxeni and Mabheleni) from Ward 8 and Ward 21 in the catchment. The interviews (22 men, 15 women) were conducted in person over a two-month period from May - July 2021. In response to increasing COVID-19 infection rates in the area in June 2021, the overall number of villages interviewed was reduced from the original seven to five and the prioritized interviews were delayed until safer conditions allowed travel to the villages in July 2021.

Overall, the findings show that in all five villages community members have increased knowledge of the relationship between rangelands, clean water from spring rehabilitation in the catchment, and the importance of taking care of these valuable resources for their daily needs, in comparison to the start of the interventions. The analysis of the interviews showed that six key areas were the primary positive themes mentioned by interviewees in all sites: **access to water, water sanitation, livestock health, hygiene and sanitation practices, decreased violence and crime (three out of five villages), and sustained environmental stewardship.**

At the same time, the interviews also indicated some negative significant change findings, including **livelihoods support and employment** that could continue after the project activities ended. Based on the evaluation findings, the team developed a set of recommendations:

For the global WiW program at CI to apply in all future WiW programming:

- Reaching the target audience requires careful preparation (Zaragosa *et al*, 2021) by involving diverse stakeholders in the planning and visioning to strengthen lasting stewardship principles and actions, such as communities assuming water monitor duties after the project ended.
- Anticipating the end goal of the project and planning for sustainability for all components, WASH, watershed conservation, and behavior change activities at the beginning of the project are critical to ensure lasting results.
- Partnering with complementary associations and Non-Government Organizations (NGOs) in the target area can strengthen gaps in community-voiced needs, such as some of the poverty alleviation and job creation ideas expressed during the evaluation.

For Conservation South Africa:

- It is recommended that the incentive-based model be revisited. In communities where poverty and unemployment are high, the focus is generally on financial opportunities rather than the actual activities, despite the long term benefits they may provide. While there is evidence of the connections made between understanding the impact of clearing wattle, grazing land restoration, and increased water availability, there appears to be little motivation to continue these activities without an external organization such as ANDM or CSA and the incentives that they offered. It is suggested that future project designs integrate water provision with rangeland restoration through the Conservation Agreement process. This requires engaging with the community as a whole to enlist their support in addressing a (complex) common challenge. Through co-creating the intervention with defined contributions (actions) and benefits, the community will hopefully feel more ownership towards the outcomes and long-term benefits. The resourcing required would be materials (ANDM and CSA) and local knowledge, expertise, and labor.

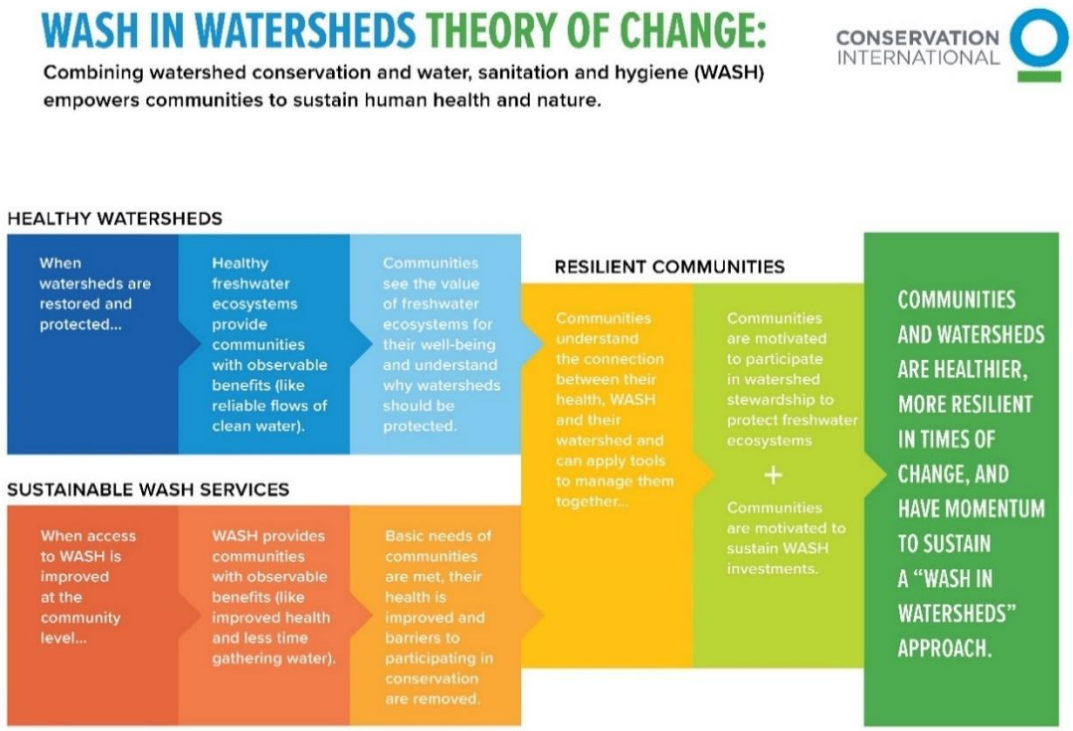
- It is not just about water. Water access is critical, but it is not a separate issue. The WiW program cannot be seen as isolated from the range of activities offered by CSA in this landscape. This is evident in the responses from this evaluation which also provided broad insights into other aspects of the different projects run by CSA. WiW is a valuable tool when used in combination with other conservation activities. It is recommended that WiW theory be integrated into project design for stewardship and rangeland management to support a more sustainable process.
- The need for advocacy remains a priority. The approach used by CSA aimed to unlock municipal resources to create an integrated approach to water provision has shown some success. However, CSA will continue to advocate for nature-based solutions with the District Municipality, through showcasing examples of cost-effective service provisions that support the mandate of the Municipality for bulk water supply and meet the needs of the community in terms of their constitutional right to water.
- At a community level, CSA will continue to play an advisory role, creating awareness about what is possible through nature-based solutions and supporting communication channels between community leadership and the District Municipality. Here, CSA will also advocate for active participation by the community in projects and support them to advocate for their rights.
- It is critical to include an initial assessment that interrogates the local context and dynamics present in a community. Water is an emotive issue, and the success or failure of a project may depend on the nuances and tensions that may not always be evident to outsiders. Villages in Ward 21 are often comprised of extended family groups, and internal politics and motivations often play out in the leadership sphere.
- Continued investment of time and energy into relationships with community leadership is essential. The evolution of community engagements in this setting from formal meetings to more of a collaborative team approach has been a critical part of the success so far. CSA is known within the community and is viewed as an organization to whom they can express their needs. CSA is seen as a reliable, consistent, and trusted presence.

The findings presented in this report show six key areas where positive changes were experienced by interviewees: **access to water**, **water sanitation**, **livestock health**, **hygiene and sanitation practices**, **decreased violence and crime**, and **sustained environmental stewardship**. These changes show meaningful gains against the project's goal to improve the health of people living in the uMzimvubu Catchment while empowering them to be the guardians of the catchment that sustain them. Moving forward, CI will incorporate the lessons learned related to planning and visioning, sustainability for all components of the approach, and partnering with associations and other NGOs to respond to community-voiced needs into the WiW model. CSA will revisit the incentive-based model, seek opportunities to connect the WiW theory of change with other activities for stewardship and rangeland management, and maintain advocacy as an important aspect of their engagement at the community and municipal levels. These results are truly meaningful for both CI and CSA as they continue to work with partners, like the members of the UCP and ANDM, to ensure the long-term resilience of the uMzimvubu Catchment.

1. PURPOSE

Conservation International (CI) recognizes that water, poverty, and the environment are interconnected, and that the long-term sustainability of water, sanitation, and hygiene (WASH) services depend on the health of all life in the basin. This vision is anchored in the fundamental understanding that the health of communities and the health of ecosystems are inextricably linked. The long-term protection of freshwater ecosystems can only happen when local people are healthy and empowered to be the guardians of the watersheds that sustain them. WASH in Watersheds (WiW) approach provides one pathway for reaching that vision. WiW strengthens the connections among healthy watersheds, sustainable WASH services, and resilient communities. This WiW theory of change assumes that these three dimensions must all be supported by strong governance, inclusive management, and community-led stewardship.

Figure 2: WASH in Watersheds Theory of Change



The qualitative evaluation summarized in this report adapts elements of a standard Most Significant Change (MSC) methodology (Overseas Development Institute, no date) to the context and needs of the WiW Eastern Cape project, which has been implemented by Conservation South Africa (CSA), in partnership with the Alfred Nzo District Municipality (ANDM), and CI. Specifically, the WiW project was implemented in the uMzimvubu Landscape communities of the Eastern Cape Province. This methodology was intended to address monitoring gaps, including missing project-level indicator data,

and it also responds to the critical need of understanding project impacts from the perspective of the stakeholders. The three primary objectives of this evaluation are to:

1. Identify the impacts of the WiW project interventions through the voices of key project stakeholders;
2. Determine those impacts that are considered "most significant" by project stakeholders;
3. Understand the enabling conditions that facilitated these impacts.

The overarching question guiding this evaluation was: *To what extent have WASH in Watersheds interventions improved the quality of life for participating communities?*

2. INTRODUCTION

1.1 WASH in Watersheds in the Eastern Cape Overview

The uMzimvubu catchment supplies water to over one million people in the Eastern Cape Province and provides a wide range of ecosystem services, food, water, and livelihoods. Overgrazing, sediment damage to infrastructure, seasonal water supply extremes, loss of grazing lands, and increased erosion from the spread of non-palatable and water-thirsty invasive vegetation together with mismanaged veld fires have caused extreme soil degradation and an unpredictable water supply in the region (CSA *et al.* 2014). Approximately 40 percent of the region's wetlands have been drained or diverted for commercial farming interests or are otherwise negatively impacted by agricultural activities. Furthermore, expansion of alien trees and extreme weather also contribute to the increased degradation of the catchment (CSA 2015).

CSA, ANDM, and local community members began to implement the WiW approach in 2015 to respond to some of these threats. ANDM is a key partner in this project, as they are the governing body with the mandate to provide water supply and adequate sanitation facilities. The basic hypothesis behind the approach was that integrated freshwater conservation and WASH programing will generate more enduring conservation and human health impacts than just WASH or conservation activities would alone. Initial activities focused on the pairing of improved rangeland management and securing freshwater ecosystems through the restoration of natural springs and the clearing of thirsty, alien invasive trees near these water sources. The project also included community awareness focused on improved **sanitation** and **hygiene** habits for people and rangelands, as laid out in CSA's Veld Sanitation Guide (Rose 2018). Most of the

BOX 1. Conservation South Africa's uMzimvubu landscape Advocacy Goals

Bring district municipality onboard with using nature-based solutions for access to water in our landscape

Acknowledge the importance of the spring rehabilitation work

Have municipalities buy into nature-based solutions to provide water to its citizens in a cheaper and more functional way

clearing work, spring restoration, and awareness raising was done by water monitors and CSA staff. Water monitors are community members recommended to CSA by the Traditional Authorities of their village, who received a small stipend in exchange for the promotion of land and water stewardship through project activities.

The project work uncovered the potential to combine nature-based solutions of spring restoration and alien clearing to solve supply issues by connecting the restored water source to municipal-installed taps, many of which were already present in the landscape but were not functional. The established partnership with ANDM and enthusiasm for the approach from partners in the uMzimvubu Catchment Partnership[1] (UCP), such as Lima, Environmental and Rural Solutions, and CSA, all of whom were operating in different geographical areas within the upper part of the catchment, highlighted the important role the municipality could play in terms of expanding this approach. This led CSA and UCP partners to use an advocacy strategy approach (Walter *et al*. 2020) to influence the ANDM to adopt an integrated water service provision approach across the municipality's footprint (Rose 2021).

BOX 2. Project Overview: Conservation South Africa's Eastern Cape Pilot in the Mzimvubu Catchment

Leveraging the UCP, CSA – with technical assistance from CI – piloted the Africa Biodiversity Collaborative Group Freshwater Conservation and WASH Integration Guidelines and the Monitoring and Evaluation Framework in four sites within the Alfred Nzo District.

Project Accomplishments since 2015 include:

- Restored and protected nine natural springs, eight with technical assistance from CSA and one additional spring completed entirely by community members.
- Trained 17 water monitors (12 men, five women) on water quality monitoring, collection of water quality data, and continued maintenance of infrastructure to protect natural springs.
- Reached 613 households (211 men, 357 women) through peer-to-peer sanitation best practices awareness campaign, led by 16 community members (11 men and five women) in partnership with ANDM.
- Completed participatory stream and river health assessments with 12 villages (35 men, 13 women) to raise awareness of their importance and the need to restore degraded wetlands for water security.
- Sponsored 17 water monitors to complete accredited training programs on wetland delineation and restoration and donga (deep soil erosion gullies) rehabilitation and surface water harvesting. These capacities aim to contribute to expanding the protection of water resources after the completion of the pilot phase.
- Engaged 99 policy makers through a Climate Change and WASH Summit at the ANDM offices to build on program results through municipal actions.
- Advocated for ANDM's financial and social support for sustainable nature-based methods of water provision to communities, thus adding spring rehabilitation projects beyond CSA's efforts. ANDM subsequently funded four spring rehabilitation projects: two in Magxeni, one in Mabheleni, and one in Colana.

Source: Cardona *et al.* 2018

[1] https://umzimvubu.org/about/

3. OVERVIEW OF MOST SIGNIFICANT CHANGE METHODOLOGY

The MSC methodology is a participatory, qualitative evaluation process that collects feedback from key stakeholder groups on the project impacts in their own words (see The Overseas Development Institute's "Strategy Development: Most Significant Change"). Unlike indicators, which tend to be clearly defined at the start of a project and limited to quantitative data, this method allows for the collection and interpretation of broader types of data on impacts that are identified as important to the project's stakeholders. In most cases, this methodology can be applied throughout the project cycle to inform project management.

This report contains a summary of the responses from community members and ANDM employees in the Eastern Cape project area based on a loose adaption of the MSC methodology. This methodology was adapted due to the substantial requirements of a standard MSC process, as well as the limitations of the MSC process in capturing the full range of project impacts. This adapted methodology captures stakeholder's views on the changes stemming from WiW interventions in their own words. The adapted methodology applied can be found in Annex 1.

4. EVALUATION PROCESS

2.1 Preparation

The CSA and CI staff worked closely to design and implement an adapted MSC evaluation designed by Patricia Dunne, PhD, the Director of Applied Social Science and Stakeholder Engagement. Drawing on previous experience with MSC type research, Dunne collaborated with CSA who also had previous experience with these types of qualitative inquiries to better understand how community members perceive the project impacts on their daily lives.

During the planning phase CSA and CI staff:

- **Identified the stakeholders to be interviewed**: Based on preliminary semi-structured interviews with CSA project staff and review of project documents, the primary stakeholders targeted for interviews were:
    - Community members: this group included a representative sample of the groups within each participating community, including community leaders (traditional as well as

political), households at different geographic distances from the springs, women, youth, elders, and other relevant community groups.
    - Water monitors: these are community members, recommended to CSA by the Traditional Authorities, who received a small stipend in exchange for their community leadership and participation in the project.
    - Municipality: this group focused on the Infrastructure Development and Municipal Support Department of ANDM because of their close collaboration with CSA during the project.

- **Established the domains of change:** In the context of this project domains of change refer to the categories or types of changes that may emerge in the interviews. Based on review of project documents and discussions with project staff, expected domains were:

    - Changes in seasonal availability of water
    - Changes in access to water
    - Changes in sanitation practices
    - Changes in health for both humans and livestock
    - Changes in water stewardship actions
    - Changes in conceptual understanding of relationship between catchment health and human and livestock health
    - Changes in the balance of power
    - Changes in participation in decision making about water management, including the participation of women, youth, elders, and other community members
    - Changes in the involvement of traditional authorities in decision making about water
    - Changes in the involvement of the municipality in decision making about water
    - Changes in perception of water quality
    - Changes in community participation within the project

    These domains informed the design of the questions for the semi-structured interviews and guided the analysis phase of the evaluation. Additional categories of change emerged through the interview and data analysis process.

- **Trained the interview team:** The interviews were conducted by two consultants from the area (one male and one female), which is a significant advantage due to their fluency in local dialects and knowledge of the local context. Prior to the interview process, Dunne and colleagues delivered two, half-day trainings for the consultants in collaboration with CSA staff, on interview best practices and how to handle challenges that might arise during the data collection process.

Interviewers Preparing to Start an Interview
©CSA/photo by Thando Msomi

2.2 Data Collection

The data collection phase of the evaluation included semi-structured interviews following pre-determined questions. All

interviews started with the interviewers providing a verbal explanation of the purpose, the process, and obtaining verbal consent from the interviewee. The explanation outlined the purpose of the interview, how the stories that were collected would be used, that participation was voluntary, and how participants would be protected from any risks related to their involvement in the evaluation. In addition, interviews were conducted in a language with which the interviewee felt comfortable and were recorded to allow for later transcription. Recording and transcription was intended to ensure consistency in the analysis phase and so accounts of project impacts could be told in the words of the interviewees. The interview questionnaire can be found in Annex 2.

Two local consultants, conversant in local languages, conducted key informant interviews and focus groups in five villages from Ward 8 and Ward 21 in the catchment and one interview with ANDM employees. The interviews (22 men, 15 women) were conducted in person over a two-month period from May- July 2021. The interviewee breakdown by site was as follows:

- Nkawuleni: 1 Water Monitor; 6 Traditional Authorities and community members
- Msukeni: 1 Water Monitor; 8 Traditional Authorities and community members
- Ndakeni: 1 Water Monitor; 5 Traditional Authorities and community members
- Magxeni: 1 Water Monitor; 11 Traditional Authorities and community members
- Mabheleni: 1 Water Monitor
- ANDM: 2 employees

Due to increasing COVID-19 infection rates in the area in June 2021, several changes had to be implemented to ensure the safety of CSA staff members, the consultants, and the community members.

BOX 3 Impact of COVID- 19 on the Process and the Implications

These interviews were unfortunately scheduled just prior to the start of the third wave of the COVID-19 pandemic in South Africa. As the spread increased and restrictions were put in place, CSA was required to make the following changes:

- The number of targeted villages reduced from 7 to 5.
- Staff time spent in each community was reduced.
- Only one village could be visited per day to reduce the risk of spreading the virus.
- The number of people to be interviewed was therefore reduced.
- Instead of holding three focus groups within each village, these were combined.
- Interviews were held in winter and while it can be sunny and clear in the Eastern Cape mountains, the low temperatures make it impractical to hold long meetings outside in the cold.

Implications:

- The villages that were interviewed were all Xhosa speaking from Wards 8 and 21 at the top of the middle catchment.
- No one was interviewed from Ward 14, a Sesotho speaking area and thus, culturally different in context to the other wards.
- Due to focus groups being combined, leadership was interviewed with community members and gender specific focus groups were not held, possibly reducing the opportunity for gender-related water perspectives to be shared more openly.

2.3 Analysis

In July and August 2021, the CI team began the analysis process using QDA Miner Lite but experienced several challenges in obtaining uniform access to the software across the team. In the end, the team relied on Excel and manual coding of the data. Analysis focused on identifying and interpreting the major themes that emerged from the responses to interview questions. In many cases, these themes aligned with the domains of change previously identified, though there were additional themes that appeared. Qualitative coding was used to identify and quantify the frequency of themes.

The major steps in the analysis included:

1. Transcription of interview recordings and translation into English for interpretation
2. Development of Excel template to facilitate coding and analysis
3. Grouping of interview responses into appropriate columns in an Excel spreadsheet
4. Coding of responses; proposed codes include:
    a. Domain of change
    b. Quality of change (i.e., positive or negative)
    c. Scale of change (i.e., individual, household, village, etc.)
5. Quantification of frequency of changes
6. Identification of emblematic stories for each domain of change
7. Identification of Most Significant Changes

Table 1. Illustrative Responses: Domains of Change for Access to Water and Water Sanitation Practices

Domain: Access to water			Domain: Water Sanitation		
Interview site	Speaker Gender	Positive or Negative	Interview site	Speaker Gender	Positive or Negative
1	Male	Positive	1	Male	Positive
2	7 Male, 4 Female	Positive	2	7 Male, 4 Female	Positive
2	Male	Positive	2	Male	Positive
3	3 Male, 2 Female	Positive	3	3 Male, 2 Female	Positive
3	Male	No Data	3	Male	No Data
4	3 Male, 3 Female	Positive	4	3 Male, 3 Female	Positive
4	Male	Positive	4	Male	Positive
5	4 Male, 4 Female	Positive	5	4 Male, 4 Female	Positive
5	Female	Positive	5	Female	Positive
6	1 Male, 1 Female	Positive	6	1 Male, 1 Female	No Data

5. FINDINGS

3.1 MOST SIGNIFICANT POSITIVE CHANGES

Overall, the MSC findings show that community members have increased awareness of the connections between the rangeland, clean water from spring rehabilitation in the catchment, and the need to take care of these valuable resources for their daily needs. Through qualitative analysis of the interview responses, six main themes of positive change emerged.

In all five villages, there were four clear trends in observations of positive changes due to the project interventions. First, **Access to Water** was increased in almost every community through multiple avenues. In all but one village, where the spring construction was not yet completed at the time of the interviews, respondents felt that CSA's work successfully located and created spring water sites. The spring sites were also cleared of wattle as part of the project plan by Water Monitors. As one interviewee explained, "There were springs that were no longer providing water but since the wattle clearing project started, the springs started to show up and provided us with water." These springs also allowed for community members to retrieve water from a much closer distance than previously. The springs assisted in providing more reliable access to water through different seasons, too.

Side View of Construction Showing Overflow Stream in Foreground
©CSA/photo by Caroline Rose

The second theme of positive significant change was regarding issues of **Water Sanitation (including best practices for water collection and storage)**. In the creation of the spring sites, fences were built around the water to protect it from use by livestock such as cows and pigs. Community members felt that this has been a successful approach to preventing water contamination. Many of the water monitors also mentioned their roles in maintaining water sanitation through practices such as using Jik (a bleach product) as a cleaning agent at the spring site and at home, returning the shade cloth covering after use (where applicable), testing the water for contamination at the spring site, and generally removing rubbish or waste items, such as used nappies, from the perimeter of the site. One water monitor described their cleaning process: "I wake up early in the morning and go to clean the spring itself. I clean by doing so: there is something called spring above and reservoir tank below. I disconnect the joints, then inside the spring I will use even if it's a sack for example. Then I clean and wash it inside and let all the dirty water to come out until it is clean, then wait for the spring to be fully loaded with clean water inside and then reconnect again so that water can be channeled to the below reservoir tank and then straight to the community tank(sic)."

Third, improvements in **Livestock Health** were recognized as a positive change in all five villages. Through clearing of wattle infestations, livestock gained access to new grazing areas that were easier for livestock owners to watch over and protect. One village mentioned access to new drinking water for livestock through the creation of a dam. Participation by farmers' associations in conservation agreements ensured that their livestock received proper vaccinations. Further, community members discussed new knowledge and skills learned to participate in livestock auctions as a new source of income.

A fourth trend of positive change was seen in **Hygiene and Sanitation Practices**. Interviewees mentioned changes in these practices at the individual, household, and community levels. Many practices such as hand washing, boiling water, cleaning the house, and washing one's body and face were learned by the respondents when they were in school, but they expressed that CSA reminded them and reinforced these practices. The use of Jik to clean water, COVID safe practices, cleaning the toilets by throwing in ash, water, or cow dung to aid the decomposition process, and collecting rubbish or waste and disposing of it properly were reported to be new practices introduced by CSA. One interviewee described that their family was able to afford new cleaning supplies because of the income earned through employment from CSA. Another interviewee mentioned the desire for further education on sanitation practices from CSA. Overall, there was agreement that all ages and genders observed these practices, although some practices were more specific to women (cleaning of household) and to men (cleaning the pipes) (Rose 2021).

In three out of five villages, there was a notable positive, unexpected trend as result of CSA's work. A **Decrease in Violence and Crime** was reported by four interviewees in three of the villages**.** Before the construction of the spring sites and the clearing of the wattle, many community members felt unsafe walking to collect water, as the wattle infestation served as a hiding spot for assailants. There was also felt to be a decrease in petty crime in one village, as CSA provided job opportunities for the youth. One respondent felt this was the most positive benefit from CSA's work, while another asked, "CSA to please continue with the activities because even our children have refrained from practicing crime because they have something important to do." There was also a mention of reduced quarrels in some households, as there was no longer a reason to argue over who would have to travel long distances to collect water.

The last trend of positive change in all five villages was about awareness of the value and importance of **Sustained Environmental Stewardship,** despite many activities that ceased when the Water Monitor stipends ended**.** Many community members spoke about the importance of maintaining the fencing around the spring to keep cattle and other livestock from contaminating their water source. In some communities, the water monitor has continued to remove the wattle and rubbish from the spring area, as well as to maintain the pipes.

3.2 MOST SIGNIFICANT NEGATIVE CHANGES

While there were positive trends of Sustained Environmental Stewardship post-project, four villages brought attention to a need for **Sustained Environmental Stewardship**, regarding the ongoing maintenance of the spring site. Most members mentioned the regrowth of wattle and invasive plants, which has reduced the flow of available water and led to them traveling longer distances for water once more. There have also been issues of water contamination due to flooding during the heavy summer rains and water scarcity in the winter. The lack of regular, continued stewardship was a result of the loss of the stipend for the water monitors after the project ended. This speaks to the need to revisit the model and to consider interventions that move away from incentives and towards projects that are community-led, increasing community ownership and sustainability of the interventions.

3.3 OTHER SIGNIFICANT THEMES

There were two other significant themes found during the interviews. One was the desire for **Agricultural Development**. Prior to the erosion and wattle encroachment, a variety of crops were grown in this area, but soil conditions and lack of water for irrigation made cultivation difficult. This suggests that a change in water availability also enabled a potential change in the mindset of what is possible. Community members in three of the five villages shared that they wished to cultivate food for themselves and their livestock, but they did not have the knowledge to do so. Some of the crops mentioned were sorghum, yam, maize, orange trees, cabbage, and turnips. They asked for training and provision of seeds by CSA. Further, the desire for charcoal production and grass for roofing was expressed.

Lastly, there was a commonly expressed need for **job creation** in all villages. This region of the Eastern Cape experiences high levels of unemployment and many households survive on government grants alone. Though CSA brought a welcome source of income during project implementation, following the completion of the project, this was no longer present. Community members chose not to devote their time to maintaining the spring because they were no longer receiving a stipend, and a few cited the need for alternative lucrative opportunities. In connection to the desire for agricultural development, one interviewee mentioned the need for income to afford irrigation, and another highlighted the opportunity to grow vegetables to sell as a form of income.

BOX 4: Job creation opportunities in the Eastern Cape

CSA relies on grant funding for these projects, and while it is well understood that these activities are needed on an ongoing basis to maintain and enhance the ecosystem benefits, it is often beyond the control of CSA when funding is available. This has been reflected to one major government department funder that these delays and inconsistencies are damaging the relationships invested in by the communities with CSA and partners. Improved quality and frequency of communication between CSA, Traditional Authorities, and community members remains essential to ensure greater understanding of the nature of the employment opportunities that CSA and partners can offer.

Following on the MSC findings, three recommendations for the global WiW program at CI to apply in all future WiW programming:

- Reaching the target audience requires careful preparation (Zaragosa *et al*, 2021) by involving diverse stakeholders in the planning and visioning to strengthen lasting stewardship principles and actions, such as communities assuming water monitor duties after the project ended.
- Anticipating the end goal of the project and planning for sustainability for all components, WASH, watershed conservation, and behavior change activities at the beginning of the project are critical to ensure lasting results.
- Partnering with complementary associations and Non-Government Organizations (NGOs) in the target area can strengthen gaps in community-voiced needs, such as some of the poverty alleviation and job creation ideas expressed during the evaluation.

For Conservation South Africa:

- It is recommended that the incentive-based model be revisited. In communities where poverty and unemployment are high, the focus is generally on financial opportunities rather than the actual activities, despite the long term benefits they may provide. While there is evidence of the connections made between understanding the impact of clearing wattle, grazing land restoration, and increased water availability, there appears to be little motivation to continue these activities without an external organization such as ANDM or CSA and the incentives that they offered. It is suggested that future project designs integrate water provision with rangeland restoration through the Conservation Agreement process. This requires engaging with the community as a whole to enlist their support in addressing a (complex) common challenge. Through co-creating the intervention with defined contributions (actions) and benefits, the community will hopefully feel more ownership towards the outcomes and long-term benefits. The resourcing required would be materials (ANDM and CSA) and local knowledge, expertise, and labor.
- It is not just about water. Water access is critical, but it is not a separate issue. The WiW program cannot be seen as isolated from the range of activities offered by CSA in this landscape. This is evident in the responses from this evaluation which also provided broad insights into other aspects of the different projects run by CSA. WiW is a valuable tool when used in combination with other conservation activities. It is recommended that WiW theory be integrated into project design for stewardship and rangeland management to support a more sustainable process.
- The need for advocacy remains a priority. The approach used by CSA aimed to unlock municipal resources to create an integrated approach to water provision has shown some success. However, CSA will continue to advocate for nature-based solutions with the District

Municipality, through showcasing examples of cost-effective service provisions that support the mandate of the Municipality for bulk water supply and meet the needs of the community in terms of their constitutional right to water.

- At a community level, CSA will continue to play an advisory role, creating awareness about what is possible through nature-based solutions and supporting communication channels between community leadership and the District Municipality. Here, CSA will also advocate for active participation by the community in projects and support them to advocate for their rights.
- It is critical to include an initial assessment that interrogates the local context and dynamics present in a community. Water is an emotive issue, and the success or failure of a project may depend on the nuances and tensions that may not always be evident to outsiders. Villages in Ward 21 are often comprised of extended family groups, and internal politics and motivations often play out in the leadership sphere.
- Continued investment of time and energy into relationships with community leadership is essential. The evolution of community engagements in this setting from formal meetings to more of a collaborative team approach has been a critical part of the success so far. CSA is known within the community and is viewed as an organization to whom they can express their needs. CSA is seen as a reliable, consistent, and trusted presence.

6. DISCUSSION

Overall, the MSC findings show that community members in all five villages have increased knowledge of the links between improved rangeland management, removal of the invasive plants that reduce water availability, and measures implemented to ensure clean water from spring rehabilitation. All the villages reported benefits of the proximity of improved **access to water** and the reduced burden of traveling to distant water points. One respondent highlighted the reduced burden on women in the household, who now walk only two minutes to collect water rather than walking long distances maybe at night, risking personal safety. At the same time, the respondents in all villages reported no negative changes to water access. The respondents also uniformly observed that the wattle has begun to regrow and threaten the water supply once more.

From the project implementer view, this perception of positive changes within all the villages aligns with the WiW theory of change and project objectives. All villages also observed improved education and practices for managing **livestock health** and the relationships with improved water storage and use by communities. At the same time, respondents in all villages agreed on positive changes in the improved **water sanitation and hygiene practices,** such as hand washing, cleaning latrines, proper trash disposal, and other practices.

The most unexpected dimension of change was the **increased safety/reduced crime or violence**, as this concept was not previously delineated in the WiW framework. Three of five villages observed the link between increased proximity to water sources and decreased incidents of assault, often sexual assault of women and girls. Respondents reported a direct relationship between increased water sources closer to households and the rate of crime and rape going down because people had been assaulted in those bushes farther away. This critical aspect of human safety and security is a reminder to project

implementers to consider the full range of human well-being contextual factors and concerns when designing and implementing community-based projects.

Determining the relative positive or negative perceptions of the underpinning concept of improved **environmental stewardship** within the responses is difficult to analyze, as the responses are nuanced and conflate several recent projects that have been present in the communities, including Yes for Youth, rangeland restoration, and alien invasive plant clearing. There is some evidence that the assumption is true that community members will be motivated to increase and improve upon positive water access and sanitation practices to sustain these positive trends. The respondents in three of five villages cited the improvements in fencing, separating the livestock from polluting the water source, maintaining grass removal and other practices that have continued to some degree in the villages. On the other hand, several villages reported water scarcity issues and management concerns as the formerly supported community members are no longer actively continuing their tasks undertaken during project implementation. One village reported continued community stewardship of the water sources without monetary support from CSA and the project, while the other four villages voiced the need for renewed economic project support. This call for livelihoods and sustained economic engagement is critical for conservation organizations to elevate in future initiatives.

In identifying which of the 12 proposed domains of change were reflected on through this process, it appears that only seven of the possible domains were addressed. These were; changes in seasonal availability of water, changes in sanitation practices, changes in access to water, changes in health of people and livestock, changes in perception of water quality, changes in water stewardship actions, and changes in conceptual understanding of the relationship between catchment health and human and livestock health. While the interview responses provide valuable insight into the WiW activities and CSA's other conservation activities from the community level, it needs to be considered why the other possible domains were not reflected on in the responses. For example, changes in power relations or changes in decision making in terms of water management by local authorities or within households were not mentioned, despite questions regarding water management being asked. This calls into question the clarity of the questions within the interview or if changes in these domains really did not exist.

There are several limitations to the implementation of the adapted MSC methodology data collection and the resulting analysis and interpretation of findings. As mentioned above, the study design and interviews in the communities were significantly altered in many ways by the impact of the COVID-19 pandemic, from requiring detailed attention to safety protocols during the interviews to condensing focus group discussions to respond to time limitations on the study. For example, plans to interview men and women separately to detect gender-based differences in the domains of change were adjusted and the groups combined. While these impacts did narrow the number of community members interviewed, the sample of respondents did address the main areas of inquiry, and there is evidence of significant positive changes in the domains mentioned above.

7. CONCLUSION

This evaluation provides additional evidence that community engagement and stewardship are critical to ensuring sustained success when the WiW model is replicated among conservation, health, and development practitioners in other watersheds (ABCG 2021). The findings presented in this report show six key areas where positive changes were experienced by interviewees: **access to water**, **water sanitation, livestock health**, **hygiene and sanitation practices**, **decreased violence and crime**, and **sustained environmental stewardship**. These changes show meaningful gains against the project's goal to improve the health of people living in the uMzimvubu Catchment while empowering them to be the guardians of the catchment that sustain them. Moving forward, CI will incorporate the lessons learned related to planning and visioning, sustainability for all components of the approach, and partnering with associations and other NGOs to respond to community-voiced needs into the WiW model. CSA will revisit the incentive-based model, seek opportunities to connect the WiW theory of change with other activities for stewardship and rangeland management, and maintain advocacy as an important aspect of their engagement at the community and municipal levels. These results are truly meaningful for both CI and CSA as they continue to work with partners, like the members of the UCP and ANDM, to ensure the long-term resilience of the uMzimvubu Catchment.

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9. ANNEXES

ANNEX 1: Qualitative Evaluation using Most Significant Change

ANNEX 2: Interview Questionnaires for Most Significant Change (MSC) WASH in Watersheds (WiW) 2021

Annex 1: Qualitative Evaluation using Most Significant Change

Adapted for Conservation South Africa's WASH in Watersheds Eastern Cape Project

Overview

This qualitative evaluation methodology is an adaptation of the Most Significant Change (MSC) approach for the WASH in Watersheds (WiW) project, implemented by Conservation South Africa (CSA), in partnership with the Alfred Nzo District Municipality (ANDM), with support from Conservation International (CI). WiW has been implemented in uMzimvubu Catchment communities in the Eastern Cape Province. This adapted methodology for evaluating the impacts of the project was requested by CSA staff to help address the lack of a standardized monitoring system that resulted from a series of challenges during project implementation. While this methodology is intended to address monitoring gaps, including project-level indicators, it will also address the critical need to understand project impacts from the perspective of stakeholders.

This methodology was adapted from the Most Significant Change methodology (described below), with significant input from project staff and review of project documents. The three primary goals of this evaluation are:

1. To identify the impacts of the WiW project through the voices of key project stakeholders
2. To identify those impacts which are considered "most significant;"
3. To understand the enabling conditions that facilitated these impacts.

A secondary goal of this evaluation methodology is to train a team of area students to conduct interviews, transcribe the interviews, and assist in analysis. The overarching question guiding this evaluation is: *To what extent have WASH in Watersheds interventions improved the quality of life for participating communities?*

About the Most Significant Change Methodology

The Most Significant Change (MSC) methodology is a participatory, qualitative evaluation process that collects feedback from key stakeholder groups on project impacts in their own words (see The Overseas Development Institute's "Strategy Development: Most Significant Change"). Unlike indicators, which tend to be clearly defined at the start of a project and limited to quantitative data, this method allows for the collection and interpretation of broader types of data on impacts. In many cases, this methodology can be applied throughout the project cycle to inform project management.

In a standard MSC evaluation, the process is often implemented by first engaging representatives of a wide range of stakeholder groups early in the project cycle to participate. This group works together to identify the domains of change that will be monitored through the MSC process, as well as the frequency with which data will be collected. Interviews are then conducted with individuals who are directly participating in or affected by the project. These interviews are semi-structured, using open-ended questions designed to encourage the interviewees to discuss and interpret the changes that they have seen in their own words. The stories that these interviews generate are then filtered through a

hierarchical structure of individuals who review the stories, identify those that they find "most significant," and pass them on to the next level for similar review. Once the stories have been evaluated by all levels, those that are considered most significant are verified and quantified.

Due to the substantial requirements of a standard MSC process, as well as the limitations of the MSC process in capturing the full range of project impacts, what follows is a loose adaptation intended to better meet the needs of Conservation South Africa. However, at its core, this adapted methodology retains the intent to capture stakeholder's views on the changes stemming from WiW in their own words. However, this evaluation is also intended to capture greater detail about project impacts related to critical areas of the theory of change. Key differences between this adapted methodology and a more standard MSC process include rather than filtering out stories of change in pursuit of the 'most significant' in the process of analysis, the frequency of occurrence of each domain will be quantified at the outset, with exemplary cases used to illustrate these; and interview questions are designed to capture stakeholder's perceptions of change, as well as to explore the context of those changes in project implementation.

Evaluation Process

The evaluation process will span three main phases: preparation, data collection, and analysis.

Preparation

Identifying Stakeholders to be Interviewed: Based on preliminary semi-structured interviews with CSA project staff and review of project documents, the primary stakeholders to be interviewed include:

- Community members: this group should include a representative sample of the groups within each participating community, including community leaders (traditional as well as political), households at different geographic distances from the springs, women, youth, elders, and other relevant community groups.
- Water monitors: every effort should be made to interview each of the water monitors that were engaged with the project.
- Municipality: based on discussions with CSA and CI staff, this group should be treated as a second tier for interviews.

Establishing Domains of Change: Domains of change in the context of this project refer to the categories or types of changes that emerge in the interviews. Based on review of project documents and discussions with project staff, some of the likely domains that we may see are:

- Changes in seasonal availability of water
- Changes in access to water
- Changes in sanitation practices
- Changes in health for both humans and livestock
- Changes in water stewardship actions
- Changes in conceptual understanding of relationship between catchment health and human and livestock health
- Changes in the balance of power

- Changes in participation in decision making about water management, including the participation of women, youth, elders, and other community groups
- Changes in the involvement of traditional authorities in decision making about water
- Changes in the involvement of the municipality in decision making about water
- Changes in perception of water quality
- Changes in community participation within the project

These domains inform the design of the questions for the semi-structured interviews and will guide the analysis phase of the evaluation. However, it is possible that there may be additional categories of change that will emerge through the interview process. These should be flagged by interviewers as early as possible and evaluated by the team to determine if additional follow-up questions are needed to understand the context of the change.

Training the Interview Team: The semi-structured interviews will be conducted by students from the area, which is a significant advantage due to their fluency in local dialects and knowledge of the local context. Prior to commencing data collection, all interviewers should be comfortable with the interview questions, have translated them into the appropriate dialect, and practiced them in pairs. Further guidance on interview best practices will be provided in a separate document.

Data Collection

The data collection phase of the evaluation will include semi-structured interviews following pre-determined questions. All interviews should use a pre-approved consent form that outlines the purpose of the interview, how the stories that are collected will be used, that participation is voluntary, and how participants will be protected from any risks related to their involvement in the evaluation. In addition, interviews should be conducted in a dialect with which the interviewee is comfortable and be recorded to allow for later transcription. Tape recording and transcription will ensure consistency in the analysis phase and ensure that the accounts of project impacts are told in the words of the interviewees.

Analysis

Analysis will focus on identifying and interpreting the major themes that emerge from the responses to interview questions. In many cases, these themes will align with the domains of change previously identified, though there may be additional themes that appear. Qualitative coding will be used to identify and quantify the frequency of themes. The major steps in the analysis will include:

1. Transcription of interview recordings and translation into English for interpretation.
2. Development of excel template to facilitate coding and analysis
3. Grouping of interview responses into appropriate columns on excel spreadsheet
4. Coding of responses; proposed codes include:
    a. Domain of change
    b. Quality of change (i.e., positive or negative)
    c. Scale of change (i.e., individual, household, village, etc.)
5. Quantification of frequency of changes
6. Identification of emblematic stories for each domain of change
7. Identification of Most Significant Changes

Interview #	Village Name	Domain: Access to Water			Domain: Hygiene Practices		
		Response	Positive or Negative	Scale	Response	Positive or Negative	Scale

References

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ANNEX 2: Interview Questionnaire for Most Significant Change (MSC) WASH in Watersheds (WiW) 2021

Questions for Water Monitors, Traditional Authority, And Community Members

Basic Overview

- What is your household proximity to the protected spring?
- Who in your household is tasked with collecting water?
- How long does it take that person to collect water for your household?
- How did you participate in the project?

Significant Changes

- What changes have you seen since you and your community have been participating in the CSA activities? (*Probe: CSA activities may include – wattle clearing, grazing associations, spring protection, etc*)
- What factors do you think were most important for bringing these changes about?
- Do you think these changes would have happened without CSA's activities? Why/Why not?
- Which of these changes has made the most significant improvement on you and your family's daily life? (Has it been the same for all family members? (*Probe – has it been different for men (older/younger), women (older/younger) or children?)*

Health of Rangelands and Village Surrounds

- What did your environment look like before wattle began growing around the spring(s) and in your rangelands? What benefits did the rangelands provide your family/community? *(Probe: were there different benefits for men, women and children as they use the rangelands differently?)*
- What did your rangeland environment look like before your community began working with CSA? What benefits did the rangeland provide/not provide?
- What does your rangeland look like now? What benefits does it currently provide?
- What would you like your rangeland environment to look like in 10 years? What benefits should it be providing that it currently is not? What do you think needs to be done to realize this vision?

Access to Water

- Have you noticed any changes in the accessibility of water for you and your household since the CSA activities started?
    - Have the activities made it easier/faster to collect water? Why/Why not?
    - Is water availability more consistent year-round than before the CSA activities? Why/Why not?
    - Is your water cleaner than it was? How do you know?
    - Have you participated in new or increased activities that sustain livelihoods? *(Probe: activities related to farming, livestock practices, earning a living etc.)*
    - Have you participated in new or increased activities that allow participation in recreation or leisure? (*examples: fishing, swimming, cultural practices, other)*

Sanitation (access to clean water, toilets etc.)

- Can you describe the sanitation practices that you regularly follow?
    - Why are these important?
    - Where did you learn these practices and when did you first start practicing them? Who practices them – women, men, small children?

Hygiene (personal actions to keep healthy and clean)

- Can you describe how you and your family keep healthy and clean?
    - Has this changed at all since you have engaged with CSA? Why/why not?

Water Stewardship

- Can you describe how you or your community maintain the springs?
    - Has this changed at all since engaging with CSA? Why/why not?
    - Are there different challenges or conditions in winter and summer seasons?
    - Who has access to the protected springs?

Decision making

- Who makes decisions about water in your community and in your household?
- Who is responsible for maintaining the springs/keeping the springs clear?
- Has this changed since CSA activities began in your community?

Process

- In your opinion, which CSA activities had the most positive benefits for you and your family? What were these positive benefits?
- Were there activities that you think had a negative impact on you and your family? Which ones, and what were the negative impacts?
- Which activities had the most positive benefits for your community? What were these positive benefits?
- Were there activities that you think had a negative impact on your community? Which ones, and what were the negative impacts?
- If this project was run again, what could be done differently to increase the benefits to you and your community?
- What could be done differently to reduce negative impacts?
- What could have made the project better for more people?

Understanding of Connections

- In your own words, can you describe the connections between rangelands, fresh water, hygiene, and health?

<u>Specific Questions for Water Monitors</u>

- Are you still involved in clearing wattle from the spring? Why/why not?
- Do you still clear rubbish or debris from around the spring? Why/why not?
- Are you still involved in maintaining the community's access to water? Why/why not?
- Are other community members in your community actively involved in maintaining the spring? Why/why not?
- What skills or attributes do you think a good water monitor needs?

- Do you think you have gained or improved any specific skills by being a water monitor?
- Are you still using these skills that you acquired? How? Where?

Specific Questions for Traditional Authorities

- What changes have you seen since the communities began participating in CSA activities?
  - What factors do you think were most important for bringing these changes about?
  - Do you think these changes would have happened without CSA? Why/Why not?
  - Which of these has made the most significant improvement on the quality of life for the communities? (Probe: for who among the community – men (older/younger men), women (older/younger women), the youth, children/children under five years of age; other groups?)
- Are there specific lessons learned from CSA interventions that have informed the actions of the village leadership?
  - Please name the intervention and describe what the actions have been.

Specific Questions for ANDM Employees

- What changes have you seen since the communities began participating in CSA activities?
  - What factors do you think were most important for bringing these changes about?
  - Do you think these changes would have happened without CSA? Why/Why not?
  - Which of these has made the most significant improvement on the quality of life for the communities? (Probe: for whom among the community – men (older/younger men), women (older/younger women), the youth, children/children under five years of age; other groups?)
- Are there specific lessons learned from CSA interventions that have informed the work of the Municipality?
  - Please specify the intervention and describe what you learned.