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Program Evaluation of a Gender Mainstreaming and WASH Intervention  
in Upper West, Ghana

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By

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University of Maryland, Baltimore County  
2011

Thesis Committee Chair: Matthew Freeman, MPH PhD

An abstract of  
A thesis submitted to the Faculty of the  
Rollins School of Public Health of Emory University  
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Master of Public Health  
in Global Health  
2016

## Abstract

Program Evaluation of a Gender Mainstreaming and WASH Intervention  
in Upper West, Ghana  
by Sabah Ghulamali

**Objectives:** CARE International wanted to assess whether addressing gender equity and using empowerment approaches would lead to greater effectiveness and sustainability of WASH outcomes in rural Ghana.

**Methods:** A household survey (GAS) was conducted in 2014 (n=271) and 2015 (n=255) on gender; one community survey (GiFT) was completed in each village in 2014 and 2015 on WASH; and separate male and female focus group discussions were conducted in eight villages in 2015. Analysis methods included cluster difference-in-difference analyses in SAS, cross sectional correlation analyses in SAS, and qualitative analysis in Dedoose.

**Results:** After controlling for respondent age and sex in the GAS models, there was a statistically greater increase in equitable household decision-making scores in intervention communities over time than there was in control communities ( $p=0.05$ ). GiFT scores did not yield any significant results, but indicators of household decision-making were positively correlated to 2015 GiFT WASH sustainability outcomes ( $p=0.02$ ). Qualitative data helps explain the context in which gender equity and empowerment operates within local culture.

**Conclusion:** Quantitative results provide evidence that a comprehensive gender mainstreaming intervention can increase equity in household decision-making, a factor that is significantly positively correlated to WASH sustainability outcomes. However, the null results of other components of the intervention indicate areas for improvement in gender mainstreaming implementation. Future research should include women in planning stages while carefully considering how gender is defined and operationalized in local contexts.

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## Introduction

“When people ask me rather bluntly every now and then whether I am a feminist, I not only answer yes, but I go on to insist that every woman and every man should be a feminist—especially if they believe that Africans should take charge of African land, African wealth, African lives, and the burden of African development” – Ama Ata Aidoo, former Minister of Education of Ghana<sup>1</sup>

### Background on Upper West, Ghana

Upper West District of Ghana is one of the least developed regions of the country. According to the 2010 Ghanaian Population and Housing Census, only 2.8% of the population resides there, and over 80% of them live in rural areas (the highest of any district). Over 50% of residents over 11 years old are literate, and 51% of rural children over age 3 have never attended school.<sup>2</sup> Thirty percent of men have mobile phones, which is twice as large as the percentage of women who have mobile phones (15%). Only 4% of households have a laptop.

The main economic activity is agriculture, which includes corn, millet, groundnuts, shea butter, and brewing an alcoholic beverage called pito.<sup>3</sup> The only two seasons in Ghana are dry season and wet season. The dry season typically lasts from October to May, which hinders agriculture during that time. It can reach up to 104 degrees Fahrenheit during the day in dry season. For these reasons, access to water and sanitation are critical to Upper West communities. Unlike major urban areas like Accra where majority of households have piped-water, 68% of Upper West households rely on protected wells and boreholes for their drinking water<sup>4</sup>. According to the 2010 Census, only 3% of Upper West households had a water closet (exclusive or shared), and only 6% had a pit latrine (exclusive or shared).

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<sup>1</sup> Collins, Patricia Hill. *Black feminist thought: Knowledge, consciousness, and the politics of empowerment*. Routledge, 2002.

<sup>2</sup> Ghana Statistical Service. (2012b). Population and Housing Census: Summary Report of Final Results. Retrieved October 07, 2015 from [http://www.statsghana.gov.gh/docfiles/2010phc/Census2010\\_Summary\\_report\\_of\\_final\\_results.pdf](http://www.statsghana.gov.gh/docfiles/2010phc/Census2010_Summary_report_of_final_results.pdf)

<sup>3</sup> “Upper West.” Government of Ghana. Retrieved December 08, 2015 from <http://www.ghana.gov.gh/index.php/about-ghana/regions/upper-west>

<sup>4</sup> Ghana Statistical Service. (2012b). Population and Housing Census: Summary Report of Final Results. Retrieved October 07, 2015 from [http://www.statsghana.gov.gh/docfiles/2010phc/Census2010\\_Summary\\_report\\_of\\_final\\_results.pdf](http://www.statsghana.gov.gh/docfiles/2010phc/Census2010_Summary_report_of_final_results.pdf)

## Background on Gender Mainstreaming in WASH

The United Nations Department of Economic and Social Affairs (UNDESA) credits the beginning of “involving both women and men in the management of water and sanitation,” to the 1977 United Nations Water Conference.<sup>5</sup> Since then, the UN has published numerous reports on the disproportionate impact of unimproved water and sanitation on women and girls,<sup>6</sup> statistics on the status of women over time,<sup>7</sup> and impact studies on gender mainstreaming.<sup>8</sup> Other researchers have approached the gendered nature of water, sanitation, and hygiene (WASH) from a variety of perspectives: ethical,<sup>9</sup> epidemiological,<sup>10</sup> economic,<sup>11</sup> and feminist.<sup>12</sup>

There is a reason so much effort is placed on understanding women’s roles in WASH. Collecting water for the family is often considered a female chore,<sup>13</sup> and brings physical strain, the stress of responsibility, and significant opportunity cost (time that could have been spent generating income or attending school).<sup>14</sup> Ivens argues that WASH sustainability depends on gender equity, since “it is unlikely that repair or renewal [of a broken facility] will take place...as it does not affect the daily responsibilities of men.”<sup>15</sup> At the 1977 United Nations Water Conference, researchers advocated for mandating women’s involvement in provision and management of water resources.<sup>16</sup> As time passed, it became apparent that

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<sup>5</sup> "Gender and Water." *United Nations Department of Economic and Social Affairs*. UN, n.d. Web. 21 Sept. 2015. <<http://www.un.org/waterforlifedecade/gender.shtml>>.

<sup>6</sup> "We Can't Wait: A Report on Sanitation and Hygiene for Women and Girls." *Unilever Domestos, WaterAid, and the Water Supply & Sanitation Collaborative Council*. Nov. 2013. Web. 17 April 2016. <[http://www.zaragoza.es/ciudad/medioambiente/onu/en/detallePer\\_Onu?id=886](http://www.zaragoza.es/ciudad/medioambiente/onu/en/detallePer_Onu?id=886)>.

<sup>7</sup> "The World's Women 2010: Trends and Statistics." *United Nations: Department of Economic and Social Affairs*. 2010. Web. 17 April 2016. <[http://unstats.un.org/unsd/demographic/products/Worldswomen/WW\\_full%20report\\_color.pdf](http://unstats.un.org/unsd/demographic/products/Worldswomen/WW_full%20report_color.pdf)>.

<sup>8</sup> "Gender Mainstreaming Impact Study, Document 04." *UN-HABITAT*. 2011. Web. 17 April 2016. <<http://unhabitat.org/books/gender-mainstreaming-impact-study-document-04/>>.

<sup>9</sup> Aureli, Alice and Chaludine Brelet. "Women and Water: An Ethical Issue." *UNESCO International Hydrological Programme and World Commission on the Ethics of Scientific Knowledge and Technology*. 2004.

<sup>10</sup> Songsore, Jacob, and Gordon McGranahan. "The political economy of household environmental management: gender, environment and epidemiology in the Greater Accra Metropolitan Area." *World Development* 26, no. 3 (1998): 395-412.

<sup>11</sup> "A Gender Perspective on Water Resources and Sanitation." *Interagency Task Force on Gender and Water*. April 2004.

<sup>12</sup> O'Reilly, Kathleen. "'Traditional' women, 'modern' water: Linking gender and commodification in Rajasthan, India." *Geoforum* 37, no. 6 (2006): 958-972.

<sup>13</sup> Khosla, P., Van Wijk, C., Verhagen, J., & James, V. (2004). *Gender and Water. Thematic Overview Paper (TOP)*. IRC International Water and Sanitation Centre.

<sup>14</sup> "Women and Water." *United Nations. Division for the Advancement of Women*. Feb. 2005. Web. December 08, 2015. <<http://www.un.org/womenwatch/daw/public/Feb05.pdf>>.

<sup>15</sup> Ivens, Saskia. "Does Increased Water Access Empower Women?" *Development* 51.1 (2008): 63-67. Web.

<sup>16</sup> "Gender and Water." *United Nations Department of Economic and Social Affairs*. UN, n.d. Web. 21 Sept. 2015. <<http://www.un.org/waterforlifedecade/gender.shtml>>.

simply placing women in leadership roles did not automatically create an equitable gender environment. For example, Ghana has a 30% minimum quota for women in local governments, but they still remained responsible for the collection of water for household and productive uses.<sup>17</sup> In 2012, the World Bank conducted a qualitative study on gender and environmental development in Ethiopia and Ghana. Results showed when women were placed in management positions, given access to natural resources, an increased role in decision-making, and placed in poverty reduction and food security programs, there was a “deeper commitment to sustain project outcomes.”<sup>18</sup>

Similarly, a study from the International Water and Sanitation Centre (IRC) assessed data from 88 communities in 15 countries and found that water supply was more sustainable when the project included gender and poverty approaches.<sup>19</sup> Other studies show that services improve when men and women both have some control over the project implemented,<sup>20</sup> or that projects fail when gender differences are left unaccounted.<sup>21</sup> Gender mainstreaming has become a popular tool in international development to bring women into a program or project. The Economic and Social Council of the United Nations (ECOSOC) defines gender mainstreaming as:

“...the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women’s as well as men’s concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal

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<sup>17</sup> *Linking Gender, Environment, and Poverty for Sustainable Development: A Synthesis Report on Ethiopia and Ghana*. Rep. no. P125713. The International Bank for Reconstruction and Development/The World Bank, Jan. 2012. Web. <[https://www.wsp.org/sites/wsp.org/files/publications/global\\_plareport.pdf](https://www.wsp.org/sites/wsp.org/files/publications/global_plareport.pdf)>.

<sup>18</sup> *Linking Gender, Environment, and Poverty for Sustainable Development: A Synthesis Report on Ethiopia and Ghana*. Rep. no. P125713. The International Bank for Reconstruction and Development/The World Bank, Jan. 2012. Web. <[https://www.wsp.org/sites/wsp.org/files/publications/global\\_plareport.pdf](https://www.wsp.org/sites/wsp.org/files/publications/global_plareport.pdf)>.

<sup>19</sup> Gross, Bruce, Christine Van Wijk, and Nilanjana Mukherjee. "Linking sustainability with demand, gender and poverty." *World Bank Technical* (2001).

<sup>20</sup> Gross, Bruce, Christine Van Wijk, and Nilanjana Mukherjee. "Linking sustainability with demand, gender and poverty." *World Bank Technical* (2001).

<sup>21</sup> Narayan, Deepa. 1995. *The contribution of people's participation : evidence from 121 rural water supply projects*. Environmentally Sustainable Development occasional paper series ; no. 1. Washington, DC: World Bank. Web.

spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.”<sup>22</sup>

The United Nations Development Programme (UNDP) recommends gender mainstreaming in water resource projects, incorporating local women’s priorities into program initiatives from the start.<sup>23</sup> But a dearth of data in this field provides no current consensus on best practices for gender mainstreaming. “Linking Sustainability with Demand, Gender and Poverty,” by the IRC mentions the “lack of empirical data regarding the extent to which gender-sensitive project approaches actually have a significant impact on the sustainability of services created through projects,” as well as a “lack of a suitable methodology to help task and project managers and staff deal with gender in projects.”<sup>24</sup> A report by the Gender and Water Alliance speaks to the difficulty in translating gender theory into material and measurable changes.<sup>25</sup> CARE dealt deliberately with these issues when planning their gender mainstreaming projects.

## Research Question

The West Africa Water Supply, Sanitation, and Hygiene Program (WA-WASH), funded by USAID, was enacted in Ghana, Burkina Faso, and Niger by different implementation partners, including Florida International University, International Water Association, and WaterAid.<sup>26</sup> CARE took the lead role in implementing WASH programs in Upper West, Ghana with interventions in potable water, sanitation, savings and loans, food security, and climate change. CARE also took a gender mainstreaming approach within WA-WASH, hypothesizing that gender equity is related to WASH outcomes and sustainability, or

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<sup>22</sup> *Gender Mainstreaming: An Overview*. United Nations. New York, 2002. Web. <<http://www.un.org/womenwatch/osagi/pdf/e65237.pdf>>.

<sup>23</sup> Gender and Water Alliance, UNDP, IRC, and Cap-Net. *Mainstreaming Gender in Water Management*. Resource Guide. N.p., Nov. 2006. Web. <<http://www.undp.org/content/dam/aplaws/publication/en/publications/environment-energy/www-ee-library/water-governance/resource-guide-mainstreaming-gender-in-water-management/IWRMGenderResourceGuide-English-200610.pdf>>.

<sup>24</sup> *Linking Gender, Environment, and Poverty for Sustainable Development: A Synthesis Report on Ethiopia and Ghana*. Rep. no. P125713. The International Bank for Reconstruction and Development/The World Bank, Jan. 2012. Web. <[https://www.wsp.org/sites/wsp.org/files/publications/global\\_plareport.pdf](https://www.wsp.org/sites/wsp.org/files/publications/global_plareport.pdf)>.

<sup>25</sup> Khosla, Prabha. "Tapping into sustainability: issues and trends in gender mainstreaming in water and sanitation: a background document for the Gender and Water Session 3rd World Water Forum, Kyoto, Japan, 2003." IRC, 2003.

<sup>26</sup> *WA-WASH Project*. Florida International University. Web. 18 April 2016. <<http://wawash.fiu.edu/drupal-cms/>>.

specifically, that “addressing gender equity and using empowerment approaches will lead to greater effectiveness and sustainability of WASH outcomes, particularly if they also engage men and boys.”<sup>27</sup>

The goal of this study was to understand the effectiveness of CARE’s 3-year gender mainstreaming intervention, provide evidence to determine the inclusion of gender components in future WASH programming, and add to the literature on gender mainstreaming policies. Quantitative and qualitative methods will be used to assess whether the intervention was effective in improving gender equity and WASH, and whether gender equity is correlated with WASH outcomes. The null hypothesis is that no relationship exists between receiving the intervention and outcomes related to gender equity and WASH.

Evaluating WA-WASH is critical to filling gaps in the current literature on gender mainstreaming. It also provides some much needed insight into the causal chain that links gender to WASH. At the basis of this intervention was the idea that gender empowerment activities would lead to empowered women, which would lead to a transformation in the gendered division of labor: men would take on some of the WASH responsibilities while women would use their newly freed time to gain financially and politically. Once more men participated in WASH maintenance and more women assumed leadership positions, Ivens’s theory of WASH unsustainability would be resolved—repair and renewal of facilities *would* take place.

## Description of Intervention

The WA-WASH program began in 2011, though its gender interventions were not implemented until 2014. Jennifer Whitmill conducted the baseline evaluation of this research in 2013 and found a large variation in survey scores by community. Quantitative data revealed that less than 40% of leadership positions on water and sanitation committee boards were occupied by women. Qualitative results showed that men did not take part in water collection, and “boys would only fetch water if they ‘[felt] like it’ or the daughter and

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<sup>27</sup> “Using Empowerment Approaches to Enhance WASH Sustainability and Effectiveness – December 2012,” Research concept note. CARE International.

mother were sick or absent”, which reinforces the theory that water is a gendered resource. In 2014, and in the context of recently implemented gender mainstreaming programs, Zimo Zheng conducted the midline evaluation in WA-WASH communities with updated tools. She evaluated ten ‘intervention’ communities where a more comprehensive set of gender mainstreaming activities had been employed and five ‘control’ communities to assess the effect of CARE’s “gender equity approach on gender equity and WASH outcomes.” These same fifteen communities were assessed in the endline evaluation.

The factor that distinguished intervention from control communities was receiving the comprehensive gender mainstreaming package (more below), but otherwise, each community was provided with a unique set of interventions given their particular circumstances. For example, communities like Mantari had been exposed to WASH interventions previously under the Global Water Initiative, who provided a potable water facility, thereby relieving CARE from having to build one (Table 1). However, accounting for the inconsistency of interventions could complicate a plausibility evaluation, so analysis was conducted using only the binary of intervention or control as the independent variable.

### Gender Mainstreaming Activities

Intervention and control communities were distinguished by the number of gender mainstreaming activities implemented (Table 2). A detailed explanation of each activity is below.

*Community Gender Action Plans (CGAPs):* This activity was conducted in order to sensitize the communities on gendered work. For example, community members created work charts for men and women’s daily schedules in order to initiate a conversation about the importance of “women’s work.” Then, community members used what they learned to create a list of action items, such as: increase women’s access to land for farming, improve bathroom design to increase women’s privacy and comfort, increase women’s participation in household decision-making, and improve durability of latrines. Many of these items are reflected in the Gender Analysis Survey (GAS), a survey tool described in the methods section. Additional detail on CGAPs can be found in Appendix B.

Table 1: CARE Activities by Community

Community	Intervention / Control	Global Water Initiative Community	Gender Mainstreaming	Potable Water	Climate Change	CLTS	Food Security	VSLA	WinS
Methow-Yipaal	Intervention	X	X	Received 2nd borehole from CARE	X		X	X	
Mantari	Intervention	X	X	had existing facilities	X			X	
Meguo	Intervention	X	X	had existing facilities	X	X		X	
Dabagteng	Intervention	X	X	had existing facilities	X	X	X	X	X
Venne	Intervention	X	X	had existing facilities	X	X		X	
Babili Dagne	Intervention		X	X	X	X	X	X	
Bawelyir	Intervention		X	X	X	X	X	X	
Brifo Maal	Intervention		X	X	X	X	X	X	
Kamba Tangzu	Intervention		X	X	X	X	X	X	
Kettuo	Intervention		X	X	X	X	X	X	
Bagri	Control			had existing facilities		X		X	X
Berwong	Control			had existing facilities		X		X	X
Tabier	Control			had existing facilities		X		X	X
Dumanje	Control			had existing facilities		X		X	
Tome	Control			had existing facilities		X		X	X

Additional information on the activities completed in each community can be found in the appendix (Appendix A).

Table 2: Gender Mainstreaming Projects

Community	Intervention / Control	Community Gender Action Plans	Drama Clubs*	Male Gender Champions	Engagement with Traditional Leaders	VSLA Formation	Female Leadership Training
Methow-Yipaal	Intervention	X	X	X	X	X	X
Mantari	Intervention	X	X	X	X	X	X
Meguo	Intervention	X	X	X	X	X	X
Dabagteng	Intervention	X	X	X	X	X	X
Venne	Intervention	X	X	X	X	X	X
Babili Dagne	Intervention	X	X	X	X	X	X
Bawelyir	Intervention	X	X	X	X	X	X
Brifo Maal	Intervention	X	X	X	X	X	X
Kamba Tangzu	Intervention	X	X	X	X	X	X
Kettuo	Intervention	X	X	X	X	X	X
Bagri	Control			X	X	X	X
Berwong	Control			X	X	X	X
Tabier	Control			X	X	X	X
Dumanje	Control			X	X	X	X
Tome	Control			X	X	X	X

\* I was informed by the Project Manager that while the drama clubs were created, no plays actually took place in any of the communities.



*Drama Clubs:* Men and women form drama groups in which they first choose action items from the CGAP they are interested in, and then complete a Gender Analysis Matrix to determine the impact of enacting the chosen item on various aspects of the community. According to the midline report, “Each intervention community received three to four sessions in which CARE and Partnerships for Rural Development Action (PRUDA) staff spoke to the community about four CGAP items. The CGAPs are ‘emerging gender issues’ and solutions identified by each of the WA-WASH communities in a participatory gender analysis performed for CARE Ghana by consultants from the University for Development Studies in 2012.<sup>28</sup> In January of 2014, CARE staff reviewed all 20 communities’ CGAP’s and identified the four most common gender issues, which became the focus of the community training sessions that the intervention communities received... The intervention communities also participated in discussions using the GAM to examine the impacts that implementation of the four CGAP items were having on men and women the community as well as at the household and community levels.

CARE staff reported that all ten of the intervention communities had formed drama clubs during the summer of 2014. By the end of data collection for this midterm evaluation, staff reported that the groups were beginning to create and practice their skits. CARE planned to organize a drama competition between the drama groups in August 2014.” This competition did not end up taking place.

*Male Gender Champions (MGCs):* CARE prompted all 15 communities to select two men that they would train to lead their communities in gender equity. The midline report documents their creation, including “a two-day gender training in April 2014 that included discussions about the difference between sex and gender, the effects of gender stereotyping, men and women’s unequal workloads, access and control of resources, and privilege.”<sup>29</sup>

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<sup>28</sup> Community Gender Action Plan for the Mantari Community, Nadowli District. Dr. Emmanuel K. Debile and Team. University for Development Studies, Wa. CARE Ghana.

<sup>29</sup> Banta, Zimo Zheng, 2014. “Gender Empowerment and WASH Outcomes: Midterm Evaluation of CARE Ghana’s Gender Empowerment Approach in the West Africa Water Supply, Sanitation, & Hygiene Program.” CARE International.

*Engagement with Traditional Leaders:* CARE provided the same training given to the male gender champions to the traditional leaders of each of the WA-WASH communities, including the chief, tindaana (landlord), and queen mother (community women’s leader). When these traditional leaders returned to the community, they shared their newly acquired knowledge with their community members.

*Village Savings and Loan Association (VSLA) Formation:* Access to financial stability is essential to ensuring WASH sustainability. With this in mind, CARE provided support and education on VSLAs to WA-WASH communities. Each community formed small VSLAS containing up to 25 people. This is considered a part of gender mainstreaming since men traditionally “have owned, controlled, and made decisions about the resources” in their homes and in the wider community.<sup>30</sup> VSLAs allowed women to control their own earnings.

*Female Leadership Training:* The creation of VSLAs, as mentioned above, is a gender equity exercise in and of itself. CARE promoted gender equity even further by training women to be leaders on the committees of each VSLA group. Similar to the goal of having at least 40% female WATSAN leadership, CARE wanted VSLAs to be led by women to promote their decision-making power on the community level.

All projects took place in the first half of 2014 except for the Female Leadership Training, which happened in January of 2015.

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<sup>30</sup> Banta, Zimo Zheng, 2014. “Gender Empowerment and WASH Outcomes: Midterm Evaluation of CARE Ghana’s Gender Empowerment Approach in the West Africa Water Supply, Sanitation, & Hygiene Program.” CARE International.

## Methods

### Study design

The 2014 and 2015 evaluations utilized a mixed-methods research design, capturing quantitative survey data as well as qualitative Most Significant Change and focus group discussion responses. Fifteen communities in Upper West Ghana participated in the study. Methow-Yipaal, Mantari, Meguo, Dabagteng, Venne, Babili Dagne, Bawelyir, Brifo Maal, Kamba Tangzu, and Kettuo were intervention communities that received the full gender mainstreaming intervention. Bagri, Berwong, Tabier, Dumanje, and Tome were designated as control communities.

The program evaluation used an intention-to-treat plausibility design to determine the effectiveness of the gender mainstreaming intervention, the WASH intervention, and the correlation between the two. All quantitative data collection was conducted identically to mid-line to ensure comparability of results. A cluster difference-in-difference analysis was used to tell if there were significant changes over time in participating communities. Emory University granted IRB approval (study #65900). No permission was required by Ghana to conduct this study in-country.

### Study Population

The 2014 and 2015 target population was the same, and the sampling methods were also identical. Inclusion criteria for the study included:

- Must be a member of one of the fifteen target communities.
- Must be 18 years or older.
- Must be listed on the provided community census. This census was the same from 2014 to 2015, so no newly immigrated families were captured.
- Must live in their represented household for at least six months out of the year, and must have spent the previous night in the house at the time he/she was interviewed.

## Gender Analysis Snapshot (GAS)

### Research Instrument

The GAS is a 63-question household survey that asked about family finances, household decision-making, access to public spaces and services, community involvement, and women's empowerment and equality.

The GAS ends with five open-ended questions prompting the respondent to name the most significant changes in his or her life has been since becoming involved in CARE's program. Both negative and positive changes were acceptable answers. The 2014 and 2015 Gender Analysis Surveys were identical.

### Participant Recruitment

Using a community roster of households, 20 heads of households were randomly sampled. In communities that had fewer than twenty households, all heads of households were selected to participate. On the day of the survey, each enumerator met the sampled heads of households with a survey page that indicated whether to interview a male or female to ensure an even response rate. All eligible members of the household were recorded. Enumerators then used a random number chart (Appendix E) to randomly select an interviewee from the list of eligible household members according to the sex indicated. In accordance with last year's methodology, if the selected household member was unavailable, enumerators would choose an available member of the household to interview. However, if an entire household was absent, that household was recorded as a non-response.

### Data Collection

Dagaare has no written form, so surveys were written in English. In 2014, the researcher made an effort to create surveys in phonetic Dagaare, but these were disliked and unutilized by enumerators. The two-day training allowance in the summer of 2015 was not enough time to have all questions memorized in Dagaare. Enumerators instead practiced translating the tools in front of each other to improve consistency. Meaning, each enumerator translated each survey from English to Dagaare every time they interviewed a participant.

Every GAS survey was administered face-to-face, and enumerators marked participant responses. For open-ended questions, enumerators directly translated the replies and recorded them in English. Each

GAS took 45-60 minutes to complete. Enumerators attempted to sit far apart from one another to ensure participant privacy, but it was impossible to prohibit community members from wandering around nearby.

## Data Analysis

### *Scoring*

Every GAS response used in analysis had been assigned an *a priori* score when the survey was first created (Appendix, Tool 1). The majority of questions followed this pattern of scoring:

Only men.....	1
Mostly men.....	2
Men and women equally.....	3
Mostly women.....	2
Only women.....	1
Nobody.....	*
Don't know.....	*

Higher GAS scores meant greater gender equity. The following GAS scored subsections were created for analysis:

1. Total GAS score
2. Water sanitation and hygiene (WASH)
3. Household decision-making (HH D-M)
4. Access to public spaces/services (Access)
5. Women's empowerment and equality (Empowerment)
6. Community Gender Action Plans (CGAP)

### *Analysis*

SAS 9.4 was used to analyze the GAS and GiFT survey results. 2015 GAS responses were cleaned exactly the same way as the 2014 researcher cleaned her data for comparable results, including using a single imputation method to fill in missing values (mean response of the community and gender as the respondent in question). Once the data was cleaned and missing values were filled, GAS scores were calculated using predetermined scoring methods, and linearity assumptions were verified. These GAS scores were the dependent variables, while the intervention or control assignment of the community was the independent variable.

Raw means for each scored subsection in 2014 and 2015 were calculated to show difference-in-differences. To assess significance of those differences, a cluster ordinary least squares regression was conducted using PROC SURVEYREG, with each community being a single cluster. After comparing regressions with likely confounders, age and sex were selected to include in the model.

## Governance into Functionality Tool (GiFT)

### Research Instrument

The GiFT is a 56-question community survey on water and sanitation functionality which additionally examines the financing, management and operations of the water and sanitation (WATSAN) Committee. Certain questions were used as proxy indicators for sustainability; sustainability was not judged longitudinally (See GiFT subsection scoring in Appendix C). One GiFT was completed in each community in 2014 and 2015. The GiFT surveys were identical in both years.

### Participant Recruitment

The GiFT was administered in a group of four to six respondents that fulfill a specific set of eligibility requirements: a minimum of one male WATSAN member, one female WATSAN member, one non-WATSAN male, and one non-WATSAN female. Due to the nature of the eligibility requirements and the lack of written membership lists, each village's chief or research liaison served as gatekeepers for a convenience participant sampling.

### Data Collection

Data collection for the GiFT was very similar to the GAS in that each enumerator leading the GiFT would translate on the spot from the written English questions into Dagaare, and would translate any open-ended responses given in Dagaare directly onto the paper in English. The GiFT was also conducted face-to-face, and would last around 45 minutes. All participating members had to come to a consensus before the enumerator would record their single response to each question.

## Data Analysis

### *Scoring*

Similar to the GAS, every GiFT survey question used in analysis had been given a predetermined score, and scores were organized into the following subsections:

1. WASH sustainability
  - a. Water point functionality
  - b. Sanitation sustainability
2. Governance
  - a. Management
  - b. Accountability & responsiveness
3. Financing

Though there was no consistent list of possible responses for all the GiFT questions, a higher GiFT score meant better WASH outcomes.

### *Analysis*

Due to the small sample size for the GiFT, a difference-in-difference analysis comparing 2014 and 2015 control and intervention community responses was conducted as well as a few additional cross-sectional correlation tests.

Similar to the GAS, GiFT scores were dependent variables and the intervention status of the community was the independent variable. After getting raw means for each scored subsection, difference-in-differences were calculated using PROC GENMOD. A generalized linear model was selected over a traditional linear model, since there were only 15 observations in each year, with not completely at random missing variables.

Next, Spearman Rank Correlation tests were conducted comparing the 2015 GiFT subsections with each GAS subsection to see if there was a relationship between specific gender outcomes and WASH outcomes. Finally, two simple linear regressions were conducted on the 2015 GiFT data. The first was to see if there was a correlation between greater total GiFT score and the proportion of women on WATSAN

boards in each community. The second was to see if there was a relationship between total 2015 GiFT score and total GAS score.

## Focus Group Discussions (FGD)

### Research Instrument

The FGD guide was designed to parallel the themes of the GAS, but focus more heavily on change over time and community-level rather than household responses. In total, there were 16 questions on control of income and productive assets, decision-making, communication, permission-asking, and self-confidence and autonomy.

With feedback from the research supervisor and analysis from the midline report, iterative changes were made to enhance the FGD guide and also attain information on the overall successes and failures of the program. Additionally, a pre-discussion activity page was created to compare men and women's daily activities, but it did not work effectively in largely illiterate groups of participants.

### Participant Recruitment

The FGDs were completed in the same eight communities as 2014: Babili Dagne, Berwong, Brifo Maal, Methow-Yipaal, Mantari, Dabagteng, Dumanje, and Tom. Five were intervention communities and three were control. In each community, enumerators conducted two separate FGDs. One was an all female-group of six, and the other was an all-male group of six. Participants were conveniently sampled out of available community members, though each had a mix of age and life experiences. Community chiefs or research liaisons once again served as gate-keepers. A total of 16 FGDs were conducted, each one lasting 45-60 minutes.

### Data Collection

Two enumerators were assigned to each focus group discussion. One served as a facilitator while the other was a note-taker—a critical role in identifying participant involvement at the transcription stage. Participants were sat in a circle and each was given a notecard with a number from one to six. They were also asked for their age, marital status, and involvement in community groups. No other identifying



information was recorded. At the start of each FGD, an audio recording device was turned on to record the discussion. FGDs were recorded in Dagaare, and then each enumerator listened to them and transcribed them in English (skipping the usual transcription in foreign language step as that was not possible).

### Data Analysis

A mixed methods application for qualitative data called Dedoose was used to analyze focus group discussion data. An initial exploration of data was conducted, and inductive and deductive methods were used to create rough codes. Next, thematic codes were added with appropriate weights to highlight emerging concepts in the data. At this point, it became clear that the quality of data collected was too poor for a full qualitative investigation. However, the preliminary exploration helped identify relevant categories and concepts as well as some notable storylines.

## Results

A breakdown of the questions used to score each subsection can be found in the Appendix (Appendix C).

### Gender Analysis Snapshot

The population demographics of the 2015 Gender Analysis Survey were similar to that 2014 (Table 3). A total of 255 community members participated—158 from the ten intervention communities and 97 from the five control communities—with nearly equal participation from men and women. The mean age was 44 years old, and ranged from 19 to 85 years. Seventy-five percent of people were married, 78% had no education, and 77% of people earned their income through farming.

In all cases, except (notably) for women’s empowerment, there was a greater increase in average scores in intervention communities from midline to endline than there was in control communities. After controlling for respondent age and sex, there was a statistically greater increase in household decision-making scores in intervention communities over time than there was in control communities (Table 4). Therefore, we have evidence to suggest that the intervention is related to household decision-making becoming more equitable. Changes in all other subsections were not statistically significant.

Table 3: Demographics

<b>Characteristic</b>	<b>2015 (n=255) Mean or %</b>	<b>2014 (n=271) Mean or %</b>
<i>Status</i>		
Intervention	62%	64%
Control	38%	36%
<i>Mean Age</i>	44	43
<i>Sex</i>		
Male	51%	51%
Female	49%	49%
<i>Marital Status</i>		
Married	75%	73%
Single never-married	7%	13%
Divorced/Separated	1%	<1%
Widowed	17%	14%
<i>Highest Education</i>		
No education	78%	67%
Primary school	7%	13%
Junior high/JSS	8%	12%
Secondary school/SSS	5%	6%
University/tertiary	0%	<1%
<i>Income Sources*</i>		
Farming	77%	60%
Pito	9%	11%
Shea	2%	3%

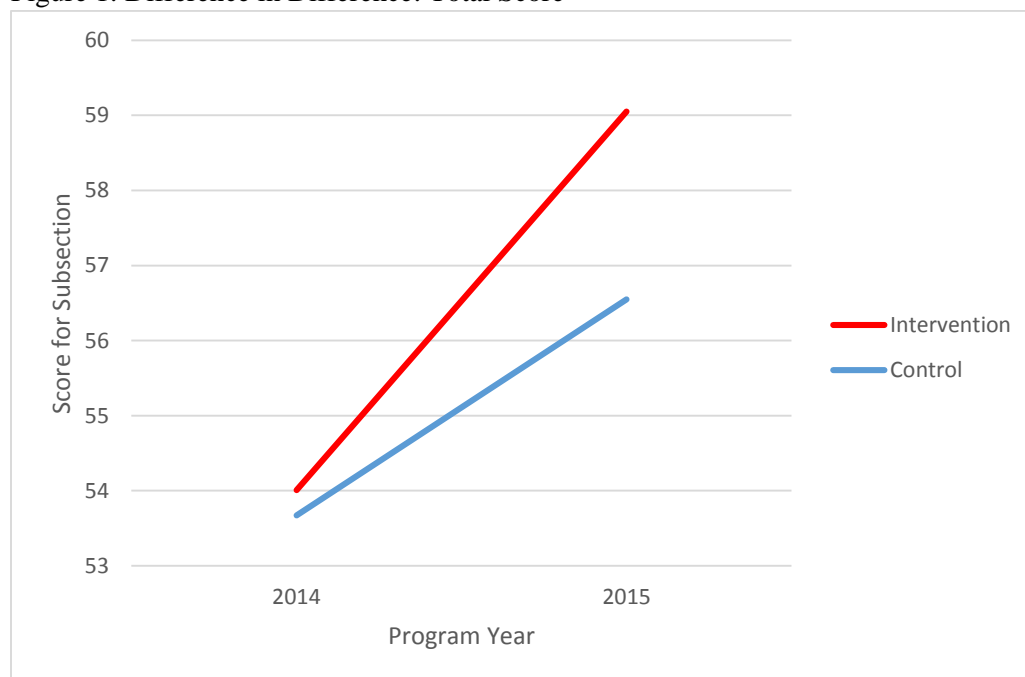
\*Income sources were not mutually exclusive.

Displayed graphically, intervention and control communities increased their total score a statistically indistinguishable amount (Figure 1), but control communities' household decision-making scores remained almost unchanged, while the intervention communities' scores in that subsection raised a significant amount (Figure 2).

Table 4: Differences in Mean GAS Score from 2014 to 2015

GAS Section <sup>31</sup>	Intervention	Control	Difference of Differences (Intervention Column – Control Column)	p-value
	2015 Mean - 2014 Mean	2015 Mean - 2014 Mean		
Total Score	5.04	2.88	2.16	0.34
WASH	0.98	0.58	0.4	0.55
HH D-M	1.59	0.14	1.45	0.05*
Access	1.05	0.42	0.63	0.36
Empowerment	1.44	1.74	-0.3	0.41
CGAP	2.24	0.84	1.4	0.23

Figure 1: Difference in Difference: Total Score<sup>32</sup>



<sup>31</sup> Score section abbreviations refer to the following:

WASH - Water, Sanitation, and Hygiene

HH D-M - Household Decision-Making

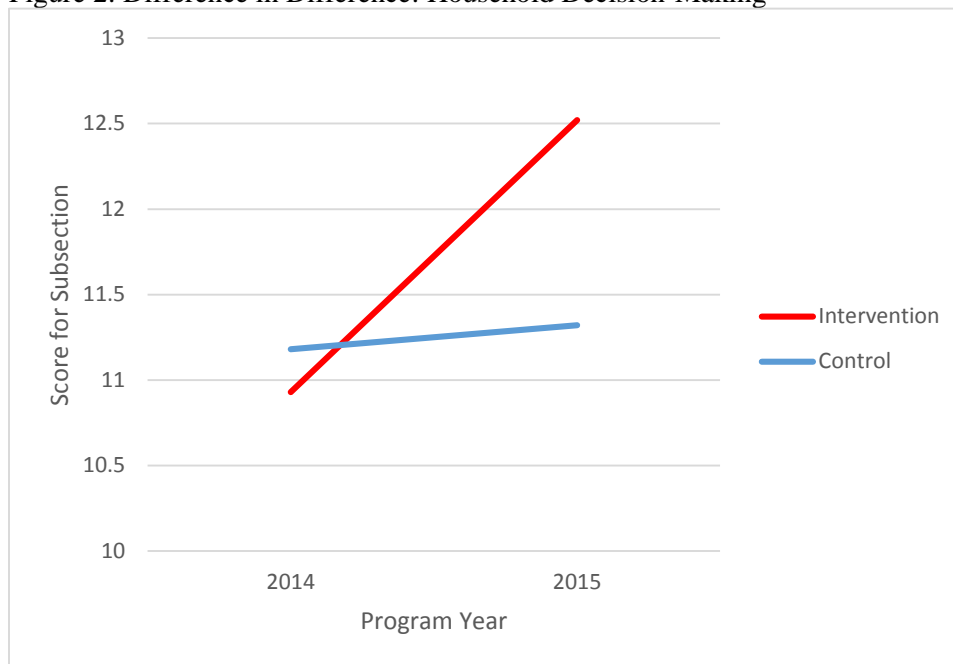
Access - Access to Public Spaces and Services

Empowerment – Women’s Empowerment and Equality

CGAP – Community Gender Action Plan

<sup>32</sup> Possible scores ranged from 21 to 84.

Figure 2: Difference in Difference: Household Decision-Making\*<sup>33</sup>



\*significant at P<.05

### Governance into Functionality Tool

Unlike the GAS scores, which increased to greater equity with an additional year of intervention, none of the GiFT scores increased over time (Table 5). In most subsections, the intervention communities' scores decreased less than the control communities (Figure 3). The only subsection where scores increased was in accountability and responsiveness of the WATSAN board. The only subsection where control communities had less of a decrease in score than intervention communities was in sanitation sustainability. While this negative trend is concerning, there was no statistical significance to any of the results.

Spearman Rank Correlation tests were conducted comparing the 2015 WASH sustainability subsection and each GAS subsection to see if there was a relationship between specific gender outcomes and WASH outcomes. Across all communities, there was a positive relationship between WASH sustainability and the household decision-making subsection (p=0.02) and the CGAP subsection (p=0.05).

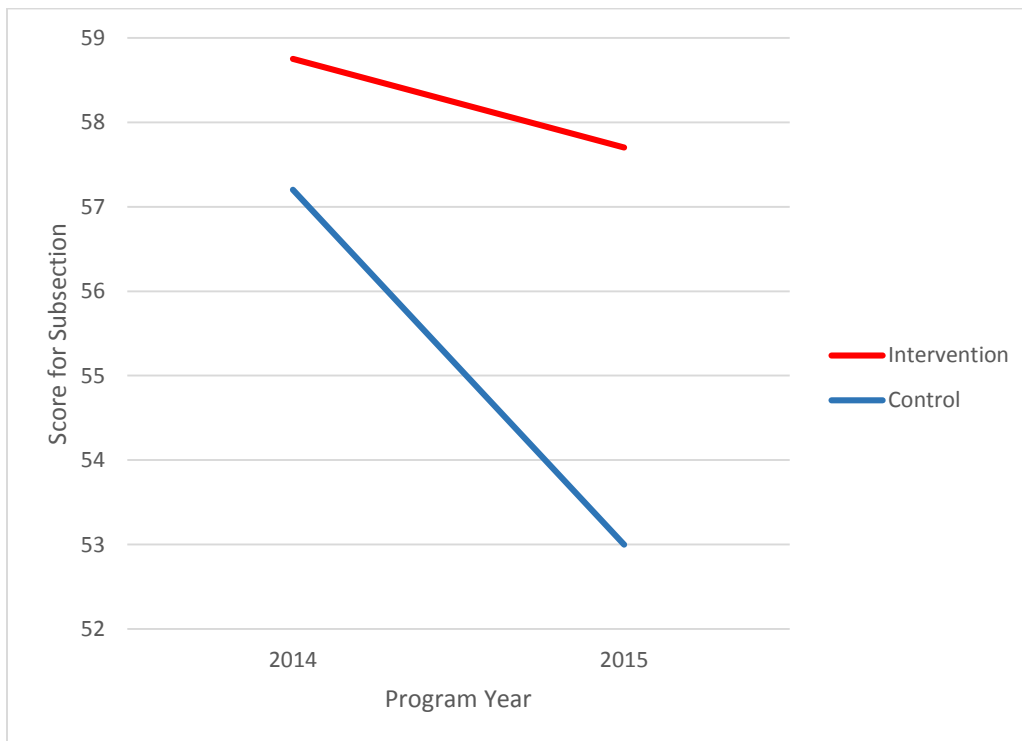
<sup>33</sup> Possible scores ranged from 6 to 18.

This offers evidence in support of the idea that WASH sustainability can be affected by changes in gender equity on the household and community levels.

Table 5: Differences in Mean GiFT Score from 2014 to 2015

<b>GiFT section</b>	<b>Intervention 2015 Mean - 2014 Mean</b>	<b>Control 2015 Mean - 2014 Mean</b>	<b>Difference of Differences (Intervention Column – Control Column)</b>	<b>p-value</b>
Total GiFT score	-1.05	-4.2	3.15	0.24
<i>WASH sustainability</i>	-1.08	-2.65	1.57	0.26
Water point functionality	-0.23	-1.8	1.57	0.24
Sanitation sustainability	-0.73	-0.35	-0.38	0.51
<i>Governance</i>	0.7	-0.2	0.9	0.46
Management	-0.48	-0.8	0.32	0.71
Accountability	&			
Responsiveness	1.64	0.6	1.04	0.33
<i>Financing</i>	-0.72	-1.2	0.48	0.44

Figure 3: Difference in Difference: Total GiFT Score<sup>34</sup>



<sup>34</sup> Possible scores ranged from 26 to 71.

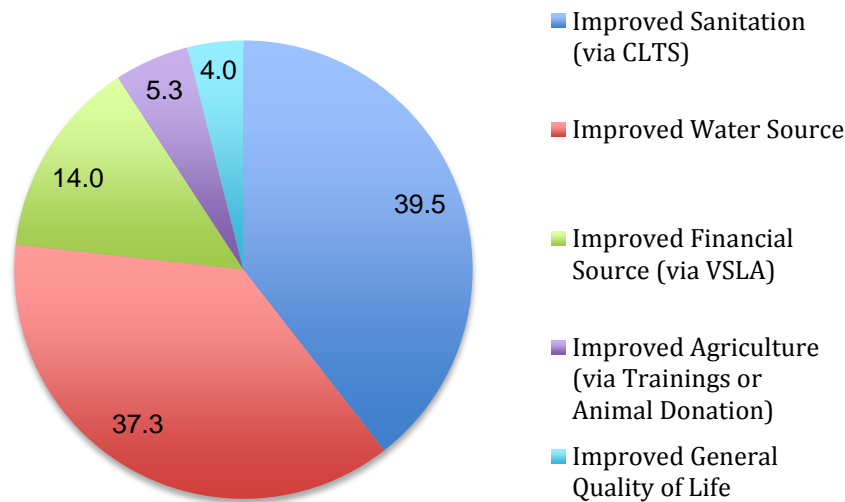
Simple linear regression was conducted to analyze the relationship between the total GiFT score and the proportion of women on the WATSAN boards, and to see if there was a relationship between each community's total GiFT score and total GAS score. In both cases, there were no significant findings (p-values were 0.92 and 0.47 respectively).

### Most Significant Change

Participants' open-ended responses were fit into general themes (Figure 4). A majority of people felt that the Community-Led Total Sanitation (CLTS) intervention and an improved water source (either a borehole or solar pipe) were the most significant changes they experienced out of CARE's involvement in their community. Respondents very clearly cited these examples by saying things like, "The CLTS concept by far is [the most] significant. The provision of household latrines improves upon environmental hygiene and sanitation," or "The provision of a borehole for potable water is very significant." When asked why sanitation was the most significant improvement, respondents often pointed to reduced human and animal illness. Some even mentioned being able to eat out of their gardens since eliminating open defecation. Many were able to point directly to a reduction in specific diseases such as cholera and typhoid fever.

However, those who identified other categories as their most significant change cannot be discounted. For example, those who selected the Village Savings and Loans Associations (VSLAs) as their most significant change indicated that they now had the ability to pay for various expenses. One participant told us, "I use my savings to pay for buying a mattress, paid my children's school fees, and renewed our health insurance." Participating in a VSLA improved the health and quality of life of this participant and his/her family. Also, many respondents chose multiple categories as important changes before being asked to choose *one* most significant change. Note here that none of the Most Significant Change categories explicitly mention gender, empowerment, or equity.

Figure 4: Area of Most Significant Change



### Focus Group Discussions

Though a full qualitative analysis was not conducted on the irregular focus group discussion data, “empowerment” was a key talking point in every discussion, and certain cross-cutting themes emerged. Many participants had a difficult time understanding the empowerment questions, since there is no easy translation for “empowerment” from English to Dagaare. The enumerators used a word that translates more directly into “strength” and then had to elaborate that it was the strength to “do things.” Still, the word did not resonate with participants, and they came up with their own understandings. Three separate conceptualizations of empowerment were defined by participants through the discussions: empowerment through men, empowerment through money, and empowerment through respect. Further elaboration upon these definitions and their basis in local culture have the potential to explain the successes and failures of the WA-WASH approach, and provide avenues to disrupt systems of oppression.

Some defined power in a patriarchal way, like “It is the man who gives the woman the power.” Two men discuss the reason behind men’s power over women, which is often related to the marriage

contract (a cross-cutting theme described more below), and occasions when women can take leadership roles:

P3: The man is the elder to the woman so he is in charge. He brought the woman, so he will be able tell this and this and that and if the woman has an opinion she will voice it out.

P2: The man is the elder

P3: The man is the elder

P2: But if the man is a drunk, the woman could always advise him on how they will use the money to take care of us properly.

In separate groups and communities, women shared similar sentiments, in statements like “We ask for permission because the man used his money to dowry you. Even if you are both doing the same work you must give the man some respect.”

Others spoke to empowerment as something that could be achieved through accumulation of wealth. Many cited the VSLA as a method to reaching empowerment, or farming as a means to earn money to then become empowered. Having money allows women to “pay their children’s school fees,” or to resist from violence: “Because they have more money than men, if the man is stubborn, she will send police after them. Now if you beat such women they will call the police to arrest and lock you up.” However, attaining empowerment through wealth did not occur in a vacuum, and though many credited the VSLA’s, others noted the role of husbands in the process. For example, “some women get empowered through their rich husbands.” One man cited a fear of this kind of empowerment because “when [women] flourish in their business and become richer than the husbands they begin to disrespect them.” Since his example involved a husband giving millet to his wife to start a pito brewing business, it’s important to note the ways in which men can promote or impede women’s capital due to their impression of how empowerment effects women’s relationships with their husbands.

Additionally, some participants discussed empowerment in terms of respect to and from their peers:



“Being empowered means that you should be understanding, have equality and be united with your colleagues. If you do not talk with your colleagues and sit with the truth in your room then it is not power.”

This female participant is indicating that empowerment stems from unity, which means talking to your fellow men and women and being able to say “the truth.” As another woman succinctly put it, “Empowered women are respectful and helpful.” Interestingly, men in the communities shared the opposite sentiment: that women were already in the place they should be, and that empowerment led to some form of disrespect or conflict. While many men mentioned that an empowered woman would disrespect her husband, one man simply said, “Nobody respects her.”

There are a few mediating contextual factors that both influenced, and were influenced by, the process of empowerment mentioned above. One is mores in marriage—the common customs and gendered roles that marriage placed on men and women in the Upper West communities. From the entrance into marriage all the way through to parenting, there were tacit agreements such as the implication of men providing dowry for their wives mentioned above. Women and men from the same community were regarded as brothers and sisters, so intra-community marriage was seen as incest. When a woman and man were married, the woman left her community to go start a life at her husband’s. When probed about why women shouldn’t become chiefs, men cited that exact issue—“We are not going to follow her there [to her new community] and she is not going to rule us from there. For that reason, the woman cannot become a chief.” To complicate marriage’s impact on women’s roles further, many Muslims in each community engaged in polygamy, and there were different power dynamics for first and subsequent wives. Responses indicated that the first wife held greater power, both in regards to their relationship with their husband and in their relationship with the other wives. For example, one woman said,

“If my husband wants to marry another wife, he will sit with me and tell me his intention of marrying another woman and ask if I agree with him or not, with that I can say he has asked for permission. If I don’t agree with him, he can’t marry another wife.”

Another man shared the following, which illuminates the household hierarchy: “It’s the man that has the greater say. But if the man has two wives, the first wife may have a greater say and can speak at length without the man stopping her for the weak one to also talk.”

Ways in which men and women communicate is another critical piece to understanding the process of attaining empowerment works. One man said:

“Before now... anytime we sat to talk or discuss any issue, we would always end up beating [our wives] because we didn’t know how to tolerate each other. But now if we are talking and I get angry or she gets angry I simply leave the house and come back later when I have calmed myself down.”

It’s unclear based on these discussions whether empowering women, as a function of the CARE intervention, is what led to changes in communication, or if learning to communicate better is what propelled a reduction in gender-based violence. That said, consensus and the importance of communication was brought up often in the endline FGDs. As another participant put it, “Once there is understanding there is no fight. There is no more men and women fight.” Others indicated that advanced technology, like mobile phones, bettered communication in their households when a spouse is traveling. It is important to note that these changes in communication were discussed on the household level and did not indicate changes in gendered communication at the community level.

Another major factor at play in the sociocultural sphere was local cultural beliefs and superstitions. Though they were sparse, there were mentions of witchcraft and the devil at work within the surveyed communities. At one point, a woman shared the following story:

P3: I, myself, went on a journey without consulting my man. I went on the journey for one full year and came back. He made his brothers test me. Maybe [he thought] if I went on the journey for the full year and am not fully myself I will tell his brothers.

I: Is it cutting part of you away and coming?

All: laugh

P3: You know and you are asking, don't you know our Dagaare law? When you stir T.Z.<sup>35</sup> they may come and remove the top layer of it. If you leave the T.Z. beneath, he will not accept that and then bring his brothers together, and they will ask questions like you have asked us. I will say I have heard the message he has given to you to ask me. He is the one who took me as a young lady when I had not yet developed breasts till I gave birth, but there was something that worried me and made me to go to my brother for the one year and come back and you want to test me?

Without familiarity with Dagaare law, this did not make sense. An enumerator explained the significance of the story over email:

The story is that she traveled for a year without the permission of the husband. On her return the husband was suspicious that she probably had an affair with a different man while she was away. The Dagaare law is that when a customarily married woman has an affair with a different man other than her husband, she is not supposed to cook for the husband. If the husband eats her food he can die. That is why her husband made the brothers put her to a test. If she is unwilling to cook then it presupposes that she has defiled herself in the course of the one year journey. By cutting part of her away, it means she has traded off part of her privacy in terms of sex to another man and by the husband's judgment in terms of value, she is no more intact.

These local beliefs play an important role in men and women's lives, and are involved in day to day processes like intra-household interactions and gendered division of labor, as well as singular events like travel and extramarital affairs. Indeed, this participant's reference to her young age at the start of her relationship signifies the reciprocity between cultural beliefs and gender roles.

Finally, the women in each community expressed some form of subversive power in their marriage that were not captured in responses to the specific questions about "empowerment." Though the women may not view these acts as acts of empowerment, there were times when they took over family finances,

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<sup>35</sup> T.Z. is a common dinner dish

either when their husbands drank or when they got money themselves from the VSLA. There were other times when women used sex as a means to get their way in the household. There were quite a few stories like this one: “You wait in the night when you sleep on the bed and touch each other [to] tell [your husband] that you would like to travel.” This is reminiscent of Obioma Nnaemeka’s claim that “The majority of African women are not hung up on ‘articulating their feminism’; they just do it.”<sup>36</sup> These methods were effective in getting desired results, and were utilized by a variety of women who may or may not be “empowered” by standard definitions of the word.

## Discussion

GAS scores revealed a significantly higher increase in equitable household decision-making in intervention communities compared to control communities over time. GiFT scores did not yield any significant results, though community scores had a negative trend over time. Household decision-making and community gender action plan scores were positively correlated to WASH sustainability outcomes.

The other GAS subsections did not reveal a statistically significant difference. There could be many reasons why this happened. Though 200-300 surveys were completed each year, a larger sample size within each community is required to be able to detect smaller statistical change in each cluster. The small sample size for the GiFT community survey also impacted the ability to determine statistical significance. It is possible that the other gender activities, which were conducted in intervention and control communities, increased scores in both groups. The total GAS score from all communities taken together (both intervention and control) are significantly higher than that of midline. The endline had a mean total GAS score of 58 while the midterm had a mean score of 54 ( $p < 0.01$ ). That said, it is still unclear what a four-point increase translates into for community members and their lives.

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<sup>36</sup> Collins, Patricia Hill. *Black feminist thought: Knowledge, consciousness, and the politics of empowerment*. Routledge, 2002.

Though villages were at times spread out, it is also possible that change in an “intervention” community affected change in a “control” one, even if CARE was not a direct actor there. At least one chief went out of his way to spread CLTS to nearby communities with which CARE had never worked.

It is also possible that the survey questions needed greater validity in the context of the Upper West. Given that focus group discussions revealed nuanced definitions of gender empowerment as well as the societal factors that mediate empowerment, it is possible that the survey questions didn’t reflect the impact the intervention was having on the participants; hence the importance of the mixed-methods design. Behavior change is very difficult to assess and quantify and often requires the depth of a focus group discussion to understand why something worked or did not. For example, both endline and midline GiFT analysis did not find any correlation between women holding leadership positions in the WATSAN and WASH sustainability. Participants in the FGD’s discussed better communication in the home but did not indicate that women had more power or permission to speak in public.

There were significant challenges to bias-free data collection that impacted data quality and study validity. One was in ensuring that the enumerators practiced standard survey protocol. There was not enough time during training to have enumerators memorize the survey questions in Dagaare, so they were translating each question every time they gave the survey, allowing for slight variations. There was difficulty in translating specific words in particular, like “empowerment,” which was a key concept to the goals of the program. Additionally, while “confidentiality” and “privacy” of the participants was stressed to the enumerators, there was little regard for keeping interview spaces private. Since homes were small huts, all interviews were held outside in the community common space where other members would walk and do their work. It was very difficult to separate create an interview space that had boundaries and was distinct from communal space.

Another challenge was encouraging women to speak in front of men, or younger women to speak in front of older or more senior women. The GiFT necessitated a mixed-gender group of respondents, but there was no way to ensure that the women actually contributed responses to the survey. Similarly, in the

focus group discussions, often the younger women would sit through a majority of the discussion without speaking, despite probing from the facilitator. Devault complicates the idea of silence in her work:

“The concept of ‘mutedness’ does not imply that women are silent: in every culture, women speak, in a variety of forms and settings, and in almost all cultures, women are important transmitters of language, through their care and teaching of children. But just as muted sounds are audible but softened, women speak in ways that are limited and shaped by men's greater social power and control, exercised both individually and institutionally (and exercised to control less privileged men as well as women).<sup>37</sup>

Gaining an understanding of the many ways in which women in these communities speak and transmit language would add depth and structure to future empowerment interventions that aim to encourage voice.

The use of the Most Significant Change tool showed that maybe community priorities were not set on changing gender dynamics, and that the participants’ main concerns were having clean water and sanitation. Though members were encouraged to prioritize gender and WASH together in the community gender action plans, it is notable that gender was left out when these members were asked about what they felt changed most in their lives.

## Recommendations

### Changes to the Study Design

An effective cluster plausibility design would create an unbiased counterfactual. Ideally, the treatment and control groups would be the same in the absence of the program, they would both react to the program in the same way if given the program, and then during the study, they would be exposed differently to the program. Plausibility designs should account for observed variation in the population through baseline survey data. For the Ghana WA-WASH program, baseline data was only attained for the

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<sup>37</sup> DeVault, Marjorie L. "Talking and listening from women's standpoint: Feminist strategies for interviewing and analysis." *Social problems* 37, no. 1 (1990): 96-116.

intervention communities. Then the survey was altered, making the results incomparable to 2014 and 2015 data. Longitudinal trends would have been very useful for the GiFT, since 2015 data was trending downward. Without additional time points, it's unknown whether that trend was preexisting, or was seen after the intervention was conducted.

There were also confounding factors, like the Global Water Initiative's past WASH interventions in some of the communities, and the unequal distribution of WA-WASH projects depending on each community's needs (for example, some got a WASH in school project while others did not). Appendix A shows the variation in program implementation per community, but CARE dictated that my research only study gender activities and WASH through the tools provided, so the impact of the other interventions is unknown. Standardization of intervention would have helped increase internal and external validity in the study findings.

One benefit of this study is providing data to create an intracluster correlation coefficient as well as an estimate for nonresponse, so that future studies can be powered more accurately. Interviewing 20 participants per community was decided by resource constraints rather than statistical calculation, and could only detect large changes.

### Changes to the Tools

The GAS and the GiFT surveys were 45 to 60 minutes long, which exhausted both the participants as well as the enumerators. Since the surveys already were scored beforehand, the other unused questions should have been dropped from the surveys; they were not critical to the analysis anyway.

To properly score each section of the GAS and GiFT surveys, all questions needed to have a response that corresponded to a pre-determined scale. When participants did not answer a question or provided responses that did not have a numerical value (like, "don't know" or "doesn't apply"), then the rest of their scores for that entire subsection were discounted. Singular imputation was used to give missing

responses the mean value of their gender and community, but that again distorts the reason why certain questions were skipped not completely at random.

Another biostatistical issue with *a priori* scoring is that there is no inherent reason why the numbers were assigned the way that they were. The current method of scoring assumed that there is a one point difference when households jump from a task involving “only men” to “mostly men” to “men and women equally,” without a quantitative basis. Perhaps, for example, a household transitioning to tasks done by “men and women equally,” is a tenfold increase from “only men.” This creates difficulty in interpreting the results of the evaluation as well—how much better off are the intervention communities that now score a higher number of points on the GAS scale?

If it’s critical to look at multiple dependent variables together in concert, then there are two main recommendations to improve the problems posed above. The first is to spend much longer pre-testing the data and analyzing the pre-tested data to find questions that are not being answered consistently, that do not get a variation of responses, and that have a high number of “don’t know”s or “not applicable”s. The second suggestion is to score the questions *after* running some descriptive analysis on all the collected observations, instead of scoring the questions beforehand. Looking at distribution of responses can guide a better and less arbitrary scoring system.

An improved version of the Gender Analysis Snapshot can be found in Appendix F. Many improvements were made to formatting, including font choice, appearance of response options, and general layout. A new household roster was created to ease the burden on enumerators, who previously could only list members above 18 on the survey. This new roster serves a dual purpose—instead of questions that were confined to answers like “only men,” or “only women,” erasing the specific relational details of that person, questions like W4 on the revised GAS can ask for the exact bearer of responsibility while maintaining anonymity. Questions that were either unused by the scoring, poorly written, or had biased response choices were removed and/or replaced. For example, almost all Likert scale responses were replaced, allowing for



either exact answers or binary yes/no responses. The reduced length of the survey would lessen the level of enumerator and participant fatigue

Changes are recommended for future focus group discussion guides as well. The focus group discussions were an appropriate 45-60 minute length, but there were too many questions for the participants to answer in that time frame. At times, facilitators would either accept a question-and-answer format (instead of allowing time for discussion), or else run out of time before asking every question. The focus group discussion guide should be reduced in length, and the questions should be framed much more broadly at cultural mores, norms, and motivations behind behaviors.

### Changes to the Methods

To improve the quality of data collected, much more time needs to be built into the data collection process in regards to enumerator training, sampling, and nonresponse. If enumerators spent more time practicing the surveys and focus group discussions before they got into the field, data quality would have improved. It's possible that enumerators could have standardized the ways in which they translated the survey questions. Enumerators also had difficulty in switching from asking survey questions in a specific and ordered way to engaging in focus group discussion facilitation where qualitative methods promote asking questions out of order and probing deeper into responses. However, there was not enough time in their two day training to practice FGD facilitation as much as was needed to perfect it. Spending a few hours half-way through the fieldwork to re-train enumerators was helpful for them and reminded them of proper survey and FGD technique.

The current random respondent selection table (Appendix E) caused the enumerators a lot of confusion. They had to first list all the household members above 18, separate them by age, and then “randomly” select a member to interview. It was extremely difficult for the enumerators to understand and use, and it is possible that they accidentally chose the wrong member to interview because they used the tool incorrectly. A better system would have been to go to each community, create a census of all household

members over 18, and then use that complete list to select random community members beforehand. With this technique, it could be an individual-level survey instead of a household one, and members of larger households would have an equal chance of being selected.

Choosing respondents beforehand and visiting each community multiple times would also aid greatly in reducing nonresponse. Because of limited time and resources, the research team went to each village once, selected members to interview, and had to forgo households that were not available.

### Lessons Learned

In future studies, lessons learned from the WA-WASH evaluation can be applied to improve study design, tool validity, and data quality. The results, particularly qualitative, can also be used to refocus some of the ways in which gender empowerment is approached in developing countries.

Temple and Young write about the difficulty in the translation of foreign concepts, such as the one encountered in this study with empowerment: “In fact the process of meaning transfer has less to do with finding the cultural inscription of a term than in reconstructing its value.”<sup>38</sup> In that perspective, CARE staff were not just asking about empowerment but were co-creating its meaning as the discussion took place. It would have been helpful to design a survey on the evolution of empowerment after qualitative work had been conducted and analyzed to show what empowerment meant to local members, how they strived to achieve it, and what other cultural factors (like mores in marriage, belief systems, and areas of subversive power) affected its adoption.

One report, “Gender Analysis and Policy Implications for Gender Mainstreaming,”<sup>39</sup> was written at baseline, but it is unclear what, if any, role its findings played on the development of the research tools. For example, two main findings from the report were women and female children “are particularly

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<sup>38</sup> Temple, Bogusia, and Alys Young. "Qualitative research and translation dilemmas." *Qualitative research* 4, no. 2 (2004): 161-178.

<sup>39</sup> Derbile, Emmanuel Kanchebe. *Gender Analysis and Policy Implications for Gender Mainstreaming in the WA-WASH Programme*. Rep. Upper West Region, Ghana: CARE Ghana, 2013. Print.

vulnerable to the impact of climate change, given their higher levels of poverty and their responsibilities for household water, food and fuel,” and that “addressing concerns of women in climate change adaptation must first be dealt with by addressing the need for gender equity in accessing land and financial services.” While the WA-WASH program certainly integrated aspects of climate change resilience, land access, and financial service (via VSLAs), there were few to zero questions on the GAS about them and similarly, there was very little specific analysis requested for those topics.

Incorporating the recommendations above could lead to more effective implementation and evaluation of gender and WASH programming.

### Placing WA-WASH in Context

Bustelo’s meta-evaluation of gender mainstreaming emphasizes that “the new policy strategy of ‘gender mainstreaming’ poses particular challenges for the evaluation of public gender-equality policies.”<sup>40</sup> She found that the “existence of structured plans, increase of formal commitments concerning gender-equality plans and their evaluation, international support for gender-equality policies, the existence of consolidated gender-equality organisms, and the acknowledgement of program and policy evaluation in recent years,” all positively influence the evaluation of gender mainstreaming policies. Indeed, the multilateral WA-WASH program in Ghana meets many of these criteria by its donors and it did receive the benefit of an evaluation.

The WA-WASH project attempted to be participatory by asking community members how to prioritize their gendered needs in the Community Gender Action Plans. However, CARE did not take a community based participatory action research approach in the rest of the design or implementation of the program. Without more detailed information, it is difficult to know how CARE handled disagreements by community members in prioritization. Even if staff encouraged more vulnerable women, like younger

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<sup>40</sup> Bustelo, Maria. "Evaluation of gender mainstreaming ideas from a meta-evaluation study." *Evaluation* 9, no. 4 (2003): 383-403.

community members or new wives, to create priorities, did they work to protect against possible backlashes documented in other studies?<sup>41</sup> Conversely, how did staff handle demands by women in the community that may not have fit into their pre-determined definition and goals of empowerment? Indeed, despite the theory of change was behind the WASH and empowerment approach, it was difficult to tell how the intervention was supposed to disrupt the matrix of patriarchy that cultivated the problems being identified. Cornwall criticizes “the practice equivalence between ‘gender’ and ‘women’s issues,’ and the narrow focus of ‘gender relations’ on particular kinds of male-female relations,” because it obscures “the analytic importance of gender as a constitutive element of all social relationships and as signifying a relationship of power.”<sup>42</sup> Similarly, Eyben and Napier-Moore claim that today, “privileging of instrumentalist meanings of empowerment associated with efficiency and growth are crowding out more socially transformative meanings associated with rights and collective actions,” and instead “argue for a politics of solidarity between officials and feminist activists.”<sup>43</sup>

CARE also made attempts to overcome barriers to women’s participation through economic means (the Village Savings and Loan Associations), and mandating specific gendered requirements in their evaluation (surveying both men and women, including male and female members in the GiFT, and having gender segregated focus group discussions). Researchers have criticized other studies that include women nominally but do not actually accommodate a space for them to raise their voices.<sup>44</sup> Kandiyoti delves deeper into women’s voices and participation, and highlights the challenges of working with women with “vested interested in the system that oppressed them,” and the importance of “systematic analyses of women’s strategies and coping mechanisms.”<sup>45</sup> Qualitative methods are critical, therefore, to the evaluation of gender

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<sup>41</sup> Mukasa, G. "Gender and participation: the case of Redd Barna, Uganda." *Unpublished MA thesis, Institute of Development Studies, Brighton*. In A. Cornwall (1998). "Gender, Participation and the Politics of Difference". In I. Guijt, and M. Kaul Shah (Eds.). *The Myth of Community: Gender Issues in Participatory Development*. London: Intermediate Technology Publications(2000): 46-57.

<sup>42</sup> Cornwall, Andrea. "Whose voices? Whose choices? Reflections on gender and participatory development." *World development* 31, no. 8 (2003): 1325-1342.

<sup>43</sup> Eyben, Rosalind, and Rebecca Napier-Moore. "Choosing words with care? Shifting meanings of women's empowerment in international development." *Third World Quarterly* 30, no. 2 (2009): 285-300.

<sup>44</sup> Mohanty, Ranjita. "Institutional dynamics and participatory spaces: the making and unmaking of participation in local forest management in India." *ids Bulletin* 35, no. 2 (2004): 26-32.

<sup>45</sup> Kandiyoti, Deniz. "Bargaining with patriarchy." *Gender & society* 2, no. 3 (1988): 274-290.

empowerment interventions. Quantitative data alone could not capture the driving forces behind women's decisions, strategies, and actions.

Finally, it is difficult to determine the standalone impact of gender empowerment—do effective gender-mainstreaming programs need complementary features such as economic empowerment, agricultural development, or growth in social capital? Research has shown those are three of the possibly many factors that intersect with gender empowerment in developing contexts.<sup>46,47,48</sup> Due to the complex nature of the WA-WASH program, which included economic and agricultural interventions, it is not possible to calculate the impact of the Community Gender Action Plans alone.

## Conclusion

Gender is a difficult thing to research because it does not stay constant over space and time. The relationships between men and women are complex and fluid and involve tacit negotiations. As Kandiyoti has observed, “Patriarchal bargains are not timeless or immutable entities, but are susceptible to historical transformations that open up new areas of struggle and renegotiation of the relations between genders.”<sup>49</sup> Empirical data on gender will always lag behind the ever-changing nature of the relationships that construct and reconstruct gendered roles.

The Gender Analysis Snapshot revealed a significant improvement in household decision-making for intervention communities, but Governance into Functionality Tool did not yield any significant results. cursory focus group discussion analysis provided depth and nuance to the indicators used to judge empowerment, and was useful in contextualizing the significant and insignificant results. The collected data could not, however, be used alone to recommend the inclusion of gender mainstreaming in future WASH

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<sup>46</sup> Wrigley-Asante, Charlotte. "Out of the dark but not out of the cage: women's empowerment and gender relations in the Dangme West district of Ghana." *Gender, Place & Culture* 19, no. 3 (2012): 344-363.

<sup>47</sup> "Passport to mainstreaming gender in water programmes. Key questions for interventions in the agricultural sector." *Food and Agriculture Organization of the United Nations*. June 2013. Web. 17 April 2016. <[http://www.zaragoza.es/ciudad/medioambiente/onu/en/detallePer\\_Onu?id=682](http://www.zaragoza.es/ciudad/medioambiente/onu/en/detallePer_Onu?id=682)>.

<sup>48</sup> Sorenson, Susan B., Christiaan Morssink, and Paola Abril Campos. "Safe access to safe water in low income countries: water fetching in current times." *Social science & medicine* 72, no. 9 (2011): 1522-1526.

<sup>49</sup> Kandiyoti, Deniz. "Bargaining with patriarchy." *Gender & society* 2, no. 3 (1988): 274-290.

programming. More thorough and methodologically rigorous data is needed to understand the relationship between gender and WASH and the causal chain between the two. Since WASH sustainability was positively correlated to household decision-making, these two factors may be critical pieces to the puzzle.

That said, the Most Significant Change tool was revelatory in that no participants listed gender anywhere in their observed changes, and rather focused on WASH components such as improvements in water and sanitation. The question remains as to whether the gender intervention failed to make a mark, or whether improvements in WASH truly take priority for both men and women in these communities. The lessons learned on how to improve the approach, study design, tools, and methods can be used to carve a new path forward in effective gender mainstreaming in WASH programs in developing countries. They can also serve as a reminder to use participatory interventions in more than a nominal way—asking the community what they want, engaging members in the process of meaning-making, and assessing gender outcomes in the context of local beliefs and systems can create a stronger program and evaluation.

## Appendix

### Appendix A: Specific WA-WASH Activities Completed in Each Community

<b>Methow-Yipaal</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders, community gender action plan and drama club, training session on CGAPs, GAM.
<b>Water</b>	Got borehole from GWI in 2011. Monthly levying option for WASH O&M.	Provided 2nd borehole with handpump. CARE promotes workable payment models, so they organized and trained water committees.
<b>Sanitation</b>	Benefitted from latrine subsidy program from GWI.	Only completed hygiene promotion by distributing Information Education and Communication materials (IEC) to communities. The IEC covers hygiene issues and food issues, etc. Facilitators used them to engage community members. Hygiene promotion also included handwashing demonstrations, inspecting latrines and giving on-the-spot advice on improvement, training latrine artisans in the community, and providing handwashing gallons.
<b>VSLA's</b>		Established and trained 7 to 8 subgroups. VSLA's also used as platform for handwashing.
<b>Farming</b>	Dry season vegetable gardening with water from the Black Volta river using motor pumps.	Community livestock and animal husbandry training, brought in community based extension agents (CBEA's), created a demonstration farm, taught dry season garden (supported with motor pumps to draw water from Black Volta).
<b>Trainings</b>		Female leadership training, VSLA training, access to climate information training.
<b>WinS</b>		
<b>Climate Change</b>		Climate vulnerability and capacity analysis (CVCA). Developed Community Based Action Plan (CBAP). Once the plan is completed, CARE helps facilitate involving the district assembly, who then do the implementation.
<b>Mantari</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders, community gender action plan and drama club, training session on CGAPs, GAM.
<b>Water</b>	Got Multiple Water Use Systems (MUS) through the Global Water Initiative (GWI) project in 2009. Monthly levying option for WASH O&M.	Continued MUS- rehabilitated the existing water system and trained men's gardening groups. Mantari's solar mechanized water system can be used for multiple activities outside of the household. CARE organized and trained water committees, trained women on agricultural practices, and gardening.
<b>Sanitation</b>	Benefitted from (CLTS) intervention.	Only completed hygiene promotion by distributing Information Education and Communication materials (IEC) to communities. The IEC covers

		hygiene issues and food issues, etc. Facilitators used them to engage community members. Hygiene promotion also included handwashing demonstrations, inspecting latrines and giving on-the-spot advice on improvement, training latrine artisans in the community, and providing handwashing gallons.
<b>VSLA's</b>	2 VSLA groups	Established an additional VSLA group and then tried to strengthen existing ones. To strengthen the existing groups, CARE provided training that consisted of 6 modules. All members had to participate. To monitor and support the VSLAs, field officers visited them regularly.
<b>Farming</b>	Dry season farming using MUS.	Trained men and women's gardening groups on agricultural practices (crop selection, how to raise beds, planting and nurseries, transplanting, pest management, composting, watering) and water use efficiency. A small plot in each community's garden is establish to carry out training activities throughout the season. No food security exercises competed.
<b>Trainings</b>		Female leadership training, VSLA training, access to climate information training.
<b>WinS</b>		
<b>Climate Change</b>		Climate vulnerability and capacity analysis (CVCA). Developed Community Based Action Plan (CBAP). Once the plan is completed, CARE helps facilitate involving the district assembly, who then do the implementation.
<b>Meguo</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders, community gender action plan and drama club, training session on CGAPs, GAM.
<b>Water</b>	Got Multiple Water Use Systems (MUS) through the Global Water Initiative (GWI) project in 2009. Monthly levying option for WASH O&M.	Continued MUS- rehabilitated the existing water system and trained men's gardening groups. Mantari's solar mechanized water system can be used for multiple activites outside of the household. CARE organized and trained water committees, trained women on agricultural practices, and gardening.
<b>Sanitation</b>	Benefitted from (CLTS) intervention.	Only completed hygiene promotion by distributing Information Education and Communication materials (IEC) to communities. The IEC covers hygiene issues and food issues, etc. Facilitators used them to engage community members. Hygiene promotion also included handwashing demonstrations, inspecting latrines and giving on-the-spot advice on improvement, training latrine artisans in the community, and providing handwashing gallons.



<b>VSLA's</b>	1 VSLA group	Established and trained additional VSLA groups.
<b>Farming</b>	Dry season farming using MUS.	Trained men and women's gardening groups on agricultural practices (crop selection, how to raise beds, planting and nurseries, transplanting, pest management, composting, watering) and water use efficiency. A small plot in each community's garden is establish to carry out training activities throughout the season. No food security exercises competed.
<b>Trainings</b>		Female leadership training, VSLA training, access to climate information training.
<b>WinS</b>		
<b>Climate Change</b>		Climate vulnerability and capacity analysis (CVCA). Developed Community Based Action Plan (CBAP). Once the plan is completed, CARE helps facilitate involving the district assembly, who then do the implementation.
<b>Venne</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders, community gender action plan and drama club, training session on CGAPS, GAM.
<b>Water</b>	Got Multiple Water Use Systems (MUS) through the Global Water Initiative (GWI) project in 2009. Monthly levying option for WASH O&M.	Continued MUS- rehabilitated the existing water system and trained men's gardening groups. Mantari's solar mechanized water system can be used for multiple activites outside of the household. CARE organized and trained water committees, trained women on agricultural practices, and gardening.
<b>Sanitation</b>	Benefitted from (CLTS) intervention before baseline.	Re-did CLTS because before it was not effective. And also handwashing campaign (same as mantari).
<b>VSLA's</b>	Members of a women's self-help group contributed money.	Established and trained a VSLA.
<b>Farming</b>		Trained men and women's gardening groups on agricultural practices (crop selection, how to raise beds, planting and nurseries, transplanting, pest management, composting, watering) and water use efficiency. A small plot in each community's garden is establish to carry out training activities throughout the season. No food security exercises competed.
<b>Trainings</b>		Female leadership training, VSLA training, access to climate information training.
<b>WinS</b>		
<b>Climate Change</b>		Climate vulnerability and capacity analysis (CVCA). Developed Community Based Action Plan (CBAP). Once the plan is completed, CARE helps facilitate involving the district assembly, who then do the implementation.
<b>Dabagteng</b>	<b>At Baseline</b>	<b>Interventions Completed</b>

<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders, community gender action plan and drama club, training session on CGAPs, GAM.
<b>Water</b>	Got borehole from GWI in 2011. Monthly levying option for WASH O&M.	
<b>Sanitation</b>	Benefitted from latrine subsidy program from GWI.	Only completed hygiene promotion by distributing Information Education and Communication materials (IEC) to communities. The IEC covers hygiene issues and food issues, etc. Facilitators used them to engage community members. Hygiene promotion also included handwashing demonstrations, inspecting latrines and giving on-the-spot advice on improvement, training latrine artisans in the community, and providing handwashing gallons.
<b>VSLA's</b>	VSLA Group	Established and trained VSLA.
<b>Farming</b>		Community livestock and animal husbandry training, brought in community based extension agents (CBEA's), created a demonstration farm, taught dry season garden (supported with motor pumps to draw water from Black Volta).
<b>Trainings</b>		Female leadership training, VSLA training, access to climate information training.
<b>WinS</b>		Trained teachers, and then the teachers are responsible for promoting hygiene. Developed materials for education (IEC), built a new urinal, and distributed handwashing materials.
<b>Climate Change</b>		Climate vulnerability and capacity analysis (CVCA). Developed Community Based Action Plan (CBAP). Once the plan is completed, CARE helps facilitate involving the district assembly, who then do the implementation.
<b>Dagne</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders, community gender action plan and drama club, training session on CGAPs, GAM.
<b>Water</b>		Built borehole with handpump for household use. Provided a second handpump boreholes just for gardening (because garden is far away).
<b>Sanitation</b>	100% open defecation before baseline.	CLTS and handwashing, engaging leaders, natural leaders, and latrine artisans.
<b>VSLA's</b>		Established and trained VSLA. Then used the VSLA as a platform to do hygiene education.
<b>Farming</b>		Community livestock and animal husbandry training, brought in community based extension agents (CBEA's), created a demonstration farm,

		promoted use of second handpump borehole for gardening.
<b>Trainings</b>	Youth empowerment activities.	Female leadership training, VSLA training, access to climate information training.
<b>WinS</b>		
<b>Climate Change</b>		Climate vulnerability and capacity analysis (CVCA). Developed Community Based Action Plan (CBAP). Once the plan is completed, CARE helps facilitate involving the district assembly, who then do the implementation.
<b>Bawelyir</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders, community gender action plan and drama club, training session on CGAPs, GAM.
<b>Water</b>		Built borehole with handpump for household use. Provided a second handpump boreholes just for gardening (because garden is far away).
<b>Sanitation</b>	100% open defecation before baseline.	CLTS and handwashing, engaging leaders, natural leaders, and latrine artisans.
<b>VSLA's</b>	Members of a women's self-help group contributed money.	Established and trained a VSLA.
<b>Farming</b>		Community livestock and animal husbandry training, brought in community based extension agents (CBEA's), created a demonstration farm, promoted use of second handpump borehole for gardening.
<b>Trainings</b>		Female leadership training, VSLA training, access to climate information training.
<b>WinS</b>		
<b>Climate Change</b>		Climate vulnerability and capacity analysis (CVCA). Developed Community Based Action Plan (CBAP). Once the plan is completed, CARE helps facilitate involving the district assembly, who then do the implementation.
<b>Brifo Maal</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders, community gender action plan and drama club, training session on CGAPs, GAM.
<b>Water</b>		1 borehole, but they also received motor pumps for drawing water from the Black Volta.
<b>Sanitation</b>	100% open defecation before baseline.	CLTS and handwashing, engaging leaders, natural leaders, and latrine artisans.
<b>VSLA's</b>	Members of a men's and women's self-help group contributed money.	Established and trained a VSLA.
<b>Farming</b>		Community livestock and animal husbandry training, brought in community based extension agents (CBEA's), created a demonstration farm, taught dry season garden (supported with motor

		pumps to draw water from Black Volta), and promoted use of second handpump borehole for gardening.
<b>Trainings</b>		Female leadership training, VSLA training, access to climate information training.
<b>WinS</b>		
<b>Climate Change</b>		Climate vulnerability and capacity analysis (CVCA). Developed Community Based Action Plan (CBAP). Once the plan is completed, CARE helps facilitate involving the district assembly, who then do the implementation.
<b>Kamba</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders, community gender action plan and drama club, training session on CGAPs, GAM.
<b>Water</b>		Received 1 borehole
<b>Sanitation</b>	100% open defecation before baseline.	CLTS and handwashing, engaging leaders, natural leaders, and latrine artisans.
<b>VSLA's</b>	Members of 2 women's self-help groups contributed money.	Established and trained a VSLA.
<b>Farming</b>		Community livestock and animal husbandry training, brought in community based extension agents (CBEA's), created a demonstration farm, taught dry season garden using the provided waterpoint for domestic uses.
<b>Trainings</b>		Female leadership training, VSLA training, access to climate information training.
<b>WinS</b>		
<b>Climate Change</b>		Climate vulnerability and capacity analysis (CVCA). Developed Community Based Action Plan (CBAP). Once the plan is completed, CARE helps facilitate involving the district assembly, who then do the implementation.
<b>Kettuo</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male Gender Champions, Engagement with Traditional Leaders, Community Gender Action Plan and Drama Club, Training session on CGAPs, GAM.
<b>Water</b>		1 borehole, but they also received motor pumps for drawing water from the Black Volta.
<b>Sanitation</b>	100% open defecation before baseline.	CLTS and handwashing, engaging leaders, natural leaders, and latrine artisans.
<b>VSLA's</b>		Established and trained a VSLA.
<b>Farming</b>		Community livestock and animal husbandry training, brought in community based extension agents (CBEA's), created a demonstration farm, taught dry season garden (supported with motor pumps to draw water from Black Volta), and

		promoted use of second handpump borehole for gardening.
<b>Trainings</b>		Female leadership training, VSLA training, access to climate information training.
<b>WinS</b>		
<b>Climate Change</b>		Climate vulnerability and capacity analysis (CVCA). Developed Community Based Action Plan (CBAP). Once the plan is completed, CARE helps facilitate involving the district assembly, who then do the implementation.
<b>Bagri</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders.
<b>Water</b>	Had an existing borehole.	
<b>Sanitation</b>		CLTS and handwashing, engaging leaders, natural leaders, and latrine artisans.
<b>VSLA's</b>		Established and trained a VSLA.
<b>Farming</b>		
<b>Trainings</b>		Female leadership training and VSLA training.
<b>WinS</b>		Trained teachers, and then the teachers are responsible for promoting hygiene. Developed materials for education (IEC), rehabilitated the bathrooms (built a urinal), and distributed handwashing materials.
<b>Climate Change</b>		
<b>Berwong</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders.
<b>Water</b>	Had an existing borehole.	
<b>Sanitation</b>		CLTS and handwashing, engaging leaders, natural leaders, and latrine artisans.
<b>VSLA's</b>		Established and trained a VSLA.
<b>Farming</b>		
<b>Trainings</b>		Female leadership training and VSLA training.
<b>WinS</b>		Trained teachers, and then the teachers are responsible for promoting hygiene. Developed materials for education (IEC), provided new latrines, and distributed handwashing materials.
<b>Climate Change</b>		
<b>Dumanje</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders.
<b>Water</b>	Had an existing borehole.	
<b>Sanitation</b>		CLTS and handwashing, engaging leaders, natural leaders, and latrine artisans.
<b>VSLA's</b>		Established and trained a VSLA.
<b>Farming</b>		
<b>Trainings</b>		Female leadership training and VSLA training.
<b>WinS</b>		

<b>Climate Change</b>		
<b>Tabier</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders.
<b>Water</b>	Had an existing borehole.	
<b>Sanitation</b>		CLTS and handwashing, engaging leaders, natural leaders, and latrine artisans.
<b>VSLA's</b>		Established and trained a VSLA.
<b>Farming</b>		
<b>Trainings</b>		Female leadership training and VSLA training.
<b>WinS</b>		Trained teachers, and then the teachers are responsible for promoting hygiene. Developed materials for education (IEC), rehabilitated existing latrine and built new urinal, and distributed handwashing materials.
<b>Climate Change</b>		
<b>Tome</b>	<b>At Baseline</b>	<b>Interventions Completed</b>
<b>Gender Activities</b>		Male gender champions, engagement with traditional leaders.
<b>Water</b>	Had an existing borehole.	
<b>Sanitation</b>		CLTS and handwashing, engaging leaders, natural leaders, and latrine artisans.
<b>VSLA's</b>		Established and trained a VSLA.
<b>Farming</b>		
<b>Trainings</b>		Female leadership training and VSLA training.
<b>WinS</b>		Trained teachers, and then the teachers are responsible for promoting hygiene. Developed materials for education (IEC), rehabilitated existing latrine and built new urinal, and distributed handwashing materials.
<b>Climate Change</b>		

## Appendix B: Community Gender Action Plan Details

STAGE	PROCESS	INPUTS/SUPPORTIVE APPROACHES
<p><b>Stage 1: AWARENESS</b></p>	<p>a) Informal discussion and meeting with communities traditional leaders to explain and share the action agenda and how to show the importance of what is being undertaken.</p> <p>Communities and District Assembly have received Community Gender Action Plans.</p> <p>Development of gender checklist questions per issues/thematic</p>	<ul style="list-style-type: none"> <li>▪ Community Action Plans</li> <li>▪ Gender Analysis Matrix</li> <li>▪ Awareness approaches</li> </ul>
	<p>b) Use Gender tools to take the awareness to another step (Mix group M+F)</p> <p>Implementation of key community Gender Action plans in 10 communities, using the process below:</p> <p>c) Two separate men only and women only groups select 1- 2 action items from the relevant community action plans (issues/thematic : bathroom/latrines, gardening, decision making, livestock: own, keep, sell? Etc) that have a strong gender inequity component and are related to WASH or multiple uses of water. After having filled out the Gender Analysis Matrix, they discuss what is equitable /inequitable about this? What is effective about this?</p> <p>At a separate meeting, the groups each create skits to act out 1) an equitable 2) an inequitable representation of the issue.(Better in next stage)</p>	<p>Tools to use</p> <ul style="list-style-type: none"> <li>▪ Gender analysis Matrix</li> <li>▪ Daily activity chart</li> <li>▪ Gender roles chart</li> </ul> <p>This will basically be activity based.</p>
<p><b>Stage 2: IMAGINATION</b></p>	<p>a) The two groups act out each of their two skits to a larger community group. A facilitated discussion ensues on the implications of the issue. The focus is on <i>what are the good things we have</i></p>	<p>Tools to use</p> <ul style="list-style-type: none"> <li>▪ Participatory theater( drama groups will be formed in all 10 communities to act out to large community members on key</li> </ul>

	<p><i>seen from this and how can we do more of them?</i></p> <p>The discussion moves to what can be done to address the issue in a more equitable format. Using the Gender Analysis Matrix as a guide, the facilitator probes to find out what are considered equitable solutions by men only, women only, both men and women, the older generation, the younger generation, etc. The skits are re-enacted with changes, multiple times, if there are various definitions of “equitable” solutions</p> <p>b) Gender champions training (men and boys). They will help lead the discussion on the masculinity</p>	<p>issues in their gender action plans)</p> <ul style="list-style-type: none"> <li>▪ Gender Analysis Matrix</li> <li>▪ Appreciative inquiry</li> </ul>
<b>STAGE 3: CONSENSUS</b>	<p>Agreement on actions is reached. If this is not possible, facilitator takes note of the reasons why and these issues are explored further in separate discussions with the men’s group and women’s group.</p> <p>A process to implement and monitor the changes is agreed.</p> <p>Creation of an “Ecole des Maris” Care Niger approach??</p>	<ul style="list-style-type: none"> <li>▪ Gender Analysis Matrix</li> <li>▪ Trend diagram</li> <li>▪ Masculinity reflection groups will be formed after the training of male gender champions( the training hopefully will take place in March or April)</li> <li>▪ Training of female executives (WATSAN/VSLAs)</li> <li>▪ Training of traditional leaders in promoting equity and fairness and women empowerment in their communities.</li> </ul>
<b>STAGE 4: SUPPORT</b>	<p>Periodic monitoring and support to the communities will be undertaken. Use Gender Analysis Matrix once a month for this with communities hopefully leading this review with time. Masculinity Reflection Groups can also be explored as an adjunct.</p>	<ul style="list-style-type: none"> <li>▪ Gender Analysis Matrix</li> <li>▪ Masculinity reflection groups would have been formed.</li> </ul>



## Appendix C: Subsection Scoring

### Community Gender Action Plan Subsection Scores (GAS)

Variable	Q #	Question	Scoring
<b>Water and Sanitation</b>			
fchair	W8	How many female chairpersons are there on the water committee?	0.....0 1+.....3
whosanhh	W12	Who is most responsible for improving sanitation at the household level?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Nobody.....* Don't know.....*
whosancm	W13	Who is most responsible for improving sanitation coverage at the community level?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Nobody.....* Don't know.....*
whohygc	W14	Who is most responsible for promoting hygiene in the community?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Nobody.....* Don't know.....*
<b>Household Decision-Making</b>			
hhedu	H1	In your household who makes decisions about the children's education?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1

			Nobody.....*
			Don't know.....*
hhdday	H2	In your household, who makes decisions about family day-to-day finances?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Don't know.....*
hhdivst	H3	In your household, who makes decisions about family investments?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Don't know.....*
hhdfp	H4	In your household, who makes decisions about family planning?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 N/A (ie. no partner).....* Don't know.....*
hhdins	H5	In your household, who makes decisions about getting health insurance?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Don't know.....*
hhdwhealth	H6	In your household, who makes decisions about a woman's healthcare?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 N/A (ie. no women).....*

			Don't know.....*
Women's Empowerment & Equality			
eqland	E7	Should men and women have access to land?	Yes.....1 No.....0 Don't know.....*
eqlanddo	E9	In your household, do both men and women have access to land?	Yes.....1 No.....0 Don't know.....*

Other Subsection Scores (GAS)

Variable	Q #	Question	Scoring (and possible range)
Water and Sanitation			Possible Range: 10 - 33
collectd	W1	Who collects water for domestic purposes?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Don't know.....*
used	W2	Who uses water for domestic purposes?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Don't know.....*
usemorep	W4	Who uses more water for productive purposes?	Men use a lot more than women.....1 Men use a little more than women.....2 Men and women use equal amounts.....3 Women use a little more than men.....2 Women use a lot more than men.....1 Don't know.....*
controlp	W5	Who controls the water used for productive purposes?	Only men's.....1 More men's than women's.....2 Men's and women's equally.....3 More women's than men's.....2 Only women's.....1 Nobody.....3 Don't know.....*
fchair	W8	How many female chairpersons are there on the water committee?	0.....0 1+.....3

mnypay	W9	Whose money is used to pay for water (in your household)?	Only men's.....1 More men's than women's.....2 Men's and women's equally.....3 More women's than men's.....2 Only women's.....1 Nobody pays for water.....* Don't know.....*
whopay	W10	Who physically pays for water services in your household?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Nobody pays for water.....* Don't know.....*
whodeflt	W11	Who defaults more often: men or women, or do they default equally frequently (in your household)?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Always pay, nobody defaults.....* Don't know.....*
whosanhh	W12	Who is most responsible for improving sanitation at the household level?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Nobody.....* Don't know.....*
whosancm	W13	Who is most responsible for improving sanitation coverage at the community level?	Only men.....1 Mostly men.....2 Men and women equally.....3

			Mostly women.....2 Only women.....1 Nobody.....* Don't know.....*
whohygc	W14	Who is most responsible for promoting hygiene in the community?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Nobody.....* Don't know.....*
Household Decision-Making			Possible Range: 6 – 18
hhedu	H1	In your household who makes decisions about the children's education?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 N/A (ie. no children).....* Don't know.....*
hhdday	H2	In your household, who makes decisions about family day-to-day finances?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Don't know.....*
hhdivst	H3	In your household, who makes decisions about family investments?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Don't know.....*
hhdfp	H4	In your household, who makes decisions about family planning?	Only men.....1

			Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 N/A (ie. no partner).....* Don't know.....*
hhdins	H5	In your household, who makes decisions about getting health insurance?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Don't know.....*
hhdwhealth	H6	In your household, who makes decisions about a woman's healthcare?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 N/A (ie. no women).....* Don't know.....*
Access to Public Spaces and Services			Possible Range: 6 - 20
pmove	A1	Who can move freely within the community without asking for permission?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Neither (both have to ask).....3 Don't know.....*
pbank	A2	Who can access financial services such as open a bank account without asking for permission?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Neither (both have to ask).....3

			Don't know.....*
pvsia	A3	Who can join VSLA group without asking for permission?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Neither (both have to ask).....3 Don't know.....*
phealth	A4	Who can access health services without asking for permission?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Neither (both have to ask).....3 Don't know.....*
plitrcy	A5	Who can choose to attend adult literacy class without asking for permission?	Only men.....1 Mostly men.....2 Men and women equally.....3 Mostly women.....2 Only women.....1 Neither (both have to ask).....3 Don't know.....*
pchange	A6	Now compared to before, is asking for permission more equal, less equal, or unchanged in your community?	A lot more unequal.....1 A bit more unequal.....2 No change.....3 A bit more equal.....4 A lot more equal.....5 Don't know.....*
<b>Women's Empowerment &amp; Equality</b>			<b>Possible Range: -1 – 13</b>
eqllead	E1	Should men and women have equal opportunity to occupy leadership positions in social groups?	Yes.....1 No.....0 Don't know.....*



eqleaddo	E3	In your community, do men and women have equal opportunity to occupy leadership positions in social groups?	Yes.....1 No.....0 Don't know.....*
eqpol	E4	Should men and women have equal opportunity to become district assembly-persons?	Yes.....1 No.....0 Don't know.....*
eqpolddo	E6	In your community, do men and women have equal opportunity to become district assembly-persons?	Yes.....1 No.....0 Don't know.....*
eqland	E7	Should men and women have access to land?	Yes.....1 No.....0 Don't know.....*
eqlanddo	E9	In your household, do both men and women have access to land?	Yes.....1 No.....0 Don't know.....*
eqearn	E10	Should men and women have the opportunity to earn the same amount of money?	Yes.....1 No.....0 Don't know.....*
eqearnndo	E12	In your household, do men and women have the opportunity to earn the same amount of money?	Yes.....1 No.....0 Don't know.....*
eqchange	E13	In your community, is equality between men and women increasing, decreasing or staying the same?	Increasing.....1 Decreasing.....-1 Staying the same.....0 Don't know.....*
fewmany	E15	How many women do you see in your community who you would say are in a position of equality to men?	Many.....4 Few.....2 None.....0

**Total GAS Possible Range: 21 - 84**

### All Subsection Scores (GiFT)

Variable	Q #	Question	Scoring (and possible range)
Water and Sanitation Sustainability (Water Point Functionality + Sanitation Sustainability)			Possible Range: 9 – 26
Water Point Functionality			Possible Range: 5 – 17
F1	2.1	Is the scheme working and providing water today?	No.....1 Yes.....2
F2	2.2	What has scheme functionality been like since establishment?	Very poor (nearly always broken).....1 Poor (only functioning 50% of the time).....2 Fair (functioning up to 80% of the time).....3 Very good (nearly always working).....4
F4	2.3	Has there been water resource protection around the scheme? ( <i>any measures to protect the water scheme and/or rivers nearby</i> )	No.....1 Yes.....2
F6	2.6	How would you rate the quality of water provided for human consumption?	Very poor.....1 Poor.....2 Fair.....3 Good.....4 Very good.....5
U1	6.1	For people living within the water scheme's coverage area, who uses the scheme?	Very few households (less than 10%).....1 Less than 50% of the households in the community.....2 More than three quarters of households.....3 All households.....4
Sanitation Sustainability			Possible Range: 4 – 9
S1score	3.1	What proportion of the community has access to sanitation?	<90%.....1 ≥ 90%.....2
S2	3.2	Has the community maintained or rebuilt latrines?	No.....1 Yes.....2
S3score	3.3	What proportion of latrines have accompanying hand-washing facilities with	<90%.....1 ≥ 90%.....2

		water AND soap/ash there?	
S4	3.4	If there are new community members, what have they done to access sanitation?	Don't use latrines.....1 Use existing latrines.....2 Built their own latrines.....3
Governance (Management + Accountability & Responsiveness)			Possible Range: 12 – 35
Management			Possible Range: 5 – 16
M1	5.1	What is the situation regarding the WATSAN?	Does not exist.....1 Exists but does not function.....2 Exists and functions.....3
M4	5.4	Does the WATSAN hold committee meetings?	Never holds meetings.....1 Sometimes holds meetings.....2 Holds regular meetings.....3
M5	5.5	Is there a caretaker or pump minder? ( <i>person who does maintenance and minor repairs, a "fitter"</i> )	Does not exist.....1 Exists but does not function.....2 Exists and functions.....3
M6	5.6	Is there a mechanic within the community who undertakes major repairs?	Does not exist.....1 Exists and has repaired but not successfully.....2 Exists and has repaired successfully.....3
M7	5.7	What is the role of women within WATSAN decision-making?	No role.....1 Limited role.....2 As important as men.....3 Main decision-makers.....4
Accountability & Responsiveness			Possible Range: 7 – 19
A1	7.1	Have elections been held open and transparent?	No elections have ever been held.....1 Elections are held but they are neither open nor transparent.....2 Yes, both open and transparent.....3
A2	7.2	After the first WATSAN elections have there been re-elections?	No.....1 Yes.....2

A3	7.3	Does the WATSAN have by-laws, i.e. clear rules and procedures that are known and updated as required?	No.....1 Some rules and procedures known but there is some uncertainty over them.....2 Yes, known and updated as required.....3
A4	7.4	Is there a mechanism of reporting back to users, for example, about the financial status of the scheme?	No.....1 Yes, but it is ineffective.....2 Yes, and it works well.....3
A5	7.5	Are written functionality records kept up-to-date?	No functionality records are kept.....1 Some functionality records are kept but they are incomplete.....2 Yes, full records are kept.....3
A6	7.6	Are there audits and/or financial checks carried out every year?	No.....1 Yes, but not every year.....2 Yes, every year.....3
A7	7.7	Have you had any major problems/breakdowns that were beyond the community's ability to resolve without external assistance?	Yes.....1 No.....2
<b>Scheme Financing</b>			<b>Score Range: 5 – 10</b>
Fi1	H1	Does the community raise funds to maintain water and sanitation facilities?	No.....1 Yes.....2
Fi3	H2	Do these funds adequately cover operation and maintenance?	No.....1 Yes.....2
Fi4	H3	Do these funds cover capital replacement costs?	No.....1 Yes.....2
Fi5	H4	Is there a VSLA linked to the water supply scheme? (to pay for water usage or for repairs?)	No.....1 Yes.....2
Fi6	H5	Has there been preventative maintenance carried out in the last year?	No.....1 Yes.....2
<b>Total GiFT Possible Range: 26 – 71</b>			



## Appendix D: Focus Group Discussion Guide

<p>1. What are common things done with the money earned in the household?</p> <ul style="list-style-type: none"><li>• Saved or spent?</li><li>• Is money spent differently by different members of the household?<ul style="list-style-type: none"><li>○ If so, how?</li></ul></li><li>• Is water (levy) payment a priority?<ul style="list-style-type: none"><li>○ If so, by whom?</li><li>○</li></ul></li></ul>
<p>2. Which household members can say how money is spent?</p>
<p>3. Are these the same people that have always decided how money is spent?</p> <ul style="list-style-type: none"><li>• <b>If new people have a say</b>, how has decision-making changed?</li><li>• What has caused the changes?</li><li>• Are these changes good or bad?</li> <li>• <b>If the same people as always have a say</b>, why?</li><li>• What is liked about the current system?</li><li>• What is disliked about the current system?</li></ul>
<p>4. Which members of the household control land and water for farming/gardening?</p> <ul style="list-style-type: none"><li>• Has it been this way, or has control shifted over time?</li> <li>• <b>If there has been change</b>, is the change good or bad?</li><li>• If there has been change, what caused it?</li> <li>• <b>If it has stayed the same</b>, why?</li><li>• What is liked about the current system?</li><li>• What is disliked about the current system?</li></ul>
<p>5. Think about the decisions that are made in the household. What are the most important decisions?</p> <ul style="list-style-type: none"><li>• How much say do men and women have in the decisions? Why?</li><li>• Is this fair?</li></ul>
<p>6. Have these decisions always been made by the same people in the household?</p> <ul style="list-style-type: none"><li>• <b>If new people are making decisions</b>, what has changed?</li><li>• What has caused these changes?</li><li>• Are these changes good or bad?</li> <li>• <b>If the same people as always are making decisions</b>, why?</li><li>• What is liked about the current system?</li><li>• What is disliked about the current system?</li></ul>

<p>7. Think about the decisions that are made in the community. What are the most important decisions?</p> <ul style="list-style-type: none"> <li>• How much say do men and women have in the decisions? Why?</li> <li>• Is this fair?</li> </ul>
<p>8. Have these decisions always been made by the same people in the community?</p> <ul style="list-style-type: none"> <li>• <b>If new people are making decisions</b>, what has changed?</li> <li>• What has caused these changes?</li> <li>• Are these changes good or bad?</li> <li>• <b>If the same people as always are making decisions</b>, why?</li> <li>• What is liked about the current system?</li> <li>• What is disliked about the current system?</li> </ul>
<p>9. Have there been changes in the way men and women communicate with each other in households?</p> <ul style="list-style-type: none"> <li>• What has caused the changes?</li> <li>• Are the changes good or bad?</li> </ul>
<p>10. Have there been changes in the way men and women communicate in public?</p> <ul style="list-style-type: none"> <li>• What has caused the changes?</li> <li>• Are the changes good or bad?</li> </ul>
<p>11. How is asking for permission different for men and women? Why?</p> <ul style="list-style-type: none"> <li>• For what do you ask? Why?</li> <li>• For what do you not need to ask? Why?</li> </ul>
<p>12. Has permission always been asked this way and at these times?</p> <ul style="list-style-type: none"> <li>• <b>If asking permission has changed</b>, how?</li> <li>• What has caused the changes?</li> <li>• Are the changes good or bad?</li> <li>• <b>If asking permission has stayed the same</b>, why?</li> <li>• What do you like about the current way permission is asked?</li> <li>• What do you dislike about the current way permission is asked?</li> </ul>
<p>13. What does an empowered woman look like?</p> <ul style="list-style-type: none"> <li>• Why?</li> <li>• How do women become empowered?</li> <li>• How do men perceive them?</li> <li>• How do women perceive them?</li> </ul>
<p>14. What does an empowered man look like?</p> <ul style="list-style-type: none"> <li>• Why?</li> <li>• How do men become empowered?</li> <li>• How do men perceive them?</li> </ul>

<ul style="list-style-type: none"><li>• How do women perceive them?</li></ul>
15. How do opportunities to take leadership positions in social groups differ for men and women?  <ul style="list-style-type: none"><li>• Has it always been like this or have there been changes recently?</li><li>• What has caused the changes?</li><li>• Are the changes good or bad?</li></ul>
16. Are there any additional thoughts or comments?



Appendix E: Random Respondent Selection Table

ELIGIBLE RESPONDENTS CHART (ADULTS 18 YEARS AND OLDER)					
(1)	(2)	(3)	(4)	(5)	(6)
#	Relationship to HH head	M/F	Age	Give a number to each MAN of column (2)	Give a number to each WOMAN of column (2)
1	Head				
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

Use random respondent selection table below for 1-10 eligible respondents.  
 Use random number list for 11-20 eligible respondents.

RANDOM RESPONDENT SELECTION TABLE										
LAST DIGIT SURVEY#	TOTAL NUMBER OF ELIGIBLE WOMEN OR MEN IN HOUSEHOLD									
	1	2	3	4	5	6	7	8	9	10
0	1	2	2	4	3	6	5	4	7	8
1	1	1	3	1	4	1	6	5	8	9
2	1	2	1	2	5	2	7	6	9	10
3	1	1	2	3	1	3	1	7	1	1
4	1	2	3	4	2	4	2	8	2	2
5	1	1	1	1	3	5	3	1	3	3
6	1	2	2	2	4	6	4	2	4	4
7	1	1	3	3	5	1	5	3	5	5
8	1	2	1	4	1	2	6	4	6	6
9	1	1	2	1	2	3	7	5	7	7

CIRCLE CHOSEN PERSON'S # IN ELIGIBLE RESPONDENTS CHART

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(DD/MM/YY)

Appendix F: Gender Analysis Snapshot—Updated Module

**INTERVIEWER SAY:**

Hello. My name is [Interviewer’s name]. Is the head of household’s wife here today? May I speak with her?

**ONCE WIFE IS PRESENT, MAKE SURE SPACE TO CONDUCT SURVEY IS PRIVATE.**

**THEN SAY:**

Hello. My name is [Interviewer’s name]. I am working with CARE International and a researcher from Emory University. We are doing research to learn about the situation with water points and how water is managed by the head of household’s wife. This information is gathered so that CARE can better understand the communities and improve its work. This survey is anonymous and confidential – we will not write down anybody’s names and only the research staff will have access to the information. This survey is voluntary and you may refuse to participate. This survey takes 15 minutes to complete. You can also stop at any time or not answer any questions that you do not want to answer. Do we have your consent to participate?\*

Question	Response	Skip
Agreement to Participate	Respondent agrees to be interviewed.....1 Respondent does not agree to be interviewed.....2	→ <b>END</b>

START TIME: \_\_\_\_ : \_\_\_\_ AM/PM (*circle AM or PM*)  
hour : minutes

**INTERVIEWER SAY:**

First I would like to find out who else lives here regularly. I will **not** write down anyone’s name. I only want to know how they are related to you and their age...

**R. HOUSEHOLD ROSTER**

Surveyor ID-Survey#: \_\_\_ - \_\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

(DD/MM/YY)

	(1)	(2)
#	Relationship to HH head	Age
	...Starting with yourself, please list other household members and how they are related to you.	...How old is this person? __ __
A	Head of Household (HH)	
B	Wife of HH	
C		
D		
E		
F		
G		
H		
I		
J		
K		
L		
M		
N		
O		

**INTERVIEWER SAY:** Thank you. Next I am going to ask you some questions about yourself. Please know that there are no right or wrong answers. We would like your honest personal opinion. Do you have any questions before we begin?

***INTERVIEWER REMEMBER:***

- *Do not read responses unless instructed.*
- *Never read “don’t know” and “refused” options.*
- *Always specify for “other”*

<b>D. DEMOGRAPHICS</b>			
	Question	Response	Skip
D1*	How many years of education did you complete?	____ ____ years Refused.....99	
D2	How many years have you been married?	____ ____ years DK.....8 8 Refused.....99	
D3+	Does your husband usually spend the night here?	Yes.....1 No.....2 Refused..... .....99	
<b>F. FAMILY FINANCES</b>			
	Question	Response	Skip
F1*	What is your husband's job?	Doesn't work.....0 Farmer.....1 Brew pito.....2 Make shea butter.....3 Garden.....4  Other_____5 Refused..... .....99	
F2*	What is your job?	Doesn't work.....0 Farmer.....1 Brew pito.....2 Make shea butter.....3 Garden.....4  Other_____5 Refused..... .....99	
F3*	About how much money does your entire household earn all together? Can answer in amount per day, month, or year.	GH¢ ____ ____ ____ per day.....1 per month.....2 per year.....3	

		DK.....8 8 Refused.....99	
F4*	About how much money do you earn on your own? Can answer in amount per day, month, or year.	GH¢ ____ ____ ____ per day.....1 per month.....2 per year.....3  DK.....8 8 Refused.....99	
F5	How many animals does your household own, for farming or otherwise?	____ ____ number of animals	
F6	About how much money do you spend on water? Can answer in amount per day, month, or year.	GH¢ ____ ____ ____ per day.....1 per month.....2 per year.....3  DK.....8 8 Refused.....99	

**W. WATER USE, COLLECTION, OPINIONS**

**INTERVIEWER SAY:** Thank you for that. Next I would like to talk about the water your household uses.

	Question	Response	Skip
W1*	You told me before that other people live in your house ( <i>Interviewer: show R1 on page 2</i> ). Who collects the water you use around the house?  <i>Interviewer: If the person answered is not listed as a household member, add them.</i>	____ ____ (no. from roster) Doesn't apply.....99	→ W3
W2	How many times is <b>house water</b> collected?  Can answer in amount per day, month, or year.	____ ____ times per day.....1 per week.....2 per month.....3  DK.....8 8	
W3	List three ways water gets used in the house:	A. _____ B. _____ C. _____	

	<i>Interviewer: Write them down in the following spaces</i>			
W4	You told me before that other people live in your house ( <i>Interviewer: show R1 on page 2</i> ). Who decides how house water is used? <i>Interviewer: If the person answered is not listed as a household member, add them.</i>		____ ____ (no. from roster) Doesn't apply.....99	
W5	You told me before that other people live in your house ( <i>Interviewer: show R1 on page 2</i> ). Who collects the water you use outside the house? <i>Interviewer: If the person answered is not listed as a household member, add them.</i>		____ ____ (no. from roster) Doesn't apply.....99	→ W7
W6	How often does <b>outside use</b> water need to be collected?		____ ____ times per day.....1 per week.....2 per month.....3  DK.....8 8	
W7	List three ways water gets used outside your house: <i>Interviewer: Write them down in the following spaces</i>	A.	B.	C.
W8	You told me before that other people live in your house ( <i>Interviewer: show R1 on page 2</i> ). Who decides how outside water is used?		____ ____ (no. from roster) Doesn't apply.....99	

	<i>Interviewer: If the person answered is not listed as a household member, add them.</i>		
<b>INTERVIEWER REMEMBER:</b> See instructions below each question on how to ask			
W9	How often do you talk to your <b>husband</b> about the household's water use? <i>Read options aloud</i>	____ ____ times per day.....1 per week.....2 per month.....3  Never..... .....0 DK.....88 Refused.....99	
W10	How often do you ask other household members for help in collecting water? <i>Read options aloud</i>	____ ____ times per day.....1 per week.....2 per month.....3  Never..... .....0 DK.....88 Refused.....99	
W11*	You told me before that other people live in your house ( <i>Interviewer: show R1 on page 2</i> ). Who makes the final decision about day-to-day finances?  <i>Interviewer: If the person answered is not listed as a household member, add them.</i>	____ ____ (no. from roster)	
W12*	You told me before that other people live in your house ( <i>Interviewer: show R1 on page 2</i> ). Who makes the final decision to buy expensive items?  <i>Interviewer: If the person answered is not listed as a household member, add them.</i>	____ ____ (no. from roster)	

W13	You are comfortable asking your family to help with water collection, yes or no?	Yes.....1 No.....2 Refused.....99	
W14	You believe a man should have the final say about decisions in his home, yes or no?	Yes.....1 No.....2 Refused.....99	

**C. WATER COMMITTEE**

**INTERVIEWER SAY:** My last set of questions is on the local Water Committee and your opinions of the group.

	Question	Response	Skip
C1	Does a WASHCo exist in this community?	No.....0 Yes.....1 Refused.....99	→ END
C2	Are you a member in the WASHCo?	No.....0 Yes.....1 Refused.....99	→ END
C3	How often do you attend WASHCo meetings? <i>Read options aloud</i>	Never.....1 Sometimes.....2 Always.....3 DK.....88 Refused.....99	
C4	Do you have a position or role in the WASHCo?	No.....0 Yes.....1 Refused.....99	→ C5 → C6

**INTERVIEWER SAY:** For the next set of statements, I will be asking you to agree, disagree, or indicate that you don't care.  
**INTERVIEWER REMEMBER:** Remind participant of the options: 'agree, disagree, don't care' if she hesitates to answer.

C5	You wish to have a position or role in the WASHCo.	Disagree.....0 Agree.....1	FOR ALL
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Surveyor ID-Survey#: \_\_\_\_ - \_\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

(DD/MM/YY)

		Don't Care..... 2 Refused.....99	REPLI ES → C12
C6	You find your position or role enjoyable.	Disagree..... .....0 Agree .....1 Don't Care..... 2 Refused.....99	
C7	You find your position or role difficult.	Disagree..... .....0 Agree .....1 Don't Care..... 2 Refused.....99	
<b>INTERVIEWER REMEMBER:</b> Remind participant of the options: 'agree, disagree, don't care' if she hesitates to answer.			
C8	You contribute to discussions in WASHCo meetings.	Disagree..... .....0 Agree .....1 Don't Care..... 2 Refused.....99	
C9	Other members listen when you speak during meetings.	Disagree..... .....0 Agree .....1 Don't Care..... 2 Refused.....99	
C10	Your suggestions are incorporated into final decisions made.	Disagree..... .....0 Agree .....1 Don't Care..... 2 Refused.....99	

Surveyor ID-Survey#: \_\_\_ - \_\_\_\_\_

DATE: \_\_\_/\_\_\_/\_\_\_

(DD/MM/YY)

C11	You are an important member of the WASHCo.	Disagree.....0 Agree .....1 Don't Care.....2 Refused.....99	
C12	You are satisfied with the WASHCO's decisions.	Disagree.....0 Agree .....1 Don't Care.....2 Refused.....99	
C13	It is acceptable for women to speak at a WASHCo meeting.	Disagree.....0 Agree .....1 Don't Care.....2 Refused.....99	

**INTERVIEWER SAY:** That is the end of the survey. Thank you for your time.

END TIME: \_\_\_ \_\_: \_\_\_ \_\_ AM/PM (circle AM or PM)  
hour : minutes

\*Taken or adapted from  
*Gender Analysis Snapshot 2014 and Governance into Functionality Tool 2014. CARE.*

+Taken or adapted from  
*The Role of Informal Conversations on Health and AIDS Behavior in Malawi, 2004: Women's Questionnaire. Malawi Longitudinal Study of Families and Health (MLSFH).*