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GENDER ANALYSIS REPORT – ONE HEALTH:

Integrating Freshwater Conservation, WASH and Rangeland Management in South Africa's Mzimvubu Catchment

Authors: Janet Edmond, Nolubabalo Kwayimani, Colleen Sorto and Brittany Ajroud

March 21, 2017

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AFRICA BIODIVERSITY COLLABORATIVE GROUP

COVER PHOTO: © Conservation International / Patrick Nease
CAPTION: Conservation South Africa is engaging men and women in freshwater conservation efforts throughout the Mzimvubu Catchment.

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March 21, 2017

Africa Biodiversity Collaborative Group

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Program Title:	Africa Biodiversity Collaborative Group (ABCG II)
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ACRONYMS

ABCG	Africa Biodiversity Collaborative Group
AfDB	African Development Bank
AMCOW	African Minister's Council on Water Policy
ANDM	Alfred Nzo District Municipality
AWF	African Wildlife Foundation
CI	Conservation International
CSA	Conservation South Africa
EGI	Environment and Gender Index
HQ	Headquarters
IUCN	International Union for the Conservation of Nature
IWFSA	International Women's Forum South Africa
JGI	Jane Goodall Institute
M&E	Monitoring and Evaluation
NGOs	Non-governmental organizations
OSW	Office on the Status of Women
SDGs	Sustainable Development Goals
TNC	The Nature Conservancy
USAID	United States Agency for International Development
UNICEF	United Nations International Children's Fund
WASH	Water, sanitation and hygiene
WCS	Wildlife Conservation Society
WHO	World Health Organization
WRI	World Resources Institute
WWF	World Wildlife Fund
WRC	Water Research Commission

I. INTRODUCTION

The Africa Biodiversity Collaborative Group (ABCG) is supported by the US Agency for International Development (USAID) to advance understanding of critical biodiversity conservation challenges and their solutions in sub-Saharan Africa. ABCG is hosted by the Wildlife Conservation Society (WCS), in coalition with the African Wildlife Foundation (AWF), Conservation International (CI), the Jane Goodall Institute (JGI), The Nature Conservancy (TNC), World Resources Institute (WRI) and World Wildlife Fund (WWF). The goal of ABCG is to work collaboratively, efficiently and effectively to further a sustainable future for the African continent (ABCG 2016).

BOX 1 | ABOUT THE AFRICA BIODIVERSITY COLLABORATIVE GROUP

ABCG's Vision

ABCG's vision is of an African continent where natural resources and biodiversity are securely conserved in balance with sustained human livelihoods.

ABCG's Mission

ABCG's mission is to tackle complex and changing conservation challenges by catalyzing and strengthening collaboration, and bringing the best resources from across a continuum of conservation organizations to effectively and efficiently work toward this vision of Africa.

ABCG's Objectives

- Promote networking, awareness, information sharing and experience among U.S. conservation non-governmental organizations working in Africa
- Encourage information exchange and idea sharing with African partners
- Identify and analyze critical and/or emerging conservation issues in Africa as priorities for both future NGO action and donor support
- Synthesize collective lessons from field activities and share them with a broader multi-sector community in the United States and Africa

As one of the four focal areas for ABCG from 2015-2018, ABCG members are exploring the links between human health, the health of domestic animals, the health of wildlife, and ecosystem health in Sub-Saharan Africa. In order to test out promising approaches that integrate health, development and conservation, two ABCG members—CI and JGI—will pilot two ABCG-designed tools to integrate biodiversity conservation with health projects focused on providing access to clean water, improved sanitation, and hygiene in South Africa and Uganda respectively. This will contribute to making

biodiversity conservation effective by highlighting the importance of biodiversity to human health and well-being, and making explicit linkages that can be developed through improved conservation planning (ABCG 2015).

Conservation South Africa (CSA), the local in-country affiliate of CI, has implemented the "One Health" Initiative in the Mzimvubu landscape in the Maputaland-Pondoland-Albany Hotspot in the Eastern Cape with partners to improve conservation and human well-being outcomes since 2011. The "One Health" initiative's objective is to integrate water, sanitation and hygiene (WASH) activities with rangeland management and conservation programs to improve the health of people, animals and ecosystems. Conservation South Africa is applying this framework in the upper reaches of the Mzimvubu Catchment to improve water resource sustainability and resilience to threats, including climate change.

The purpose of this report is to identify key gender issues and constraints to be addressed through the "*One Health; Integrating Freshwater Conservation, WASH and Rangeland Management in South Africa's uMzimvubu Catchment*" project activities. Through increased information gathering and analysis of men and women's existing roles in the catchment area, CSA and its partners hope the gender analysis will help identify areas for increased understanding and awareness of how men and women can improve activities that conserve water and biodiversity while improving human health.

II. THE MZIMVUBU CATCHMENT

The town of Matatiele has about 40 000 ha of wetlands. This wetland, photographed during the summer, is found on the way to Motseng Village. Credit: CI Patrick Nease

The headwaters of the Mzimvubu River, South Africa's last free-flowing river, supplies water to over one million people in the dry Eastern Cape Province. The watershed is comprised of more than 2 million hectares and provides a range of ecosystem services, food, water and livelihoods. Yet it is experiencing rapid rates of degradation in the form of huge soil erosion gullies from overgrazing, sediment load 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 (CSA 2014). Sadly, the entire upper catchment (435,000 ha.) is a severely degraded grassland mosaic landscape, with high water runoff that causes extensive soil erosion and an unpredictable water supply. Degradation, largely from Acacia mearnsii (black wattle) and Acacia dealbata (silver wattle) encroachment and erosion are impacting nearly 10 percent of the upper catchment. At the same time, about 40 percent of the region's wetlands have been drained or diverted for commercial farming interests or are otherwise impacted by agricultural activities. A vulnerability assessment shows that further expansion of alien trees and extreme weather events could exacerbate degradation (CSA 2015).

BOX 2 | ABCG RESOURCES ON INTEGRATING FRESHWATER CONSERVATION AND WASH

Clean freshwater systems are essential to human health and to environmental health. Good human hygiene and sanitation practices and good environmental practices are also essential to freshwater health. Given this bond, it would seem natural for water, sanitation, and hygiene practitioners and biodiversity practitioners to work together on freshwater issues. But historically WASH and biodiversity conservation have been considered incompatible, not because of insurmountable factors but due to the lack of a comprehensive approach to integrating the two sectors. Recognizing that development projects which connect conservation and WASH goals can accomplish greater outcomes—and more cost-effectively—than single-sector efforts, ABCG set out to bridge these two communities.

In 2012, CI, along with fellow ABCG members and several NGO development partners specializing in WASH, spearheaded an effort funded by USAID to produce several cutting-edge resources for integrated programming of freshwater conservation and WASH in sub-Saharan Africa. According to a recent report from Coca Cola, this pioneering work funded by USAID's Bureau for Africa is the only supportive evidence outside of the Sustainable Development Goals (SDGs) that builds the case for the integration of WASH and freshwater biodiversity conservation (Koch and Noe 2016). The ABCG group has produced:

Case study report of integration in Sub-Saharan Africa, entitled *Linking Freshwater Conservation and Water, Sanitation and Hygiene: Experiences from Sub-Saharan Africa*.

Guidelines for designing integrated programs - *Freshwater Conservation and Water, Sanitation, and Hygiene Integration Guidelines: A Framework for Implementation in sub-Saharan Africa*.

Monitoring and evaluation framework to support the design, implementation, and analysis of integrated projects, entitled *ABCG Freshwater Conservation and WASH Monitoring and Evaluation Framework and Indicators*.

For more information, please see www.abcg.org

In South Africa, the legacy of apartheid has left most former communal homelands[1] in a state of desperate poverty and environmental degradation. The Mzimvubu Catchment is within one of these former homeland areas. Although policies guarantee local communities basic sanitation services and access to water within 200 meters from households, only 80 percent of rural households have access to an improved source of drinking water. In contrast, 100 percent of urban households have access to an improved drinking water source. Similarly, only 61 percent of households in rural South Africa have

[1] Any of the racially and ethnically-based regions with nominally independent status created by the government in South Africa (http://www.thefreedictionary.com/Homeland+(South+Africa))

improved access to sanitation while 70 percent of urban households have access to improved sanitation (UNICEF and WHO 2015).

Most former communal homelands are in a state of desperate poverty and environmental degradation. Unemployment is higher than the national average, with most rural dwellers dependent upon social grants from the government and on local natural resources for their livelihoods (CI unpublished). Notably, this encompasses the river system and the range of ecosystem services it provides, such as food and water.

Though its communities are poor, the Maputaland-Pondoland-Albany Hotspot contains rich biodiversity, supporting more than 2000 plant and animal species that are unique to the area. Protecting the upper catchment is crucial to attaining South Africa's development goals. In order to support water security for over a million people, the landscape requires improved management and conservation efforts that work holistically with the health and economic needs of the population.

CSA staff with NRM beneficiaries doing MiniSASS biomonitoring as part of M&E. Credit: CI Patrick Nease

In response to these threats, CSA has been working in the Eastern Cape with the Alfred Nzo District Municipality (ANDM)—the district government that covers more than 70 percent of the watershed. CSA has also engaged key institutions and civil society groups in its efforts, such as the Mzimvubu Catchment Partnership Program (UCPP), Matatiele Local Municipality, and traditional leaders and community members in Ward 14 and Ward 21. The collaboration has received support from USAID South Africa and the Bureau for Africa, through the Africa Biodiversity Collaborative Group, the Starwood Hotels & Resorts Worldwide Foundation, Inc., and the South African Department of Environmental Affairs.

> Only 80 percent of rural households have access to an improved source of drinking water in ANDM.

From 2015-2018, CSA—with technical assistance from CI—is piloting the ABCG Freshwater Conservation and WASH Integration Guidelines and the Monitoring and Evaluation (M&E) Framework in four sites within the Alfred Nzo District. (Please see Text Box 2 for more information on these tools). ANDM is a key partner in this project, as the government body with the mandate to provide water supply and adequate sanitation facilities. Given their holistic vision, these partners are essential to achieving successful integration of these disciplines and achieving both health and conservation outcomes.

III. GENDER CONTEXT IN SOUTH AFRICA

A villager in Ntloa, happy to be contributing to WASH in Mvenyane, is photographed after completing the WASH household survey. Credit: CI Patrick Nease

The mandate for women's empowerment and gender equality in South Africa comes primarily from the country's 1996 Constitution (IWFSA 2011), which states in Section 9 Equality that "the state may not unfairly discriminate directly or indirectly against anyone on one or more grounds, including race, gender, sex, pregnancy, marital status, ethnic or social origin, colour, sexual orientation, age, disability, religion, conscience, belief, culture, language and birth (Republic of South Africa 1996). (Please see text box 3 for definition of gender and gender equality.) In line with the constitution, South Africa's National Policy Framework for Women's Empowerment and Gender Equality was formulated by the Office on the Status of Women (OSW) and adopted by the Cabinet in December 2000. The framework describes the values and principles which form the foundation of the National Gender Programme, which notably supports the recognition that women's rights are human rights (IWFSA 2011).

Most of South Africa's success in bringing about gender equality has been in the area of politics and decision making, particularly in national parliament, according to the African Development Bank (AfDB). In 1994, quotas helped increase the participation of women in government positions, but by 1999 quotas were not needed. (Myakayaka-Manzini 2003.) In 2009, 43 percent of Members of Parliament and 41 percent of cabinet ministers were women, and five of the nine provincial premiers were women. Women's representation in provincial parliaments also stood at 41 percent and in the private sector 18.6 percent of executive positions were held by women (AfDB 2009).

According to the International Union for the Conservation of Nature (IUCN) Environment and Gender Index (EGI) pilot study in 2013, South Africa is ranked 18 out of 72 countries for strong performance on a series of indicators relating to gender integration. The EGI assesses the conditions for gender equality and women's empowerment in the environmental arena using 27 indicators divided into 6 categories for 72 countries. The goal of the EGI is to measure progress, improve information, enhance policy and program development, and ultimately empower countries to take steps forward for gender equality and for the environment. South Africa's relatively strong rating and top EGI rank in the Africa region demonstrates that gender-based rights and participation are fundamental in the country's socio-economic and political governance system (IUCN 2013.)

Life expectancy at birth in South Africa for its 51 million citizens is comparable to many low-income countries: in 2015, it was 55.2 years for men and 59.3 years for women (World Bank 2015.) Access to health care is limited in rural areas, with poor women having to walk long distances to rural health clinics and health services. Literacy levels for men and women are high compared to other Sub-Saharan countries, with a high rate of girls and boys completing secondary education. Despite these relatively positive indicators, the legacy of apartheid means wide gender disparities persist, especially for black women.

There is unequal access to economic opportunities across the country, with women more likely than men to engage in unpaid work within the care economy or in the informal sector. Beyond social norms and time constraints, lower levels of education and experience may also be to blame for the large income gap between men and women (The Kaizen Company 2016.) Women farmers, particularly small-holder women farmers who often lack access to credit, training and inputs that help increase productivity, tend to farm smaller plots and less profitable crops than men. Outside of the agricultural livelihood sector, women business owners also tend to operate in smaller firms and less profitable sectors. As a result, women across South Africa tend to earn less money than men (IWFSA 2015). However, approximately 50 percent of households in South Africa are headed by females (IUCN 2013).

BOX 3 | DEFINITION OF GENDER AND GENDER EQUALITY

Gender refers to the economic, social, political, and cultural attributes and opportunities associated with being women and men. This means that staff and partners will understand and take into account the different roles of men and women in conservation and development activities at all scales.
USAID's Gender Equality policy indicates that equality is more than just laws on the books: it means expanding freedoms and improving the overall quality of life so that equality is achieved without sacrificing gains for males or females (USAID 2013).

IV. GENDER, WASH AND THE EASTERN CAPE CONTEXT

The social norms that translate to gender inequalities across economic and political spheres are particularly pronounced when it pertains to water resources. Based on gender differentiated roles, women are primarily responsible for care work that occurs in the domain of the home, including cooking, cleaning and caring for children and the elderly. Their high influence over water usage at the household level means they are most responsible for seeking and securing water resources. Women all over the world experience a far greater burden than male counterparts in terms of water collection, storage, and protection.

In Africa, women are responsible for 90% of the work associated with collecting water and wood for their households (UN Water). These commitments often represent a significant time burden that takes away from other economic or educational activities. Inadequate access to sanitation facilities or clean water tends to also impact girls and women the most, often meaning that they must travel greater distances and are exposed to greater security risks (UNICEF). These realities perpetuate inequalities that limit women's opportunities at the economic and even political level.

Despite the valuable insight that women gain on local water needs and management practices through these roles, they are rarely included in related decision-making processes. This represents a missed opportunity for women's empowerment that would support the success and efficacy of conservation and WASH interventions.

In recognition of this, there have been numerous international policy commitments—such as the 1992 International Conference on Water and the Environment in Dublin—that acknowledge the importance of including both men and women in discussions around water and sanitation. In order to move this recognition to practice, the African Minister's Council on Water Policy (AMCOW) developed a gender mainstreaming strategy in 2014 to promote the integration of diverse gender perspectives within water governance (AMCOW 2014).

Most women in the Eastern Cape transport water by hand. In contrast, an estimated 80% of men use wheelbarrows to transport water. Credit: CI Patrick Nease

Women and children in the ANDM face increasing vulnerability to stress on water resources and ecosystems in the watershed. Credit: CI Patrick Nease

South Africa has already made some progress in this regard. According to a 2014 analysis from the Water Research Commission (WRC), South Africa was among only two countries surveyed that had reached an advanced stage of gender mainstreaming within the water policy sector, meaning that some targets and standards were in place for collecting sex disaggregated data on water monitoring and evaluation (WRC 2014, 17-20). South Africa's Department of Water Affairs and Forestry (DWAF) developed a gender policy in 1997 that promotes the inclusion of women across water and sanitation projects and has established a 50% target for women's representation within the management committees of Water User Associations. Since then, various other policy efforts that call for gender mainstreaming across government and local natural resource management bodies in South Africa have been put in place (WRC 2009).

While such high-level gender mainstreaming initiatives are important, they often face barriers in implementation due to persistent social norms and barriers. These are often even more pronounced at the community level, meaning that change does not always translate to where the needs are greatest.

Within South Africa's Eastern Cape region, ANDM is one of the most food-insecure municipalities. Over one-third of its population is reliant upon social grants and nearly half are living below the poverty line (CSA 2015). Drought conditions are increasing throughout the country, with ANDM likely to experience greater water stress in the summers as rising temperatures exacerbate the evapotranspiration process in the region (13). This has implications for already fragile water resources facing other local pressures, such as the proliferation of invasive plant species. The fragility of the region's resources and overall ecosystem is linked to the increasing vulnerability of the communities that rely upon it, particularly women.

When considered within the context of these regional issues, the need to examine the interlinkages between women's roles in water management and decision-making and their inclusion in local water governance is critical. The needs and usage patterns of strategic users of local water resources should inform the design and implementation of interventions aimed at improving WASH practices and conservation outcomes.

"South Africa was among only two countries surveyed that had reached an advanced stage of gender mainstreaming within the water policy sector" – Water Research Commission 2014

V. METHODOLOGY

Recognizing these gendered differences in access to resources, participation and decision-making in South Africa, CSA conducted a gender analysis in order to better understand the on-the-ground realities in our target area within the Mzimvubu communities. Gender analysis is a forward-looking project planning and activity design tool which can strengthen the effectiveness of interventions based on evidence and data (USAID Tanzania 2013). Understanding women's engagement with local water resources is critical to improving conservation outcomes and better targeting our WASH outreach and services.

With input from CI's Gender Advisor, CSA staff and HQ technical staff, the following activities were carried out:

- Compiled and reviewed questions to be used as part of small group interviews;
- Engaged community village chiefs to attain support from communities to move forward with the survey;
- Conducted focus group interviews in four target communities and captured data that was collected into Excel spreadsheets;
- Analyzed initial findings;
- Drafted second round of gender analysis questions to fill gaps in data collected during focus groups;
- Conducted a second round of interviews with 40 community members (five men and five women per village) to augment data collected from focus groups;
- Drafted synthesis that was used to inform project activities and monitoring plans, and;
- Produced this final report that summarizes key findings and recommendations.

For this analysis, CSA designed a data collection questionnaire for the focus groups to help gain insight into how men and women in the ANDM community are accessing and using water resources. Specifically, we designed the questions to examine current practices around water management, water access and supply, usage purposes, types of sanitation facilities and practices, and attitudes and behaviors around WASH. This methodology was informed by a desire to pursue a descriptive analysis of trends rather than a statistical analysis.

The data collection for this gender analysis was completed by two members of CSA's Eastern Cape Office, with technical support from three CI staff members based at CI headquarters (HQ) in Arlington, Virginia. During the focus groups, CSA staff interviewed a total of 58 men and 70 women using semi-structured interviews. The focus group interviews were carried out in the local indigenous languages of the four target communities of Mapoliseng, Mateleng, Nkawulweni, and Ntloa.

CSA works with volunteers in the target communities to increase awareness and improve safe water practices. Credit: CI Patrick Nease

Following an initial analysis, staff recognized there was not enough data and identified a need to collect additional information and clarify questions to reduce ambiguity. CSA returned to the four villages to conduct interviews with a questionnaire and received written responses from 40 people—five men and five women in each of the four villages. This data was then analyzed as well.

The complete list of initial questions asked and second-round interview questions can be found in Annex I and II.

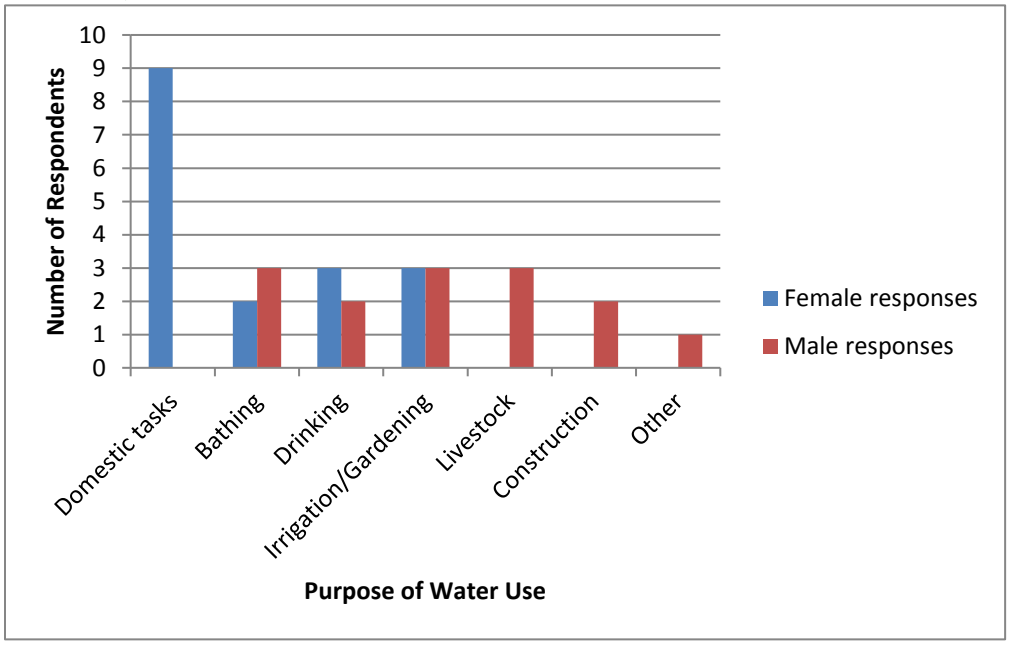
VI. KEY FINDINGS

CCSA and CI staff compiled data from the focus group interviews and aggregated the responses within Excel files. This facilitated an analysis of trends regarding access to water, use of water, sources of water and other key aspects of the project among men and women. It is important to note that the aim of this analysis was to acquire a descriptive, gender-differentiated overview of water use and management practices in Mzimvubu communities. The focus group participants were selected through an informal process with a small overall sample size, and the semi-structured interview questions were improved over time based on insight from previous focus groups. Consequently, the methodology was not structured to collect statistically significant data for analysis. Rather, these findings serve to illustrate gendered differences in water access and usage purposes, types of sanitation facilities and practices, and attitudes and behaviors around WASH that can shape critical gender considerations within project planning.

The following were the key findings.

6.1. WATER USAGE AND ACCESS

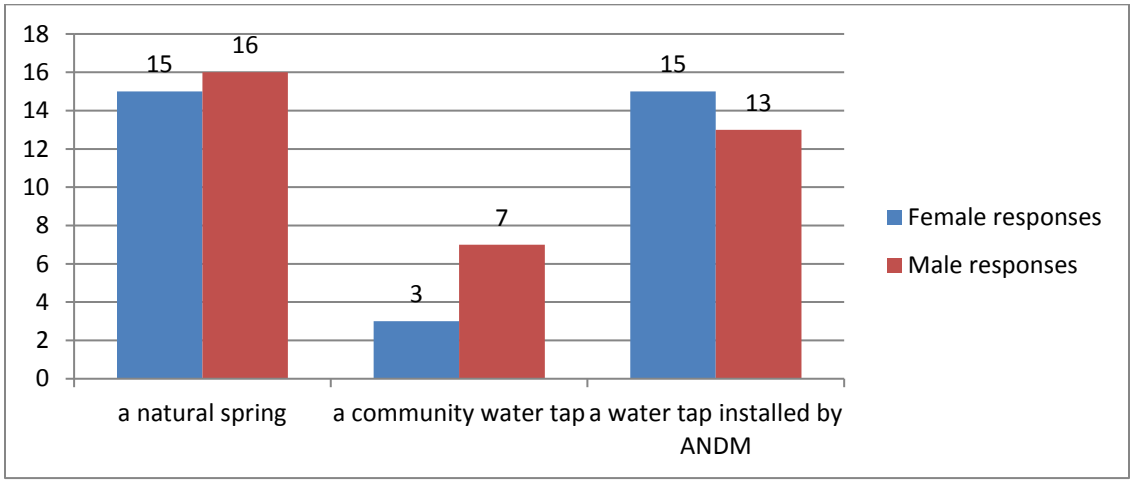
FIGURE 1 | WATER USE AT HOUSEHOLD/VILLAGE LEVEL



Across the communities examined, females overwhelming attributed domestic household work—which includes cooking—as the key purpose for water collected. Across households, men and women's responsibilities differed in a way that shapes water usage needs. Women are typically in charge of domestic duties, which include cooking, cleaning and cultivating crops. Men typically use water to care for livestock and make bricks to build houses. These differences in water usage based on gendered roles appear to be reflected in the responses recorded. For women, water was primarily allocated towards domestic responsibilities, while for men bathing, gardening and livestock care appeared to be equally important uses of water.

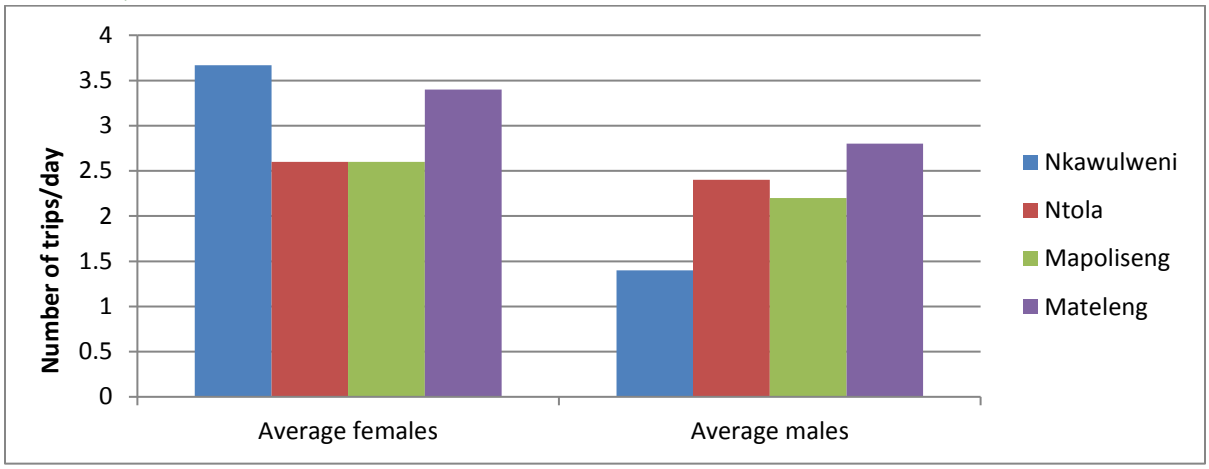
Given that there were more women than men across the focus groups (27 females to 13 males), it is not possible to determine which of these activities actually expended the greatest amount of water across households. Women claimed to use water overwhelmingly for domestic tasks, but in practice that does not necessarily translate to how water is allocated within households given uneven power dynamics that may give men greater control over water resources in the home. This is something that would be useful to examine in a future study in order to determine women's actual involvement in decision-making regarding water use at the household level.

FIGURE 2 | WATER SOURCE BY MALE AND FEMALE RESPONSES



In terms of water collection points, men and women report different uses of water taps installed by ANDM or the community. Participants noted that they rely upon more than one source of water—mostly natural springs and taps installed by ANDM. Ntloa was the only community that appeared to rely primarily upon natural springs and community taps (no one reported using ANDM-installed taps in this community). Some respondents reported that they do not know who monitors/maintains their water tap installed by ANDM, which is important because of how many people reported sourcing their water from these taps. With regards to monitoring the taps, most noted that there is a water monitor employed by ANDM to maintain the government-installed taps or that the ward committee fulfills this role, but up to six respondents reported not knowing who monitors their tap.

FIGURE 3 | FREQUENCY OF WATER COLLECTION PER DAY/TRIPS TO FETCH WATER

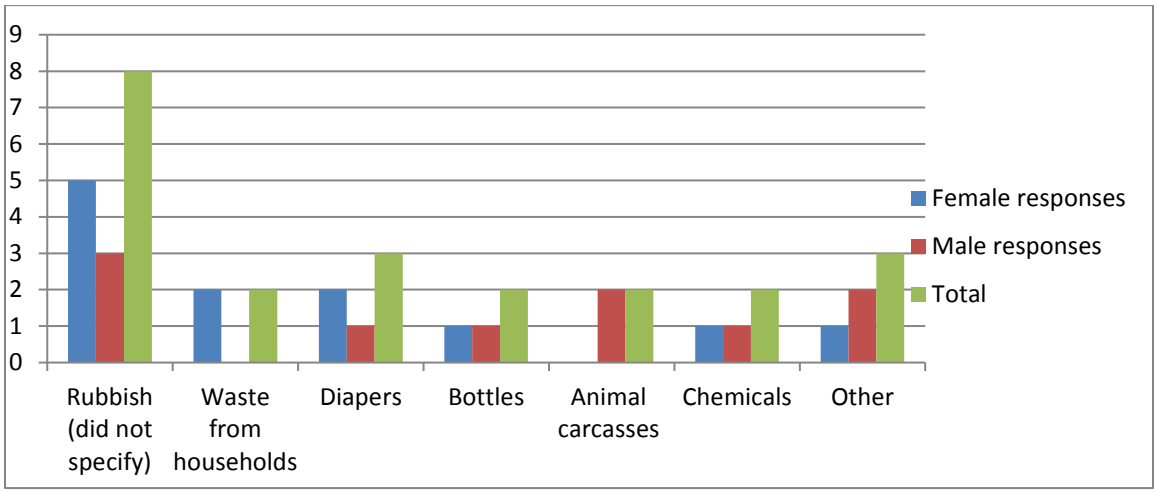


In all villages surveyed, both men and women report that they fetch or collect water, however, women in the four target sites tend to fetch water more often than men in the same communities. The largest difference in collections times occurs in Nkawulweni. In general, women spend more time per day fetching water. For all villages, an average of 20 liters is collected per trip. Ntloa has benefitted from continuous water availability in the winter due to the installation of a tap. Mapoliseng and Mateleng both report more time or trips to fetch water in the winter because they rely on springs.

When asked if they are satisfied with how and where they obtain water for daily use, both women and men across most of the four communities overwhelmingly reported no. In Mateleng, respondents claimed that they were not satisfied but that there was good water flow and they were better off than other villages. Some women in Mapoliseng complained that the terrain leading to the springs was difficult for transporting water in a bucket.

6.2. POLLUTION: WATER MANAGEMENT AND WASH PRACTICES

FIGURE 4 | SOURCES OF POLLUTION IN RIVERS AND STREAMS



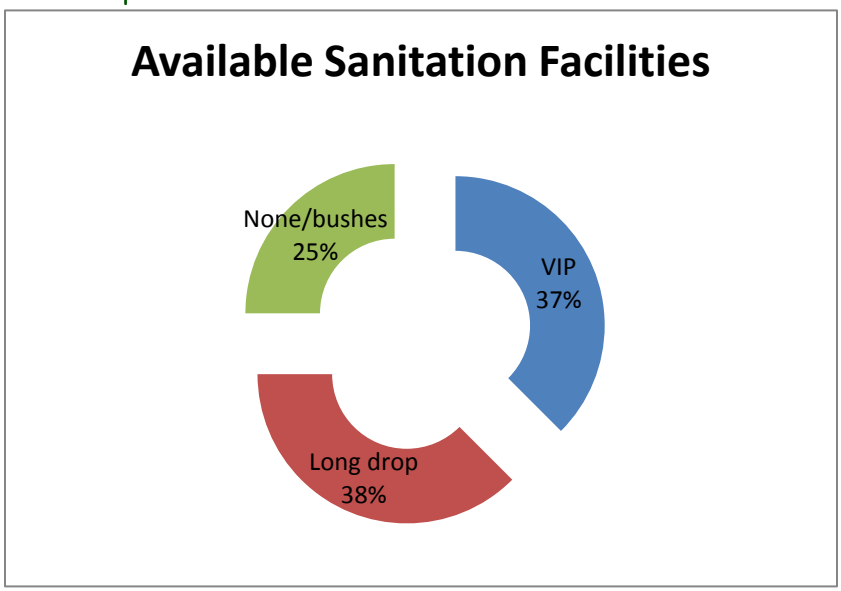
When asked if people ever cause pollution in streams or rivers, 22 out of 25 participants said yes. The only village where participants did not report this as a problem is Mapoliseng. Across the groups, men and women indicated that freshwater pollution was quite common and could be attributed to livestock herding, open defecation, and dumping of waste near water sources. At least 12 participants reported that livestock and people use the same water source. When asked if there is anyone in charge of monitoring or controlling pollution in the water source, all responses were no.

Many focus groups respondents acknowledged that the actions of livestock herders have an impact on the water that they use, with many also agreeing that these actions impact their health and that of their communities. Men are primarily responsible for this type of work, meaning that in the short-term it would be particularly important to engage them in shaping pollution-prevention approaches around livestock herding. However, increasing women's involvement in livestock herding could also be associated with long-term positive change in this area. Many WASH campaigns target women primarily because they are the ones performing care tasks involving household water resources. With proper education and capacity-building support, they may be more likely to consider water pollution prevention in their livestock-management practices based on these domestic experiences.

With regards to household water storage, only 2 respondents of 40 reported storing water in a container without a lid.

6.3. BEHAVIORS AND ATTITUDES AROUND WASH

FIGURE 5 | AVAILABLE SANITATION FACILITIES

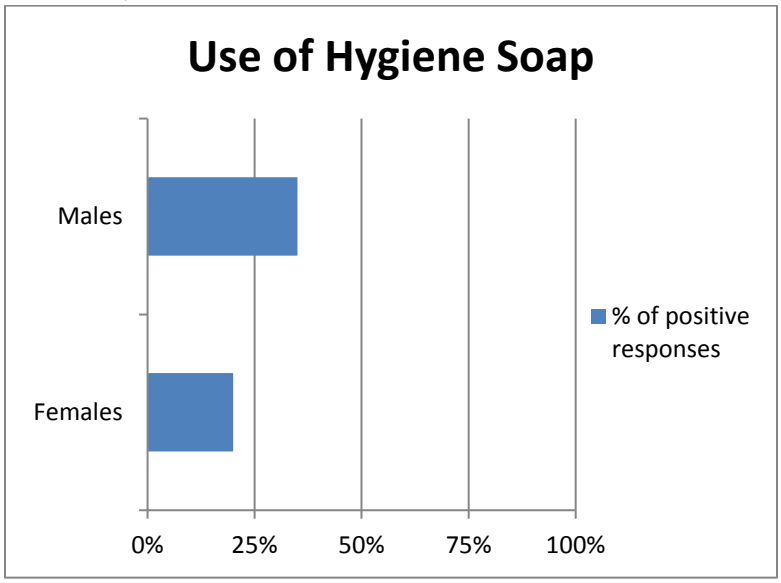


Note: VIP stands for Ventilated Improved Pit Latrine

Across the four communities, participants reported limited access to sanitation facilities, with about one-quarter claiming that people had to relieve themselves in the forest. This issue is particularly sensitive for women, given that they are the most likely to be impacted by the absence of sanitation facilities. Across many communities, there is a stigma associated with women relieving themselves in open areas, meaning that women must wait until the evening. This practice can lead to an increased potential for health complications and a greater burden on quality of life, as well as increased personal security risk for women who are more vulnerable during the darkness of evening hours. Limited access to sanitation facilities also has an impact on overall water quality, given that waste from open defecation may pollute local freshwater sources.

Participants further reported that where sanitation facilities do exist, they often became clogged after a year or two—a relatively short period of time—largely due to disposal of rubbish in the latrines/holes, including diapers. These practices represent behaviors that should continue to be challenged through educational interventions that target both men and women.

FIGURE 6 | USE OF HYGIENE SOAP



With regards to hand washing, all participants reported that they wash their hands after using a latrine or relieving themselves in a field. The water to wash their hands comes from a variety of sources, but primarily from a bucket next to the latrine or the house. While all respondents cited washing their hands, the number who reportedly use hygiene soap was quite small—particularly among women. When asking this question within a focus group setting, we specifically used the phrase "hygiene soap" because ANDM awareness events included messages on hygiene soap. This was one way to see if knowledge and practices are being retained.

In one village (Mapoliseng), male participants said they did not know what hygiene soap was, yet reported using it nonetheless. In this village, no female respondents reported using hygiene soap. Similarly, in Mateleng only two males and no women reported using hygiene soap. In Nkawulweni, all participants reported using hygiene soap, however, many said that they are not currently using it because they are waiting on ANDM to provide more soap. This limited access to hand soap and related practices are important, particularly among women who tend to do most of the cooking and feeding of children. Among children under 5, diarrheal illness is the second leading cause of death and the primary cause of malnutrition (WHO 2013). Diarrheal illnesses are highly preventable and often transmitted through improper sanitation practices, such as hand washing without soap. Improved sanitation education, particularly targeted to women, can be identified as an important area of work within WASH-related interventions in this area. This is in addition to increasing access to soap for communities.

Finally, focus group participants were also asked about whether women are and should be included in decision-making processes related to water, as well as potential mechanisms for increasing their engagement in this capacity. From these discussions, it appears that women are currently involved in water-management decision making to some extent. For example, when asked if they feel like they are able to impact decisions about how water is used in the community, all respondents (men and women) replied yes. In Mateleng, the head of community discussions on water is a woman.

Despite this, about 75 percent of respondents—inclusive of both males and females—believe that women can have more of an influence in decision-making. Indeed, there are various barriers that inhibit women's full participation in decision-making. Water management discussions primarily take place during the day at times when women are expected to be occupied with other responsibilities. In many cases, when women are included at such gatherings, cultural norms and expectations often restrict their ability to contribute, meaning that women may be invited but not necessarily encouraged to be speak out regarding issues that affect them.

The receptiveness to women's inclusion, however—as noted in these responses—suggests an area of opportunity for women's empowerment that could contribute to improved water governance practices and should be encouraged through programming. The primary mechanism cited to increase women's role in decision-making is for them to ask questions and provide input at community meetings. Understanding what barriers exist at the household or community level may be worth further exploration in the future.

VII. Conclusion

The successful integration of freshwater conservation and WASH practices in the Mzimvubu landscape depends on having reliable baseline information about men and women's corresponding roles and responsibilities with regards to water resources. The findings reported here provide some insight into the important differences in water usage patterns, needs and sanitation practices between men and women within four communities in uMzimvubu and the value of examining them.

In the Eastern Cape, cows not only serve as a food source but are used to carry wood across rivers and cleared mountains. Credit: CI Patrick Nease

Integrating women's needs and input within conservation and WASH programming is critical to achieving successful outcomes. However, obtaining buy-in from men in this regard is equally important. Evidence shows that men's support is critical to the success of gender-responsive projects. Programs and activities that take into account gender-differentiated roles and opportunities are the most successful (IWFSA 2011). Within this context, supporting activities that increase women's empowerment and participation in community discussions around local water governance is one key area that could be linked to improved conservation and sanitation outcomes, partic ularly given the communities' receptiveness to this. It is also evident that there is an overall need for hygiene education targeting both men and women that supports improved sanitation practices. These insights, among others gained in this analysis, will be used to inform future design and implementation of interventions around freshwater conservation-WASH in uMzimvubu within ABCG Phase II activities.

VIII. RECOMMENDATIONS

Based on the information gathered, CSA and partners should consider adapting their interventions to increase participation of both men and women in improving water conservation and sanitation efforts in the target areas as follows:

- Further explore men and women's different perceptions of the sources of water pollution and engage community members in problem-solving. For example, the mention of diapers as a pollution source could lead the community to build improved sanitation waste collection systems.
- Leverage existing platforms and women's networks, such as women's savings associations or other existing organizations that could serve as ideal mediums for educational campaigns that promote good hygiene and sanitation while improving women's livelihoods.
- Pursue further research on the opportunities for female involvement in livestock management and water protection. This should produce key knowledge around men and women's distinct roles, priorities, access to, and needs with regards to water and sanitation issues. This should then be followed with capacity-building efforts that support women's decision-making and livestock management roles based on the insight gained through this research.
- Engage men and women community leaders in comprehensive hygiene education in collaboration with ANDM to ensure effectiveness of health education and practices.
- Ensure gender assessment data is included in new programs; provide training on M&E to track further progress on gender equality.
- Uphold a gender balance on all project Steering Committees across the work in which CSA engages.
- Explore other approaches to show the "value added" of an integrated approach to freshwater conservation and WASH through metrics related to gender, governance, capacity building and youth.

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X. ANNEXES

ANNEX I: GENDER ANALYSIS QUESTIONS

What are the Water, Sanitation and Hygiene practices of your community?

- What do men and women use water for at a household and village level? What are the different responsibilities? E.g. domestic, livestock, crops etc.
- How long does it take for one to collect the water? How far does one have to travel in both the dry and the wet season?
- Gender dynamics at household and community level - what are the various needs and roles?
    - What us the role of women & girls in WASH practices?
    - What is the role of men & boys in WASH practices?
    - What specific needs do women/girls have of water?
    - What specific needs do men/boys have of water?

Who has access to and control of water sources?

- Where is your source of Water?
    - If this is piped water, who is the provider? Is this a communal initiative or municipality?
- Are these sources monitored?
    - If so, who monitors the springs?
    - Who monitors the taps?
- Do people ever cause pollution in the springs or the rivers?
    - If so, what are people throwing in the local rivers/springs?
- Is there anyone in charge of monitoring and controlling this kind of pollution?
- If there are community decisions about water (e.g. where to place a weir/pump/pipe) do both men and women participate in that discussion?

Who is responsible for decision making and management?

- Are the existing maps about where the springs are located?
- How are decisions made about which springs will be used and who participate in making that decision?
- Do Livestock and people uses separate sources of water? If not, who makes the decision regarding which spring serves people and which serves livestock?

Are toilets designed for privacy and dignity?

- What sanitation facilities are in place in schools for both girls and boys?
- What sanitation facilities are there in the village level?
- Who provides the facilities?

    - Municipalities: are they monitored or maintained
    - Villagers: whose responsibility is it to build the toilets? And how do they choose where to build it?
- How long does it take for these to fill up and what causes them to fill up quickly?
    - Do you consider this a long or short time?
- What do you think is the reason for them to fill up quickly?
- After using the latrine or relieving yourself in a field, is it a common practice to wash your hands?
- If so, where does the water come from that people use to wash their hands?
- Who is responsible for making sure there is water for hand washing?
- Do you think people in your community ever get sick from the water?
    - If so, what kinds of sickness do people get?
- Do you know of any waterborne diseases that people are diagnosed with? Or any water related diseases that are common within the village?
    - How do people treat these illnesses?
- Whose responsibility is it to remind people about good hygiene practices and ways to prevent disease?

Behaviors and Attitudes

- Are you satisfied with how/where you get water for daily use?
    - If not, what could be improved?
- Do you feel like you have the ability to impact decisions about how water is used by your community? Why or why not?
- Do you think the presence of alien trees impact how much water your community gets from springs or taps?
- Do you think the actions of the livestock herders (like where the krawl animals or let them drink) impact the water you use?
- Do you think that impacts your health or the health of the community members?

ANNEX II: SECOND ROUND OF GENDER ANALYSIS QUESTIONS

1. Do you fetch or collect water? If yes, please answer the three questions below. If no, jump to question 2.
    a. How many times a day do you fetch water?
    b. How much water do you fetch per trip?
    c. How much time does it take you to fetch water (each time)?
    d. Does it take more time or more trips in the dry season (vs. the wet season)?
2. After water has been fetched, how is it stored in your home?
    a. In a bucket or container without a lid
    b. In a bucket or container with a lid
    c. Other (please ask them to describe if they choose this option)
3. What is your water source? Please be as specific as possible:
    a. a natural spring
    b. a community water tap (meaning the community installed and maintains the water pipe)
    c. a water tap installed by ANDM – if yes, ask them who maintains it and who's responsibility it is to maintain that tap
    d. a water tap installed by national government– if yes, ask them who maintains it and who's responsibility it is to maintain that tap.
4. In your opinion, can women in the community have more of an influence in decision-making?
    a. If so, what mechanisms could make that possible?
5. After using the latrine or relieving yourself in a field, do you wash your hands?
    a. If so, where do you get the water to wash your hands?
6. Do you use hygiene soap?
    a. If so, what for?