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Linking Knowledge: A Qualitative Analysis of Gender and IWRM-related Policies in the Upper East Region of Ghana

Kalie Lasiter and Stephanie Stawicki
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Report overview

This report is a contribution to the synthesis work of the CGIAR Challenge Program on Water and Food Volta Basin Development Challenge V4 Project. The report represents new ideas and perspectives from CPWF research with a focus on identifying strategies to link scientific and local knowledge systems in order to achieve gender-inclusive research and development outcomes.

Authors' organizations

Kalie Lasiter Emory University

Stephanie Stawicki Emory University

Under the Supervision of:

The Challenge Program on Water and Food V4, Burkina Faso and Ghana

Jean-Philippe Venot of IWMI, Burkina Faso and Ghana

William's Daré of CIRAD, Burkina Faso

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Acronyms and Abbreviations

CIRAD	French Center on International Agricultural Research for Development
CGIAR	Consultative Group on International Agricultural Research
CPWF	Challenge Program on Water and Food
CWS	Community Water and Sanitation
DA	District Assembly
DOW	Department of Women
FASDP	Food and Agricultural Sector Development Policy
FBO	Farmer Based Organization
FGM	Female Genital Mutilation
GBV	Gender Based Violence
GDO	Gender Desk Officer
GPRS II	Growth and Poverty Reduction Strategy II
GWP	Global Water Partnership
IWMI	International Water Management Institute
IWRM	Integrated Water Resources Management
MLGRD	Ministry of Local Government and Rural Development
MOFA	Ministry of Food and Agriculture
MOWAC	Ministry of Women's and Children's Affairs
MSP	Multi-stakeholder Platform
MWRWH	Ministry of Water Resources, Works and Housing
NGCP	National Gender and Children's Policy
NWP	National Water Policy
UER	Upper East Region
UNDESA	United Nations Department of Economic and Social Affairs
VBDC	Volta Basin Development Challenge
V4	Volta 4 Project
WRC	Water Resources Commission

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Executive Summary

The Upper East Region (UER) in northern Ghana is the smallest and least developed region of the country. It is primarily rural and agriculturally oriented, and is characterized by a large working female population. The UER is geographically important because of its location in the White Volta watershed, which is responsible for providing water to the region for agriculture, industry and household use. The International Water Management Institute (IWMI), in partnership with the French Center on International Agricultural Research for Development (CIRAD), and through the Consultative Group on International Agricultural Research (CGIAR)'s Challenge Program on Water and Food (CPWF) Volta Basin Development Challenge (VBDC) V4 Project, is currently working to better understand how decisions and practices concerning the use and management of natural resources such as the White Volta River are made. Using participatory tools and multi-stakeholder workshops, implementing partners identify and deconstruct the processes that govern integrated water resources management (IWRM) policy decisions in the White Volta watershed. Specifically, the CPWF V4 Project investigates how the indigenous knowledge of environmental systems, which includes both male and female perspectives, can be more appropriately linked to expert/scientific knowledge and policymakers' mandates in order to identify a contextually appropriate application of IWRM policy interventions in the region. One of the core components of IWRM policy interventions includes the involvement of women due to their invaluable role in water management practices. However, what 'women's involvement' actually looks like beyond the initial IWRM rhetoric is not necessarily clear. In order to bridge the gap between the rhetoric and practices of gender-inclusive IWRM there must be a comprehensive and contextually-specific understanding of who women are, what they do, what they care about, and the sociocultural constraints and opportunities that exist that either prevent or encourage their representation and participation in broader IWRM-related policy models.

In the Upper East Region, women have limited decision-making powers at the policy level. Therefore, their inclusion in the CPWF V4 Project was considered integral. However, during a V4 multi-stakeholder workshop it became evident that V4 Project partners had a limited understanding of the specific activities, issues and concerns of women in the UER. Furthermore, there is currently limited literature available on general women's issues in the Upper East Region. The literature that is available is highly siloed and focuses primarily on either land rights or maternal and child health. Therefore, the overarching purpose of this research is to identify those gaps in knowledge in order to better understand how current policies can accurately integrate local women into their strategies and objectives.

While this study was originally conducted to gather baseline data on the general activities, issues, and concerns of women in the UER, the initial data collection led to the discovery that women in the Upper East Region are organized, either by their own accord or through the recommendation of local governing bodies, in social groupings that fulfill specific needs such as access to credit, access to agricultural inputs, and access to reciprocal labor and support. The objective of the study shifted to include an analysis of the processes, opportunities and constraints of how and why women organize themselves in these particular social groupings. The paper concludes with an evaluation of how, if at all, IWRM-related district, regional and national level policies from government departments such as the Ministry of Food and Agriculture (MOFA), the Ministry of Women's and Children's Affairs (MOWAC), and the Ministry of Water Resources, Works and Housing (MWRWH) address women and their social networks in Ghana.

In June and July 2012, the authors, under the guidance of CPWF V4 implementing partners, conducted a series of in-depth interviews with government officials from district and regional-level offices in the Upper East Region. In addition, the team conducted focus-group discussions with female community members in seven communities in the districts of Bawku West and Bawku Municipal. Both sampling populations

were chosen using a snowball sampling strategy that purposefully identified 'information-rich' individuals to participate in the study based on recommendations of initial key informants. The research team then analyzed how women's activities, issues, concerns, and social groups are addressed in Ghana's agriculture, gender, and water-related policies.

The results of this study reveal that women of the UER are involved in an expansive range of activities, mostly, but not exclusively related to farming. These farming-related activities are conducted for two reasons: 1) subsistence as a means to supplement the family's food supply; and 2) cash income generation in order to cover additional household expenditures such as school fees, clinic fees, etc. The study also reveals that women's primary issues and concerns include financial assistance, access to machinery for productive purposes such as milling machines, tractors and other machines for tilling land, and water (for both farming and non-farming usages). Overall, this study reveals that women's groups are formed within each community in relation to their farming or processing activities, as well as to fulfill mutual support functions such as pooling capital to assist each other in times of need. Therefore, these groups are integral to how women in the UER function both socially and economically.

However, a disconnect still remains between the varying IWRM-related policies that attempt to address gender-inclusion, and the identified limitations faced by women in the Upper East Region. Women still rely heavily on traditional community governance structures such as chieftaincies to represent and/or advocate for their needs, and their social groupings remain isolated within the community itself. Furthermore, their interactions with district and regional level officials remain limited, making it difficult for policymakers to explicitly detail steps for involving women in order to improve their social and economic livelihoods.

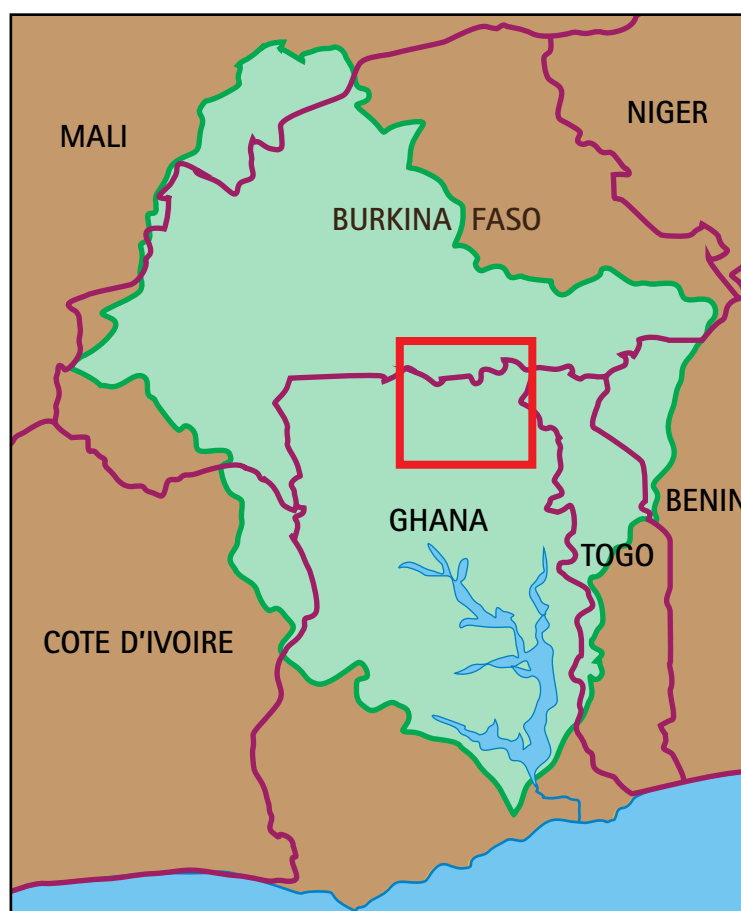
While not exhaustive of the region, this paper provides a better insight into women's activities, issues, and concerns, as well as the purposes and impacts of organized women's groups in the Upper East Region. Through this study, it can be concluded that although women's groups are conceptualized as a means to increase women's ability to overcome systemic and structural barriers such as a lack of mutual support, lack of access to agricultural inputs, and lack of access to capital, other factors, such as ineffective government policies and programming, and traditional decision-making structures that confine women to defer to chiefs for support, continue to inhibit the realization of gender-inclusive IWRM policy initiatives in the region. While women of the Upper East Region do not necessarily reflect women of Ghana as a whole, this study hopes to provide insights to organizations like the Challenge Program on Water and Food on how to appropriately integrate women into future research and programming efforts in order to truly achieve gender-inclusive IWRM initiatives. In addition, the study's analysis of IWRM-related policies and how they fail to fully address gender in agriculture and water-related issues will hopefully engage government officials and involve nongovernmental organizations to improve current policies and practices so that women can become more meaningfully involved.

1. Introduction

Background and Literature Review

The interdependent nature of water, from actors to areas to sectors, necessitates an interdependent and integrated approach in management. The International Water Management Institute (IWMI), in partnership with the Center on Agricultural Research for Development (CIRAD), and through the Consultative Group on International Agricultural Research (CGIAR)'s Challenge Program on Water and Food (CPWF) Volta Basin Development Challenge (VBDC) V4 Project, is charged with supporting on-going integrated water resources management (IWRM) policy initiatives in the White Volta watershed, located in the Upper East Region (UER) of northern Ghana in the Volta River basin system (CPWF, 2011: 10) (see Figure 1).

Figure 1: Volta River basin system (green) and White Volta watershed (red box)
Original source: GLOWA Volta Project



Integrated water resources management is a development paradigm and methodological tool that incorporates multiple actors, from the basin to the transnational level, as well as multiple segments of society which affect, and are affected by, river systems like that of the Volta River basin. The IWRM approach emphasizes the inclusion of all social, economic and political interests, and promotes solutions that are sustainable and equitable (GWP, 2009: 4). The Global Water Partnership (GWP) defines IWRM as a paradigm that 'promotes the coordinated development and management of water, land and related resources in order to maximize economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems and the environment' (Global Water Partnership,

2009: 4). The six core components, or pillars, of IWRM include: (1) a national water policy so that there is a cohesive normative framework; (2) a water law and regulatory framework for coordinated action; (3) the recognition of the river basin as a unit for planning and management; (4) treating water as an economic good to reflect its scarcity value; (5) the creation of water rights; and (6) participatory water resource management and *inclusion of women* (emphasis added) - (Prakash, 2007: 293).

In 1996 the Government of Ghana recognized the need to engage in national water reforms and created a single, supervisory government body for the water sector known as the Water Resources Commission (WRC) - (Laube, 2007: 422). Soon, thereafter, the WRC facilitated the integration of IWRM as the primary policy framework at the national level (Laube, 2007: 423). The WRC currently pledges itself to the paradigm of IWRM and the principle that water resources management should be 'sustainable, equitable, participative, *gender sensitive*, and last but not least, economically efficient' (emphasis added) - (Laube, 2007: 423). With regards to the second core component of IWRM, the WRC is charged with the mandate 'to regulate and manage the country's water resources and *coordinate government policies in relation to them*' (emphasis added) - (Odame-Ababio, 2003: 161). The WRC is comprised of representatives 'of the major regulators and users in the water sector', including in the environmental and agricultural sectors, as well as provides a forum for 'the integration and balancing of different interests' including the representation and interests of women (Odame-Ababio, 2003: 161).

Despite the WRC's institutionalization of IWRM at the national level, implementation at the local level remains somewhat elusive. The CPWF V4 Project recognizes that 'experience to date shows that effective implementation of IWRM initiatives in the developing world remains a challenge' (Venot, 2010: 3), due primarily to 'a lack of political will and sociopolitical externalities' (Venot, 2010: 3). Furthermore, the CPWF V4 Project addresses the reflexive concept that unless contemporary reforms '*question the policy models themselves ... they face the same shortcomings they were meant to address*' (emphasis added) - (Venot, 2010: 3). Thus, the WRC's mandate to coordinate government policies related to water resources, including policies by various government departments such as the Ministry of Food and Agriculture (MOFA), the Ministry of Women's and Children's Affairs (MOWAC), and the Ministry of Water Resources, Works and Housing (MWRWH), provides the theoretical background for this particular research project, which falls under the larger purview of the Challenge Program on Water and Food's V4 Project in the White Volta watershed.

The V4 Project is one of five CPWF VBDC projects being simultaneously conducted in the Volta River basin system in partnership with the Water Resources Commission of Ghana. Its objective is to 'identify socially acceptable land and water governance options' for the White Volta River, based on the local perceptions of multiple stakeholders in order to create 'a shared vision on land and water governance' (CPWF, 2012). To accomplish this, the V4 Project is working to understand how decisions and practices concerning the use of natural resources such as the White Volta River are made, specifically in relation to certain livelihood practices such as riverbank cultivation. Through innovative configurations known as multi-stakeholder platforms (MSP), and a participatory approach known as Companion Modeling (Barreteau et al, 2003; Etienne, 2011), CPWF V4 partners are working to identify and deconstruct the processes that govern IWRM policy decisions in the White Volta watershed, as well as investigate how indigenous knowledge of environmental systems, which includes both male and female perspectives can be more appropriately linked to expert/scientific knowledge and policymakers' mandates. This will allow partners to identify a contextually appropriate application of IWRM policy interventions in the UER (Venot, 2010: 3).

Multi-stakeholder platforms provide a space to discuss and create 'shared visions, well-established linkages and information flows' between actors that strengthen cooperation, improve market, legislative and policy environments, develop human capital, and overcome institutional resistance to change by means

of advocacy and lobbying (Klerkx, 2012: 467). The V4 MSPs bring together the perspectives, knowledge and actions of a diverse set of relevant stakeholders, from local farmers to regional-level policymakers, in order to integrate indigenous and expert/scientific knowledge and bridge the gap between the rhetoric and practices of IWRM in the White Volta watershed (Venot, 2010: 6). MSP members discuss 'the shaping and implementation of IWRM policies, leading to a set of governance decisions that bring together sustainability, planning concerns and livelihoods priorities', as well as 'consider and include the concerns of previously powerless stakeholders, including women' (Venot, 2010: 6). Through the use of a participatory approach known as 'Companion Modeling (ComMod)', CPWF V4 researchers build an interactive 'role-playing game' to represent actions related to agricultural and livelihood activities. They then facilitate game-play and discussions that allow all stakeholders to illustrate how water users are impacted by each other's decisions, including by policies aimed at managing the White Volta watershed.

Besides deconstructing IWRM-related policy models in the Upper East Region, the appropriate implementation of IWRM initiatives at the subbasin level must also include integrated perspectives on gender. According to the Global Water Partnership, one of the core components of IWRM policy interventions includes the involvement of women due to their invaluable role in water management practices (Prakash, 2007: 293). However, what women's involvement looks like is not necessarily clear beyond the initial IWRM rhetoric. In order to bridge the gap between the rhetoric and practices of gender-inclusive IWRM there must be a comprehensive and contextually specific understanding of who women are, what they do, what they care about, and what the sociocultural constraints and opportunities are that either prevent or encourage their participation in broader development initiatives. To simply 'include women' for the purpose of fulfilling a mandate is not enough and will not necessarily unearth and/or remedy those systemic and structural barriers that prevent them from engaging in broader development initiatives at the same level as their male counterparts. Rather, women's inclusion should be reflective of their sociocultural identities and indigenous knowledge systems in order to more accurately and appropriately integrate them as meaningful members of initiatives like the CPWF V4 Project.

In the Upper East Region (UER), women have limited decision-making powers at the policy level (let alone at the household level). Therefore, their inclusion in the V4 MSPs was considered essential. However, during these workshops it became evident that the V4 Project partners had a limited understanding of the contextually-specific activities, issues and concerns of women in the UER. For example, during the second MSP, there were a limited number of female participants. Through discussions with the few women that were in attendance, such as Queen Mothers¹ and their Magazies², the research team learned that while many women were farmers, they were also involved in an extensive array of other activities, and identified a number of issues and concerns specific to women that they felt were not being adequately addressed at the MSP. Additionally, there is currently limited literature available on women-specific development practices in the Upper East Region. The literature that is available is highly siloed and focuses primarily on either land rights or maternal and child health (IFAD, 1998; Ako and Akweongo, 2009). Due to the incomplete baseline data on women-specific activities, issues and concerns in general, and if/how those general concerns are addressed in IWRM-related policies, the initial overarching purpose of this research was to identify and fill those gaps in order to better understand how current IWRM-related policies in the UER are attempting to address gender

This initial baseline data collection led to the discovery that women in the Upper East Region are organized, either by their own accord or through the recommendation of local governing bodies, in social groupings that fulfill specific needs such as access to credit, access to agricultural inputs, and access to

¹ Queen Mothers are part of the matrilineal line of the chiefdom or royal family. They are typically related to the chief (mother, aunt, niece, etc.). Queen Mothers are held in high esteem by the village, and are responsible for social conditions and decisions relating to women. They liaise between the chief and the village women.

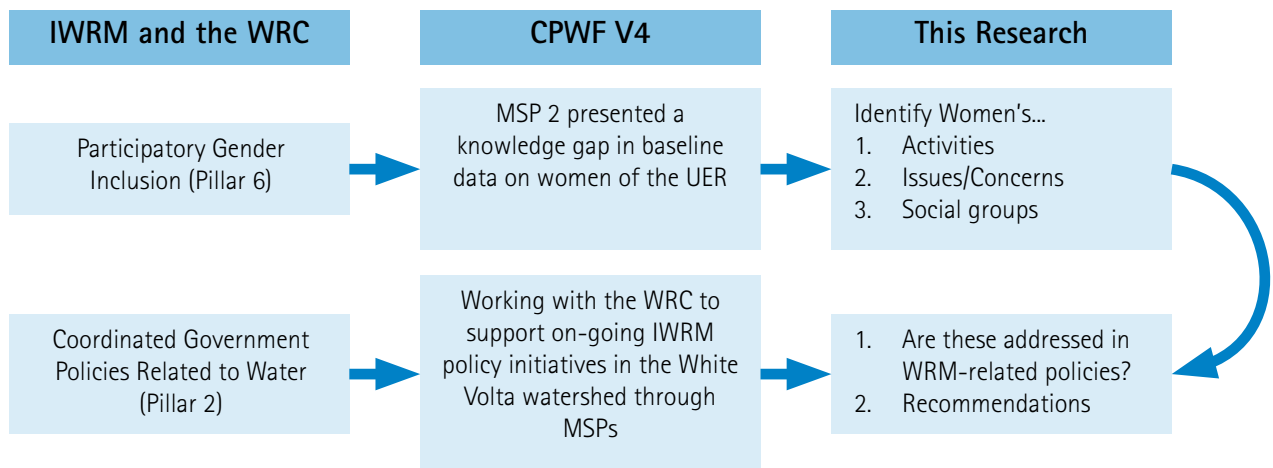
² Magazies are also high-level women who assist the Queen Mother as well as liaise between traditional leaders and the local government system.

reciprocal labor and support. The objective of the study, therefore, broadened to include an analysis of how and why women organize themselves in these particular social groupings.

Based on this background and current understanding of IWRM, water, governance, and gender in the White Volta watershed in the Upper East Region of Ghana, this research necessarily focuses on bridging the gaps in knowledge, rhetoric and practice that currently exist in relation to the processes, opportunities and constraints of what women do, what women care about, how and why women’s social groups form, and whether or not women’s social groups are embedded in broader IWRM-related policy frameworks (Figure 2).

Figure 2: Conceptual Framework

Source: Authors’ creation



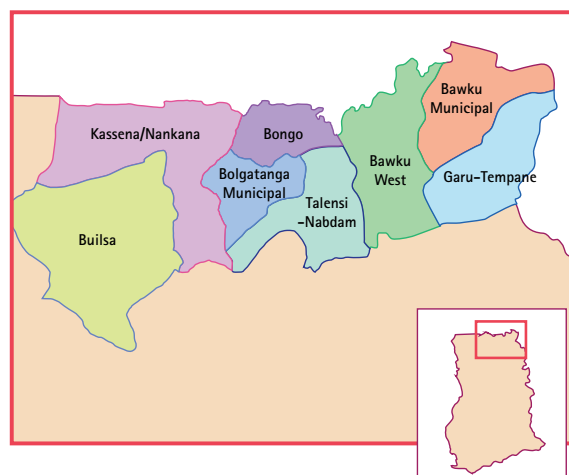
Project Site and Study Population

The Volta River basin is geographically situated across Burkina Faso, Ghana, Benin, Ivory Coast, Mali and Togo. In Ghana, where this research was conducted, the Volta River basin system as a whole covers 70% of the total area of the country and plays a vital role in supplying water for agriculture, industry and household use for a large majority of Ghana’s population (Odame-Ababio, 2003: 158).

The Upper East Region, located in northeast Ghana, is one of ten regions in the country. Bordered by Burkina Faso to the north and Togo to the east, the region is divided into ten administrative districts, including Bawku West District and Bawku Municipal District where the CPWF V4 Project is focused (see Figure 3). The White Volta River separates these two districts.

Figure 3: Map of Upper East Region and Districts of Ghana

Original source: Map created by Rarelibra for public domain use



The district-level research was conducted in seven communities and two district capitals in Bawku West and Bawku Municipal. In Bawku West, we interviewed 40 women in three communities: Widnaba, Binaba and Zongoyiri; and interviewed three district-level government officials in the district capital of Zebilla. In Bawku Municipal, we interviewed 45 women in four communities: Bansi, Binduri, Kaadi and Nafkuliga; and interviewed four district-level government officials in the district capital of Bawku Municipal. The regional-level research was conducted in the UER capital of Bolgatanga, where we interviewed representatives of regional government departments. The research team used snowball sampling (a non-probability sampling method) to purposefully identify ‘information-rich’ respondents in the delineated areas (Daniel, 2012: 170). While there are associated limitations of snowball sampling, including restrictions on generalizing findings, the method was deemed most effective for identifying women’s social networks in the area, as these networks are not necessarily visible and/or easily accessible to outsiders (Faugier and Sargeant, 1997: 790).

As a side note, and important to how the V4 Project will continue its work in the area in the future, halfway through our time in the Upper East Region the two districts in which we worked were divided into four districts, and Binduri (one of the communities) became its own district. How that will affect the Upper East Region remains unclear, and it is Binduri District (not Bawku Municipal) that now borders the White Volta River to the east.

The Upper East Region is the least developed area of Ghana and, as such, maintains the lowest average literacy, life expectancy, and per capita income rates of all ten regions (Modern Ghana, 2012). According to Ghana’s second Growth and Poverty Reduction Strategy Paper (GPRS II) the region ranks in the 88th percentile of poverty incidence; Bawku West ranks in the 92nd percentile, and Bawku Municipal ranks in the 99th percentile (IMF, 2006: 77). It is also one of the smallest regions in Ghana and constitutes approximately 2.7% of the total land area of the country (Modern Ghana, 2012). The population resides predominantly in the rural areas and, as such, their primary economic activities include agriculture and livestock rearing (over 80%) (Modern Ghana, 2012).

The methods and means of agricultural irrigation are highly variable and depend largely on a community’s proximity and ability to access primary water sources such as the White Volta River, and/or dams and reservoirs fed by White Volta tributaries, which permeate the countryside³. Dams and reservoirs include both natural and man-made, and vary in size from small to large. Furthermore, the time of year (rainy or dry season) plays a significant role in how water for agriculture is produced and consumed; the rainy season lasts from May/June to September/October (approximately), and the dry season from November to mid-February (approximately). During the rainy season, those communities located along the White Volta River and its tributaries, such as Bansi, Binduri, Nafkuliga and Zongoyiri, engage primarily in riverbank cultivation, and those that are located closer to irrigated dams, such as Binaba and Widnaba, access water via the dams. Those that do not have access to either the river or dams rely primarily on rainwater to sustain their crops. During the dry season, those communities located near the river or dams are able to practice dry season gardening. However, those communities that do not have access to the river or dams usually do not farm, but instead engage in livestock rearing or migrate to find work. Furthermore, irrigation patterns vary among households located in the same community, as not all households have access to the same water sources. For example, there are two irrigated dams in Binaba, but the availability of irrigated land located close enough to these water sources is fairly limited. The rest of Binaba’s households that do not own land near the irrigated dams must rely heavily on rain-fed irrigation. Major agricultural outputs include maize, sorghum, millet and rice during the rainy season and garden vegetables such as okra, pepper, tomatoes, soy beans and onions during the dry season.

³ V4 MSP community selection criteria included a community’s proximity and use of the White Volta River because of the Project’s focus on blue water management, governance and decision-making in the White Volta watershed.



Queen Mother and her husband after the Queen Mother participated in an in-depth interview

Finally, the age/sex structure of the region reveals that there are currently more economically active women (defined as women aged 15-64) residing in the Upper East Region than men, which could potentially affect the age dependency burden of the region. The age dependency burden, defined as the ratio of dependent young (0-14 years) and old (65+ years) to the population of working age (15-64 years), is an indication of the 'pressure placed on the productive population to support those not in the labor force' (UNDESA, 2007: 3). In 2000, the total age dependency ratio of the UER was 99.2, implying roughly one dependent person for every economically active adult (Modern Ghana, 2012). However, in the UER, economically active women outnumber men by 13% (Modern Ghana, 2012). This is most likely due to the long-term out-migration of males of the same age to other regions to find work, but has also been attributed, although to a much lesser extent, to the higher male mortality rates due to ethnic conflict in certain parts of the region (Modern Ghana, 2012). The implications of the significant higher proportion of economically active women are far-reaching. For example, this could mean that a much greater burden of labor and responsibility falls disproportionately on the shoulders of women as the 'need to provide for the economically dependent persons puts pressure' (UNDESA, 2007: 3) on already limited and strained individual and household resources. The economically dependent in the Upper East Region include primarily children, who require large economic and temporal investments on the part of women. While women have customarily been responsible for time and care invested in childrearing, traditional social structures dictate that males are primarily responsible for supporting their children economically (for example, with school fees). Due to social factors such as outmigration, however, most mothers are now the primary economic caretakers of their children as well, adding to their workload (Steady, 1998: 15).

Significance

Given the Upper East's status as significantly less developed, primarily rural and agriculturally oriented, heavily reliant on the White Volta River, and characterized by a large working female population, the baseline research conducted and outlined in this paper necessarily focuses on four overarching domains: (1) the activities of rural women in the Upper East Region; (2) the issues and concerns of rural women in the Upper East Region; (3) how rural women in the Upper East Region organize themselves in relation to their activities, issues, and concerns; and (4) whether or not those activities, issues, concerns, and social groupings are reflected or addressed in district and regional level IWRM-related water, agriculture and gender policies.

For the purposes of this paper, gender will be defined as ‘a cultural system of meaning pertaining to the differences and similarities between men and women’ (Atkinson and Errington, 1990: 8). Defining gender in this way allows one to divorce the notions so prevalent in the West of gender as an extension or representation of biological sex. Furthermore, the definition of gender as a cultural system of meaning underlines its function as something constructed for the purpose of informing a population’s gender identity or ideology. A gender ideology ‘refers to attitudes regarding the appropriate roles, rites, and responsibilities of women and men in society’ (Kroska, 2000: 368), including how women and men interact with each other (gender relations), how women and men organize themselves (social groupings), and how such gender relations and social groupings do (or do not) affect women’s and men’s’ ability to perform productive functions.

As previously described, this particular research falls within a broader action-research project currently managed by the Challenge Program on Water and Food V4 Project. The project supports IWRM initiatives in the shared White Volta watershed in Burkina Faso and Ghana through a participatory approach, called Companion Modeling⁴, implemented at the subbasin/watershed level. Currently, the CPWF V4 action-research project is working to build strong partnerships between the multiple actors involved at all levels of the decision-making process, including women, in order to make ‘evidence-based relevant recommendations’ on future IWRM policy reforms (CPWF, 2012).

Objective

The overarching objective of this research project, therefore, is to gather comprehensive baseline data pertaining to women’s activities, issues and concerns, and processes of formal and informal organization, in order to better assess whether or not women’s activities, issues, concerns and social groupings are accurately represented and addressed in district and regional level IWRM-related policies.

Primary Aims

There are four primary aims that this research proposes to address:

1. To identify women’s activities
2. To identify women’s issues and concerns
3. To identify if/how women are organized around those activities, issues and concerns
4. To identify if/how those activities, issues, concerns, and/or social organizations are represented and addressed in policy

Primary Hypotheses

Our research rests on three primary hypotheses:

1. Formal and informal women’s networks/social groupings exist
2. Natural resource management (including water management) is not central to women’s networks
3. There is a disconnect between women’s issues, concerns, and modes of social organization, and district and regional level policies

In order to achieve the outlined objective and aims, the research was conducted in four phases, described in detail in the following section. The paper then outlines: (1) a description of our summative findings on gender and group formation in the UER; (2) a general review of how specific IWRM-related policies by the Ministry of Food and Agriculture, the Ministry of Water Resources, Works and Housing, and the Ministry of Women’s and Children’s Affairs address gender; (3) an analysis of knowledge gaps in policies identified in our research; and (4) recommendations on how policies related to IWRM can more accurately reflect women’s issues, concerns and social groupings.

⁴ www.commod.org

2. Methods

Our research was conducted over an 8-week period in June and July of 2012, and consisted of four phases. During Phase I we identified key individuals at the second MSP including chiefs, district assemblymen, other government officials, and Queen Mothers or their Magazies. We conducted interviews with these initial ‘key informants’ and used a snowball sampling strategy to identify other ‘information-rich’ individuals to participate in the study. A snowball sampling strategy is a non-probability method of sampling in which respondents are selected as they are identified by successive interviewees (Daniel, 2012: 170). This sampling strategy was chosen as a response to ‘overcome the problems associated with understanding and sampling concealed populations such as the deviant and the socially isolated’ (Faugier and Sargeant, 1997: 790), or in this case, the women of the UER. We considered women of the UER an isolated, or rather ‘harder-to-reach’ population because of the sociocultural norms that dictate female interactions. In many instances, we were required to ask permission from the male community ‘gatekeepers’ such as chiefs and their council of elders to conduct women-only focus groups, and even then male community members would linger, insisting that the women needed their ‘help’ to speak in front of strangers. We were able to successfully neutralize male influence in almost all cases, but the difficulty of gaining the audience of only women necessitated the snowball sampling approach. We recognize that there are certain limitations of the snowball sampling method, including restrictions on generalizability. However, we believe our sample was ‘typical’ enough of women in the area to confidently extrapolate our conclusions and recommendations to the broader Upper East Region as a whole.

Based on the significant knowledge gap about women’s activities, issues and concerns presented to us at the second MSP, the research was originally focused on understanding women in the UER, in general. However, as the research progressed and we learned more about women’s social organization, our primary research questions shifted to include a focus on women’s groups. The objectives of each phase are noted below.



Women MSP members using the Companion Modeling tool to identify women-specific agricultural activities/strategies

Phase I

During the MSP II workshop held in Bawku Municipal in early June 2012, we identified key female informants in both districts. We also identified key officials, including district officials of national ministries such as the Ministry of Food and Agriculture, Ministry of Women's and Children's Affairs, and the Community Development Office (CDO). While conducting interviews and focus groups in the seven communities, a male workshop participant served as our translator, translating both our interview questions and the subjects' responses. In some communities, in-depth interviews with Queen Mothers often manifested into focus group discussions. During these situations, we adapted and modified questions as the conversation developed.

When interviewing women in the communities we used interview and focus group guides (see Appendix C) that were designed to obtain preliminary and basic information regarding women's activities, issues, and concerns, as well as who they interacted with when seeking assistance or information. When interviewing district and regional officials, we used in-depth interview guides (see Appendix D) that sought general information about the individual and department's role and level of interaction both across communities, and within and between other ministries and departments.

Phase II

During Phase II we conducted a preliminary data analysis in Ouagadougou, Burkina Faso and presented the findings to our supervisors from IWMI and CIRAD. Based on this initial presentation of findings, we identified gaps in our research that caused us to shift our research questions and proposed hypotheses from a focus on women's social networks to a focus on women's farmer-based organizations (FBOs). As a result we developed new in-depth interview and focus group discussion guides and scheduled new and follow-up interviews with women and officials in the UER.

Phase III

During the third phase of our research, we returned to the same communities to conduct follow-up interviews and focus group discussions with Queen Mothers and women's group leaders to determine the processes and constraints of FBO/group formation in the UER. Because of time restrictions and the limited availability of subjects (due to the rainy season and increased farming activities), our follow-up interviews and focus group discussions took place only in the communities of Widnaba and Binaba (Bawku West), and Binduri and Bansi (Bawku Municipal). We also conducted follow-up interviews with MOFA and CDO representatives in both districts, and the regional representative for the Department of Women in Bolgatanga.

Phase IV

During Phase IV we conducted a summative data analysis in Ouagadougou, Burkina Faso. We also conducted extensive web-based inquiries in order to analyze policies of ministries such as the Ministry of Food and Agriculture (MOFA), the Ministry of Women's and Children's Affairs (MOWAC), and the Ministry of Water Resources, Works and Housing (MWRHW) to determine if current policies truly reflect the realities of women and farmer-based organizations (FBOs) in each community, as well as the capacities of district and regional officials to adapt and/or integrate these realities into future policies and programming.

3. Overview of Women's Activities, Issues and Concerns

Women's Activities

The sixth pillar of IWRM highlights the need for 'participatory water resource management and the inclusion of women' in water-related policies and programming. What 'the inclusion of women' means, however, is unclear. One way to shed light onto how women can be better included in IWRM initiatives, especially at the local level, is to first ensure there is a foundational and evidence-based understanding of who those women are, what they do, and what is important to them. Once that baseline is established, recommendations can be more easily made as to how to support more contextually appropriate gender-inclusive IWRM-related policies. As previously mentioned, there is limited baseline data on women-specific activities in the UER outside of land tenure issues, maternal and child health. The research team, therefore, gathered baseline data on women-specific activities in order to provide a more comprehensive understanding of women in the Upper East Region. Based on our summative findings, women from the seven communities in Bawku West and Bawku Municipal districts engage in an extensive range of activities, from agriculture/farming to income generation (see Appendix A). There was little variation among responses when we asked the women about their 'typical day.' The personal account below exemplifies the nearly identical responses we received from women in all seven communities:

"She wakes up, washes her face, collects her broom and sweeps the yard, prepares food for her husband and children, then leaves to farm. She farms until approximately 4 or 5 PM, then comes home, fetches water, prepares dinner for her husband and children, and then goes to bed."

(Bansi Queen Mother via translator)

Interestingly, the narrative of the farmer was always the first narrative to be presented to researchers, leading to the initial assumption that all the women in each community were exclusively farmers. It wasn't until further probing that the women explained that there were a number of other activities they engaged in, some in addition to, and some independent of, their agricultural responsibilities. Additional farming-related activities include rearing small ruminants and/or guinea fowl, sorghum malt processing for pito⁵, pito brewing, rice processing, dawa-dawa⁶ processing, and shea nut gathering and processing. Other additional activities not related to agriculture but still done in conjunction with farming include retailing fish, selling petty items such as spices and soap, and retailing fertilizers and cement. The identification of these additional activities is invaluable in understanding how women engage in certain market processes, primarily their expanded role in larger value chains. Finally, there were a few women who did not engage in farming but instead held 'professionalized' occupations such as hairdressing and tailoring.

There seems to be a distinct division of roles and responsibilities by gender in many of the communities in the Upper East Region. When asked which activities the women engaged in by themselves, and which they did with men, the women expressed that most of their activities, with the exception of rainy season farming and dry season onion farming⁷, they did independently of men.

⁵ Pito is a local alcoholic beverage made from processed sorghum malt.

⁶ Dawa-dawa is a flavoring condiment added to food and is made from processed soy.

⁷ Again, the management of water for both rainy and dry season farming activities is variable not only between the seven different communities, but between households in the same community as well. Factors such as land ownership and field location, class/social capital, geography etc., determine how certain households access water for irrigation. However, most communities engage in riverbank cultivation or use irrigated dams during the dry season.

They explained:

They (men and women) don't come together because their issues are different – what the women want to discuss, the men don't want to listen to, and what the men want to discuss, the women don't want to listen to. So in the end they will only quarrel.

(Zongoyiri Women's Focus Group via translator)

Household chores such as sweeping and cooking are obvious examples of activities that are done exclusively by women, but other women's activities include some dry season farming (tomatoes, okra and peppers), rice processing, dawa-dawa processing, pito processing and brewing, petty trading, cement retailing, fish retailing and guinea fowl rearing. Fish retailing and guinea fowl rearing are especially interesting examples of the gendered division of labor that seems to permeate the Upper East Region. In both Bansi and Zongoyiri, the women we spoke with explained that, while fishing is done exclusively by men, women are involved in market transactions. This finding resonates with a previous study commissioned by the Women's Environment and Development Organization that explored the relationship between gender, fisheries, and climate change. The study highlighted that 'fishing activities in Ghana are gendered. Men go out to sea while women and children are responsible for the negotiation, purchase, storage, processing and marketing of fish' (Mensah-Kutin, 2008: 7). However, 'support to the fisheries sector by development planners has been particularly limited and gender-specific measures and interventions have not been forthcoming. This is problematic given the extent of reliance by several groups of women on fish selling as an income generating activity' (Mensah-Kutin, 2008: 7).

Guinea fowl rearing was likewise a gendered activity; in Widnaba, guinea fowl were identified as exclusively 'women's property', and those women involved in guinea fowl rearing explained that they were allowed to do whatever they wanted with their fowl, (e.g., sell or cook) without having to ask permission from their husbands. The concept of 'women's property' is especially important in the context of the Upper East Region, where there are contentious gendered issues surrounding property rights. While land distribution and land access were not identified by the women as primary issues or concerns, land rights issues were discussed in detail by district level MOFA representatives in both Bawku West and Bawku Municipal, as well as outlined and addressed in the MOFA's second Food and Agricultural Sector Development Policy (FASDEP II). This is a point that will be discussed in further detail in the policy analysis section.



Girls fetching water (identified as a women-specific activity)

Women's Issues and Concerns

While discussing the types of activities the women were involved in, women-specific issues and concerns also began to emerge. These issues were strongly linked to the various daily and seasonal activities in which the women engaged themselves. For all seven communities involved in the study, the women identified a lack of financial assistance as their primary concern. A lack of financial assistance includes difficulties accessing loans due to limited collateral and/or low initial capital to invest. All of the communities mentioned either a lack of, or poor access to, machinery, specifically tillage machines that help prepare land and milling machines that aid in the processing of grain, such as millet or sorghum. The women felt these machines would assist in improving their efficiency and productivity in their own subsistence farming, and potentially strengthen their place in value chain interactions. If they are more efficient and productive by using these machines, then their particular contribution (quantity and quality) to their value chain will increase or improve.

Three out of seven communities mentioned the following points as concerns: water (potable and for irrigation); education for their children; and a lack of inputs such as fertilizer. Concerns focused around water in these three communities were two-fold; (1) lack of clean drinking water (potable); and (2) limited access to irrigation, such as no pumps to pull water from the river or dams, or communities without dams and, therefore, no dry season farming. This particular community, therefore, noted that it relied heavily on rain-fed irrigation. With these water-related concerns irrigation was a primary problem when related to farming, while potable water was a concern when related to the general health and well-being of children. There was more specificity pertaining to water for irrigation.

The following general concerns were mentioned in only two of the seven communities: limited boreholes as a means to access clean drinking water; poverty; limited access to health services and clinics due to long distances or no facilities; limited access to livestock; and poor irrigation, due to reliance on rain-fed irrigation only and/or no access to dams. Only one of seven communities noted a lack of childcare/daycare, making it more difficult for women to engage in their farming responsibilities. In addition, only one of seven communities mentioned environmental concerns related to bushfires, land preparation, and flooding. Another concern was a lack of dams in the community and, therefore, limited options for dry season farming. In addition, there were concerns surrounding inadequate income generating opportunities in markets and limited transportation facilities.

Based on this data we can infer that women's primary concerns fall into two overarching domains: (1) maintaining and/or increasing their productive capacity through access to financial assistance, machinery, water for irrigation, and fertilizers/inputs, for both household consumption as well as to sell at the market; and (2) having access to quality services for themselves and their children (education, health/clinics and potable water, daycare services, etc.). Water is clearly a central focus and a primary concern for women; however, it falls into two categories –accessibility to potable water for health and well-being, and water for irrigation and farming activities. The water issues in Bawku West and Bawku Municipal are more centralized around blue water as the majority of the communities rely heavily on riverbank cultivation and dams. Additional issues and concerns focused on blue water are fairly community-specific. For example, the only community that mentioned issues with flooding was Nafkuliga, where riverbank cultivation is a primary means of agricultural production due to poor dam irrigation infrastructure. Comparatively, the concerns of the farmers in Zongoyiri are focused on green water as they fully rely on rain-fed irrigation.

While the women identified these concerns at the community level, officials at the district and regional levels primarily indicated that women's issues focused on gender-based violence (GBV), including physical, emotional, and financial (non-maintenance) abuse, female genital mutilation (FGM) and inequitable land distribution. It is evident that the issues and concerns mentioned by women in the communities, and the issues and concerns that the various ministry officials say they try to address on behalf of women do not necessarily align. It is a safe assumption that the women most likely felt uncomfortable or unsafe discussing such sensitive and private issues with outside researchers, but these and additional differences will be discussed in more detail in the policy analysis section of this paper.

4. Overview of Women's Groups

Women's collective action has a long history in Africa, in general, and in West Africa, in particular. Traditionally, in rural societies across sub-Saharan Africa, informal social groups and organizations fulfilled a 'bonding' function to 'build social capital and facilitate collective action to respond to the uncertainties of agricultural production' (Thompson, et al., 2009: 2). Furthermore, according to anthropologist Mary Moran, women in West Africa 'simply do not view men as capable of representing them and their interests' due to 'the highly segregated nature of women's and men's productive activities in West African farming systems' (Moran, 1989: 444). Our research on women-specific activities, issues and concerns echoes these conclusions, as well as provides a basis for understanding the formation and function of women's groups in northern Ghana.

The previously identified agricultural and income generating activities, as well as certain issue-areas identified by the focus groups, form the basis of women's groups (sorghum malt processing group, women's support and solidarity groups, etc.). While collective action is not a new occurrence in Ghana, it has gained a significant amount of attention from international donor organizations and local governments alike as a reaction to exacerbated 'market competition and integration, the marginalization of cultural minorities, and the overexploitation of natural resources', which makes individual decision-making and action difficult for many farmers (Salifu et al., 2012: 8). In Ghana, collective action (in the form of FBOs) is seen as a better way to achieve more equitable and community-driven development in rural areas, and is described as a 'social elevator', or a 'mechanism to ensure social mobility and leverage economic inequalities' (Salifu et al., 2012: 8). Since 2000, the Government of Ghana has received over US\$9 million in World Bank funding to promote the formation and growth of FBOs in the country, and NGOs have likewise followed suit (Salifu et al., 2012: 7-8). Thus, agricultural group formation has become a major mechanism by which governments distribute, and marginalized populations (especially women farmers) gain access to, resources such as agricultural inputs and credit, which are deemed essential for rural development.

For example, a lack of financial assistance (identified as a major concern by women in all seven focus group discussions) formed the basis for why many women created mutual support groups. Although most can access small loans through local banks, many are not eligible to receive larger loans because they lack collateral or are assumed unable to pay back the higher interest rates. Women expressed their inability to obtain larger loans as a major factor that prevents them from expanding their farming and processing endeavors. As a result, women form groups to pool capital and collateral in order to obtain loans and other inputs and services.

An important point to highlight about women's groups relates to the value chains in which they are embedded. A value chain refers to the chain of activities through which a product travels to get from the place of production to the point of distribution/consumption. From what we were able to gather, it seems that many agricultural crops in the Upper East Region are a part of simple value chains; that is, the same farmer that produces the crop will then take it to market to sell it. Based on the data from this study we also found that some of the women's FBOs are involved in more complex value chains; many times FBOs involved in one part of a value chain relating to the production of a particular product (for example, pito) would do only that one activity. In other words, FBOs who participate in processing sorghum to produce the pito malt do not also brew the pito. Instead they sell their malt product at the market to pito brewers. Furthermore, the actual marketing of these goods was not an activity that was mentioned by the women's groups. They discussed no real efforts on how they 'market' their products to other members in a value chain, nor did they discuss marketing as a separate activity as part of the value chain process.⁸ Finally,

⁸ While there is other literature available that cites that the marketing of agricultural products, primarily tomatoes, is a separate and highly gendered activity conducted by 'Market Queens' in the Upper East Region, we were unable to identify complex value chains that consisted of such a marketing component.

even though groups are involved in the process of production, many times the final product is still sold individually. So the different groups are the primary units of production, but individuals are the ones who facilitate the exchange of products along the value chain. This begs the question as to why women form groups in the first place, which brings us to our discussion of group composition and formation.

Group Composition

Women's, men's and mixed-gender groups are not a new occurrence in the Upper East Region; FBOs are common and their formations are encouraged by a number of NGOs and government agencies, including the Ministry of Food and Agriculture (MOFA). The MOFA has compiled a database of registered groups in all regions in Ghana, and this information is publicly available on their website www.fboghana.org. According to the MOFA, there are currently 316 FBOs registered in the Upper East Region of Ghana: 27 registered groups in Bawku West, including 2 in Binaba and 1 in Widnaba, and 49 registered groups in Bawku Municipal, including 1 in Binduri (MOFA, 2013).

However, based on the summative findings of this research, the reality of farmer-based organizations in Bawku West and Bawku Municipal is much more complex and diverse than what is listed on the MOFA website. First, all the groups listed in the MOFA database for the communities in which we conducted our research were mixed-gender groups; there were no women's-only groups. According to our data, there are a number of women's groups registered and active in all seven communities, and according to a representative from the Community Development Office in Bawku Municipal, there are more registered women's groups than men's groups OR mixed-gender groups in the district. Almost all of the women we spoke with, with the glaring exception of the women of Widnaba, were involved in a women's group not listed on the MOFA website (see Appendix B). Second, none of the groups listed on the MOFA website for three of the seven communities in which we worked (Binaba, Widnaba and Binduri) were mentioned or represented in the focus groups that we conducted, and vice versa. Finally, most of the registered groups on the MOFA website are quite large, containing anywhere from 50 to 150 members. Most of the women we spoke with recited that their groups are relatively smaller, having only 10 to 15 members in each group.

The information listed in the MOFA database and the information we were able to gather seems disjointed. It may be because our sample sizes were too small or not representative of the entire community; the information listed in the MOFA database is incomplete or incongruent with the realities of FBOs in the UER; or it may be that although what we were able to document is an accurate representation of what takes place informally at the local level, this data remains unnoticed and has failed to reach a certain level of official recognition.

What the MOFA database also fails to indicate is where each FBO is registered, and as will be explained below, there are a variety of places and organizations with which a group can register, including with the MOFA, the CDO, private banks, and local NGOs. If the statistics represented in the database were compiled based on data from MOFA offices, then it is safe to assume that the groups listed on the database are groups that have registered with the MOFA. However, while the MOFA in Bawku West was actively involved in the process of group registration, the MOFA in Bawku Municipal was not. The MOFA database, nonetheless, lists 49 registered groups in Bawku Municipal. This begs the question as to the validity of the data on the database, as well as further emphasizes the complexity of the relationship between the representation of data and reality at all levels (community to regional), especially in relation to how that data then dictates the formation of policy.

Group Formation

Based on the data of women's activities, issues and concerns, as well as the discussion of group composition, we believe that there are two primary reasons why women (and men) form groups: (1) to pool certain resources such as capital, labor, and knowledge; and (2) to more easily gain access to available support and services such as agricultural inputs and financial credit.

Both of these identified reasons for group formation resonate with the findings of Adam Salifu and colleagues in their research on FBOs in Ghana. According to them there are four categorizations of FBOs in Ghana: production FBOs, processing FBOs, marketing FBOs and multipurpose FBOs (Salifu et al., 2012: 12-13). Production FBOs are formed mainly 'to facilitate members' access to credit and agricultural inputs. They are not necessarily created to do collective or group farming, but rather 'the members produce at the individual level on their own farms and come together to cut the costs and share the risks associated with training, credit and inputs procurement' (Salifu et al., 2012: 12-13). This type of FBO resonates with many of the FBOs we identified throughout the course of this research.

The second categorization of FBOs are processing FBOs, which are 'formed to support the processing of an agricultural output' (Salifu, et al., 2012: 13) and would include the fish, sorghum, rice, shea and dawadawa processing groups that were identified in the Upper East Region.

Marketing FBOs are formed to 'facilitate agri-food commercialization' by purchasing local agricultural goods and selling them to larger regional traders or urban markets (Salifu, et al., 2012:13). We did not come across any marketing FBOs in the participating communities. However, that does not mean they do not exist in the UER. According to Ngaleza and Robinson, 'market queens' do exist in the Upper East Region, especially in relation to the distribution of tomatoes; and represent 'the direct link between rural farm producers and urban consumption' (Ngaleza, 2011: 2). Their roles and relationships to the FBOs with which we spoke are still unclear.



Women's Focus Group in Nafkuliga

Finally, multipurpose FBOs can be involved in any of the aforementioned activities as well as engage in livelihood protection activities such as ‘mutual support in case of illness, funerals, (and) weddings’, and even in ‘environmental management’ (Salifu, et al., 2012: 13). While we were able to identify a number of multipurpose FBOs who engaged in livelihood protection activities (usually referred to as Asungtaba groups), none of these FBOs engaged in environmental management. The FBOs identified in this research fall into three of the four categorizations of FBOs: production FBOs, processing FBOs and multipurpose FBOs. Government policymakers more often encouraged the creation of production and processing FBOs, versus multipurpose FBOs that were usually created independently by community members.

When asked why they decided to form groups, participants expressed that they realized that collective action would yield more results than individual action:

They realized that they all had individual problems that they couldn't solve, so they decided that if they came together as a group, they could share their problems and ideas on how to solve those problems. They heard that similar group formations had occurred in other communities, so they decided to do it in their community.

(Zongoyiri Women's Focus Group via translator)

As an aside, but still an important point evident in our findings, is the importance of word of mouth as the primary means of communication among these communities in the Upper East Region. Almost all groups identified that they had heard of similar groups being formed in other communities and decided to do the same, but none could identify exactly which groups they had heard about or from where. Oral communication is also the primary means of planning, organizing and formalizing any social gathering, from group meetings to our own focus groups, and, in some instances, can make information dissemination and implementation difficult. However, in a culture that relies heavily on word of mouth for the dissemination of information, it is important not to forget the vital role it plays in shaping how and to whom information flows.

In the previous excerpt from the Zongoyiri Focus Group, the collective pooling of knowledge and providing mutual support was identified as a primary motivator for group formation. In the following excerpt, capital and labor are also identified as resources that are better utilized under the structure of the collective:

(1) They meet as a group so they can share ideas among themselves about how to process malt. (2) Also because they have such small capital individually, when they come together they can pool their capital to see how they can support each other and raise their incomes. (3) They also hope that as the group grows, they can start to find a better market for their product. (4) Being in a group allows them to support one another in times of bereavement. (5) They all have children who go to school and who can easily fall sick. Therefore, they can help each other by sending the child to school or to the clinic if for some reason the mother cannot do it herself.

(Binaba Women's Focus Group via translator)

Gaining access to credit and agricultural inputs was highlighted by not only the community-level research participants, but by government representatives as well. According to an agricultural extension agent at the MOFA in Bawku West, providing support and services such as seeds and fertilizers to organized groups was a primary and preferred strategy. She also explained that in order for groups to gain access to agricultural inputs they must be organized, motivated and registered. The following section describes the process of group registration, as well as the potential values and limits of doing so.

Group Registration

The Process

In the description of group composition a lot of emphasis was given to registered groups. According to our data, almost all groups we identified and spoke with are registered with some sort of an assistance provider. Assistance providers include the public sector, NGOs, and private institutions. In Bawku West and Bawku Municipal, groups were registered with assistance providers such as banks, the district government via the Community Development Office (CDO) or the MOFA, and/or NGOs such as the Association of Church-based Development (ACDEP) and the Bawku East Women's Development Agency (BEWDA).

For most organizations, being registered at the bank (usually the agricultural development bank) is a prerequisite for groups to receive assistance. The process of registering at the bank and opening a group bank account is as follows: each group, once formed, is required to elect a leadership comprised of a president, a secretary and a treasurer; each group is also required to have a constitution that outlines the procedures and by-laws of the group, (e.g., procedures regarding group meetings, frequency and costs of group fees, etc.). Some groups create their own constitutions, and others receive a pre-drafted constitution from an assistance provider such as the Community Development Office (CDO). A copy of the constitution is presented to the bank, and all three leaders become co-signers on the group account. Once an account has been opened and a predetermined amount (usually taken from group fees) is deposited, groups are then able to register with other assistance providers. The Asungtaba Group in Zongoyiri was the only group we spoke with that was not registered at a bank (and, therefore, not registered with any other organization). They explained that putting their pooled capital in a bank account would make it more difficult to access in case of an emergency due to the distances of their communities from banks in the district capitals. They therefore elected a group member to serve as treasurer and ensure safekeeping of their money until they needed to use it, usually in the case of an emergency such as illness. The only assistance provider that did *not* require a group to be first registered with a bank was the Department of Women at the regional level in Bolgatanga.

After registering with the bank, the assistance provider(s) with which groups then registered varied by district. Based on our interviews with district representatives at the MOFA in Bawku West, and the MOFA and the Community Development Office in Bawku Municipal, it seems that the MOFA agricultural extension agents in Bawku West are more directly involved in assisting community members in the process of group formation and registration than in Bawku Municipal. The agricultural extension agent that we spoke with in Bawku West also indicated that the Association of Church-based Development (ACDEP) played a prominent role in facilitating group registration. Unfortunately, due to time restraints, we were unable to speak with a representative from ACDEP about their work with FBOs.

In Bawku Municipal District, the MOFA representative explained that due to limited financial resources, limited manpower (there are only 10 agricultural extension agents for 306 communities), and transportation limitations⁹, if/when they were able to go out into the communities they focused primarily on education campaigns about gender equality in relation to land rights, and did little with education about group formation and registration.

The Bawku East Women's Development Agency (BEWDA) was also identified by the focus groups in Binduri and Bansi as an assistance provider that helped with group formation and registration in Bawku

⁹ The Bawku area has faced recurrent ethnic conflict in the past decades, including motorcycle drive-by shootings. In an effort to prevent such instances, district authorities have passed legislation that makes it illegal for men (except male police officers) to ride motorbikes in the district (Lund, 2008). Women are still allowed to ride motorbikes, but men primarily use bicycles as their primary means of transportation due to the high costs of automobiles.

Municipal. Again, unfortunately, we were unable to schedule an interview with a BEWDA representative. According to focus group participants, BEWDA provides them with trainings in financial literacy and group dynamics. The women in the community of Binduri indicated that they frequently met with their BEWDA representative; during the non-planting season, they meet with their representative up to two times a month. However, during the planting season, the women's groups meet with their BEWDA representative less frequently due to their obligations in the fields. The women leaders of the five groups in Bansi revealed that they only met with their BEWDA representative three times in the initial stages of the registration process.

Furthermore, the CDO in Bawku Municipal claimed to, at least previously, be relatively active in educating community members about the processes and benefits of group formation, and maintained a list of over 400 registered men's, women's and mixed-gender groups in the district (compared to the 49 listed by the MOFA on their website). Unfortunately due to recent budget cuts their ability to assist FBOs has declined significantly. The representative from the Community Development Office in Bawku West was in Accra for the entire duration of our research, so we were unable to ascertain the comparative role of the CDO in Bawku West in reference to group formation and registration.

Benefits and Limitations

There are a number of narratives that permeate the discourse of FBOs in the Upper East Region, especially about why community members should form/join FBOs in the first place. Based on an analysis of our own data coupled with an extensive web-based inquiry into the processes of group registration, we can draw the following conclusions about the benefits and limitations of registering a group (Table 1).

The official, national narrative maintains that FBOs and other agri-groups are considered a positive asset in national development strategies in that 'they (groups) are perceived to be effective channels for the delivery of government development services' (MOFA, 2013), especially in rural areas where poor infrastructure inhibits more effective delivery of services to individuals. Since the era of structural adjustment, agri-groups and FBOs in Ghana have also been conceptualized as ways to increase competitive agribusiness in the country. However, this research was unable to identify the more social enterprise-oriented FBOs that other research has documented.

At the regional level, FBOs and other women's groups are encouraged to register with departments like the Department of Women (DOW), because by knowing which groups exist, the DOW can more easily disseminate information regarding upcoming meetings and/or campaigns directed at women's issues and concerns. Furthermore, if the Department of Women is unable to offer support, it can more easily refer certain groups to other departments for services such as the Department of Social Welfare or the Department of Education. The one obvious limitation to the registration process at the regional level, however, is that most groups that register with the DOW are from Bolgatanga and nearby surrounding communities. None of the groups we spoke with in Bawku West or Bawku Municipal were registered with the DOW. Therefore, the services that the department provides are only targeting a specific population of women in the regional capital.

At the district level, similar to the national level, group formation and registration is encouraged because groups are deemed easier to work with. Government ministries such as the MOFA prefer to disseminate funds, inputs and services to groups rather than individuals. However, based on the observations and data of this research, despite this belief, it is still extremely difficult to administer funds and support to groups due to logistical limitations such as budgetary and staff restrictions, as well as the apparent lack of accurate information about the existence of groups. While organizations were aware that groups existed, there were obvious gaps in knowledge about how to distribute certain services. For example, when questioned as to these gaps, most assistance providers explained that the expectation remained that groups in need of



Women's Focus Group in Binaba

assistance should be 'proactive' and 'come to them' to register and receive benefits. The groups, however, explained that they were under the impression that their extension agents and assemblymen should bear the responsibility of offering support – an obvious catch-22 began to emerge.

Regardless of who is to 'blame' the fact remains that the structures in place to deliver the services are not there; at the district level the lack of financial support and staff make it difficult to provide assistance to the communities, and at the community level issues with transportation, a lack of funds, and other familial obligations prevent community members from being able to go to the district to receive help. While some of these limitations pertain to all FBOs, the lack of funds, as well as other familial obligations that prevent villagers from seeking help at the district level, affect women disproportionately. As will be discussed in more detail in the policy analysis section, women suffer more from financial abuses and, therefore, on average have significantly less funds than their male counterparts. Furthermore, women are expected to fulfill their domestic roles as caretakers in addition to their income-generating responsibilities, making it much more difficult for them to find free time to leave their households to attend to business at the district capital. Thus, women, and therefore women's FBOs, are disadvantaged in their ability to receive services and/or assistance from service providers in district capitals.

Table 1: Benefits and limitations of group registration by level

LEVEL	BENEFITS	LIMITATIONS
<p>'Official' National Narrative</p> <p>Regional Narrative</p>	<p>(1) Effective channels for the delivery of government funds and services (2) Easier for groups to obtain credit and input packages than individuals</p> <p>(1) Facilitates the sharing of information between the DOW and women's groups (2) DOW can more easily refer registered groups to other depts.</p>	<p>Despite being organized in groups it is still difficult to administer funds and support</p> <p>Most registered groups are only in Bolgatanga</p>
<p>District Narrative</p>	<p>Bawku Municipal</p> <p>(1) CDO used to provided trainings/ demonstrations (2) CDO now provides education to those groups that come to them (3) CDO uses groups to disseminate information to wider communities about changes in government policies (4) BEWDA provides trainings on group dynamics and financial literacy (5) MOFA provides education about agricultural practices and equitable land distribution</p> <p>Bawku West</p> <p>(1) MOFA provides support in the form of agricultural inputs (2) ACDEP gives loans directly</p>	<p>(1) Lack of funding inhibits the CDO's ability to support groups (2) Lack of staff and motorcycle laws inhibit MOFA's ability to support groups (3) MOFA's focus is more on equitable land distribution than FBOs</p> <p>Staff, budgetary and infrastructure restrictions make support delivery difficult</p>
<p>Community Narrative</p>	<p>Bawku Municipal</p> <p>Collective action yields more results than individual action</p> <p>Bawku West</p> <p>(1) Collective action yields more results than individual action (2) If a group is already registered it can be more easily identified by the district and/or NGOs and can more easily receive assistance</p>	<p>Groups can't afford to open a bank account therefore they cannot register</p> <p>(1) Individual women can't afford to join groups (the most marginalized women are still left out) (2) Groups can't afford to open a bank account therefore they cannot register (3) Putting money in the bank makes it more difficult to access in emergencies</p>

5. Policy Review and Analysis

Gender Inclusion in IWRM-related Policy Models

As previously explained, during each of the three multi-stakeholder platforms (MSP), the CPWF V4 implementing partners (including the Water Resources Commission) invited not only local farmers and community members, but also members of various water-related government ministries and departments, as well as representatives from relevant NGOs and civil society organizations, in order to more comprehensively deconstruct and analyze how all water users and relevant actors make decisions concerning the use of the White Volta River and its tributaries (Daré et al, 2013a, 2013b). This included representatives from: a) the Ministry of Food and Agriculture; b) the Ministry of Women's and Children's Affairs; c) and Community Water and Sanitation, which is a subsector of the Ministry of Water Resources, Works and Housing. Because of the WRC's mandate to coordinate government policies related to water resources management, the authors chose to focus on deconstructing those government policy models that were represented during the MSP.

The following sections describe IWRM-related policy models that attempt to identify and integrate gender-inclusivity into their objectives and strategies. The analysis is based on an extensive web-based inquiry of available data from the Ministry of Food and Agriculture, the Ministry of Women's and Children's Affairs/the Department of Women, and the Ministry of Water Resources, Works and Housing, as well as data gathered during in-depth interviews with representatives of some of those same ministries.

Women in Agriculture: The Ministry of Food and Agriculture

The Ministry of Food and Agriculture is 'responsible for developing and executing policies and strategies for the agriculture sector within the context of a coordinated national socioeconomic growth and development agenda'. The MOFA's aims are outlined in the Food and Agriculture Sector Development Policy (FASDEP) and the Medium-Term Agriculture Sector Investment Plan - METASIP 2010-2015 (Government of Ghana, 2010). The latest FASDEP objectives are explained in FASDEP II. According to the MOFA website, the mission of the ministry is 'to promote sustainable agriculture and thriving agribusiness through research and technology development, effective extension, and other support services to farmers, processors and traders for improved livelihoods'. The objectives outlined in the FASDEP II include:

- Food security and emergency preparedness
- Improved growth in incomes
- Increased competitiveness and enhanced integration into domestic and international markets
- Sustainable management of land and environment
- Science and technology applied in food and agriculture development
- Improved institutional coordination

* FASDEP II, 2007: 22 (*Government of Ghana, 2007)

While the MOFA policy addresses a variety of issues by presenting a number of strategies for various agriculture-related topics, this analysis will primarily focus on how gender is accounted for in the MOFA policies. Furthermore, the data collected by the research team will be used to help analyze and determine how the information identified by the study's participants is reflected or addressed in policy.

Gender is a key principle of both the MOFA's policy development and how the policy is implemented. According to FASDEP II, all policies and programs are designed using a gender perspective so as to 'work



Example of completed Companion Modeling tool used in MSP (represents agricultural activities identified by stakeholders for the village of Nafkuliga)

towards greater gender equality in the agriculture sector' (FASDEP II, 2007: 23). In FASDEP II, the MOFA acknowledges 'gender inequality and discrimination against women' as a crosscutting constraint in its previous FASDEP I policy (FASDEP II, 2007: 6). In more specific terms, including terms related to women and their access to resources, the FASDEP II conveys how women in agriculture are marginalized; they have limited access to land, labor, and capital, primarily due to cultural and institutional factors (FASDEP II, 2007: 11-12). In addition, women's access to land is typically restricted to usufruct rights only, and women cannot obtain credit because they do not have assets to use as collateral (FASDEP II, 2007: 11-12). While the majority of agricultural produce traders are women, official credit programs do not usually cover trading activities. In addition to these constraints, culturally, women's reproductive roles, such as bearing children, processing food and cooking, fetching water and firewood, and more generally, taking care of the family, are not considered as 'work'. Women's reproductive roles are seen as 'natural' activities. Therefore, the addition of productive roles, such as those related to farming and other subsistence or income-generating activities, tends to present more burden on women as they try to balance both their reproductive and productive roles. The FASDEP II clearly states the institutional and cultural challenges associated with women in agriculture. Furthermore, it also indicates how such conditions impede agricultural development not only for women, but for the country as well.

Even within the FASDEP II, the MOFA reveals that 'gender inequality in the agriculture sector has undermined the achievements of sustainable agricultural development, as programs and projects are not systematically formulated around the different needs, interests, roles, responsibilities, status and influence in a society of women and men' (FASDEP II, 2007: 17). This recognition of gender inequality begins with the internal structure of the MOFA. According to the policy, gender inequality within the MOFA itself is still fairly common, with only 16% of its total employees being women (FASDEP II, 2007: 17). Furthermore, the MOFA admits that only 20% of its agricultural-related services reach women (FASDEP II, 2007: 17). Increasing and improving staff gender sensitization and training programs are identified in the policy, however the necessary steps to implement these programs are lacking. In addition, the lack of disaggregated gender data hinders the ability of the MOFA to initiate gender sensitive planning for sustainable agricultural development, and subsequently affects both the male and female farmers that the

MOFA tries to assist (FASDEP II, 2007: 17). The MOFA indicates that it is necessary to establish a 'desk' to coordinate gender mainstreaming into its work as a means to tackle gender inequality in the agricultural sector and create conditions that improve the productivity of women farmers and producers. This gender desk at the national level was not examined by the authors and cannot be validated. Nevertheless, the research team did speak with district-level, female agriculture officers; detailed information regarding the role of these officers will be discussed later in this section (FASDEP II, 2007: 17).

According to FASDEP II, there are two critical issues that impede the development of women in agriculture. The first issue is the heavy workload of women farmers and producers, which subsequently undermines their activities and earnings. The second issue is poor farmers' (male and female) limited access to key productive resources such as land, credit, information, and technology (FASDEP II, 2007: 17). The policy indicates that the MOFA 'promotes the formation of viable farmer groups and farmer-based organizations with gender equity to enhance their knowledge, skills, and access to resources along the value chain, and for stronger bargaining power in marketing' (FASDEP II, 2007: 27). However, this policy fails to provide directives on how these groups would be created and how it would be implemented across the government levels.

With regard to extension services – which many male and female farmers in the UER rely upon greatly – the MOFA notes that 'public service delivery, e.g., research and extension, has come under scrutiny with concerns over sustainability' (FASDEP II, 2007: 15). According to the policy, attempts to implement extension services have come from the private sector indicating the following:

...the few pilots on the ground show that private sector service providers have their strengths in group development and business-related services rather than in the delivery of technical information. The engagement of private sector service providers for the promotion of private sector participation in extension service delivery should, therefore, be based on their specific competences as well as cost-effectiveness. (FASDEP II, 2007: 15)

NO	NAME OF GROUP	LOCATION	TRAINING NEEDS
1	Pep-Nasalar Women Group	Unglu-Naranga Panga	Soup Making
2	Aangy-kuah women group	Tyeh-Naranga Panga	Shoe butter extraction
3	Nidanga And women's group	Nidanga Panga	Soup making and bark fit and dye
4	Sugari-Yimaa women's group	Ayaram	Soup making and bark fit and dye
5	Naranga women group	Naranga	Soup making and bark fit and dye
6	GIBANDE women's group	GIBANDE	Soup making
7	YONDAGO women group	YONDAGO	Shoe butter extraction
8	Apanherang women's group	Wimaa Zabugo	Soup making and bark fit and dye
9	Aahitaa women group	Wimaa zabugo	Shoe dressing and soap making
10	Aparanga women's group	Wimaa zabugo	Dress making and soap making
11	Sahagan women's group	Wimaa zabugo	Shoe butter extraction and soap making
12	Aangy-kuah women	Wimaa zabugo	Soup making
13	Naranga women group	Naranga Central	Soup making and shoe butter extraction
14	Tinanga Trade	Tinanga Bawku Municipal	Shoe butter extraction
15	Dakul Mata-jaragai women group	Bawku Municipality	Soup making
16	Naranga Women group	Sinanga Bawku municipal	Soup making

A ZUWERA ATE'ELTAABA GROUP TWO (2)

- Name:** The name of the Association shall be known and called *Azuwera Ate'eltaaba group two (2)*.
- Motto:** united we stand
- Aims and objectives:** to bring unity to the community.
- Executive body:** membership shall be the following: **1. Chairman** **2. Secretary** **3. Treasurer**
- Membership:** membership shall be an automatic citizen of Azuware.
- Funds:** shall be on monthly and can be change any other year.
- Regulations and byelaws:** the executive body shall stay in office for a period of three (3) years after the third fresh election could be made. If any executive member misbehaves the members of the association will decide what to do to him if any executive member fails to attend meetings for three consecutive times he/she shall be dismissed. If any member of the group fails to attend meetings he/she shall be fined an amount of GH2.
- Meetings:** meetings shall be held under our grouping two times a month. This regulation and byelaws comes into being on 15th June, 2012. Under the following executives.
 - Akurugu Atampula** Chairman _____
 - Arsango Susana** Secretary _____
 - Ayaaan Dabedu** Treasurer _____

Above left: Examples of Registered Women's Groups in Bawku Municipal District
 Above right: Charter for Azuware Onion Farmers Group

During our interviews with women and with extension agents, private sector service providers were not frequently mentioned in Bawku West or Bawku Municipal. However, participants mentioned private banks requiring group registration prior to issuing loans to female and male farmers. As indicated in the above policy excerpt, the banks facilitated group formation but did not improve technical expertise. The feedback received from female farmers in both districts mirrors the FASDEP II statements.

In relation to some of the issues and concerns voiced by women in the communities, the FASDEP II does mention such matters, but again fails to provide specific directives and steps for implementation or improvement. The FASDEP II also addresses the issue of irrigation:

Irrigation is seen as a necessary instrument for the modernization of agriculture, and in particular, for reducing vulnerability of smallholders to rainfall variability. However, the expansion in irrigation is slow and the productivity of public systems is low due to poor management. Yet not much attention is given to informal systems largely patronized by smallholders. The use of small individual water lifting devices has contributed to increased food production in the Upper East Region and can be replicated in other parts of the country. Water users' associations can contribute substantially to the management of irrigation schemes but governance systems need to improve to include women. (FASDEP II, 2007: 16)

Despite this direct mention of the Upper East Region in the FASDEP policy, the women we spoke with did not describe these improved irrigation devices and often indicated that they were in need of irrigation mechanisms and potable water. The FASDEP indicates that it has a means to monitor the indicators of irrigation activities, but they do not specifically address irrigation in relation to women. For example, one particular monitoring method states that, “record number of new irrigated schemes and farm roads developed and/or started during the considered year, and number of schemes and farm roads implemented with environmental mitigation measures” (FASDEP II, 2007: 66). While conversations with women in the seven communities revealed concerns pertaining to limited irrigation resources, such as lack of access to pumps, limited access to dams, or dependency on rain-fed irrigation, there is not enough information to conclude that these ‘new irrigated schemes’ mentioned in the FASDEP policy are non-existent in the UER. However, it is fair to say that the women we spoke with have not yet been direct recipients or beneficiaries of the policy’s ‘new schemes’. In addition, the FASDEP does not indicate how the monitoring methods, with regards to irrigation, specifically target women.

In the FASDEP *Matrix of Harmonized Monitoring and Evaluation Indicators*, and with regard to gender equity and other outlined MOFA strategies mentioned earlier in this section, women are only addressed once in the ‘cross-cutting interventions and policies’ section as part of the MOFA’s pro-poor agriculture interventions. The matrix recommends ‘designing and implementing special interventions for the resource poor, including women’ (FASDEP II, 2007: 69). However, this statement provides no specific ways to monitor the intervention and its effect on women, nor does it effectively address how to incorporate women into agriculture.

The MOFA’s gender mainstreaming policy strategies include: strengthening institutional capacity for effective gender mainstreaming; advocating affirmative action in recruitment and training in the MOFA; ensuring gender disaggregation of data in the MOFA; ensuring collection, use and maintenance of gender disaggregated data at all levels; prioritizing a key gender mainstreaming strategy annually for implementation; and promoting systematic and regular gender analysis of agricultural programs to ensure they do not increase the workload of poor women and men farmers (FASDEP II, 2007: 45). However, there is no gender mainstreaming framework outlined in the FASDEP. Gender mainstreaming is not part of the matrix noted above; instead, it is only listed under its crosscutting interventions and policies (FASDEP II, 2007: 63). While the notion of gender appears to be important to the MOFA,

as it continually refers to 'gender equity' and 'gender mainstreaming' as crosscutting policies, it is not addressed concretely. Additionally, gender appears to be an 'add-on' to most of the proposed strategies and interventions and is not a main component to the agriculture policy.

In addition to outlining the MOFA's structural issues, the FASDEP also provides strategies to strengthen financial assistance through distribution and access. These strategies are outlined as follows: strengthening capacity of operators in credit management; strengthening loan monitoring; streamlining loan application procedures; intensifying education of farmers on loan procedures; promoting linkages between formal and informal financial services for delivery and recovery of loans; promoting flexibility in types of collateral demanded by financial institutions; strengthening informal and micro-financial institutions in rural area; resource poor operators to be targeted with group lending approaches; strengthening the capacity of FBOs to facilitate delivery of financial services to their members; advocating the establishment of an 'agriculture development fund' to serve as a core source of medium to long-term funding; and enhancing rural women's access to financial services (FASDEP II, 2007). However, the last strategy is the only one that makes specific mention of women with regard to financial services. There are no detailed measures outlined in the policy as to how this will be done throughout the country, nor is it accounted for in the strategy matrix.

While it is apparent that no food and agricultural policy can be fully comprehensive, Ghana's FASDEP and FASDEP II provide a basic insight as to how to address MOFA's issues and needs related to gender, finance, and ministry structure. While the policy provides information on what the issues are and what the strategies should be in order to better incorporate gender into the agriculture sector, it fails to fully address how these efforts should be implemented. Thus, creating a gap between what national policy mandates and, what can be done in reality, by those who are implementing it.

Now that the national policy has been examined, it is important to use this information when evaluating women in agriculture at the district and community levels. In Bawku West, and especially in Bawku Municipal, efforts are hindered by limited mobility and funding. In Bawku Municipal, the MOFA's director indicated that "some years ago MOFA would help processing groups by giving them machines and equipment. But because of the conflict most of the processing machines are now broken or were confiscated and we do not have the funds to do a similar program." Again, the national level strategy does not take into account the specific circumstances and implementation limitations at the district and community levels. While this may not be the role of national officials and their subsequent policies, the limitations of fully implementing policies at the district and community levels cannot be ignored. Officials and women in all of the communities identified many of the limitations associated with the suggested FASDEP II strategies. For example, many groups we spoke with indicated that they had some money in the banks, but still did not have enough money to qualify for a loan. Similarly, the FASDEP II strategies do not outline how women can increase the initial capital in their bank accounts so that they can obtain more substantial loans. Since many of the women brought up the need for irrigation, it is evident that the proposed MOFA strategies do address these needs, but fail to provide steps or directives on how to implement proposed strategies (FASDEP II, 2007: 41).

Through our interviews with the MOFA officials and farmers in both districts, we found that both men and women farmers are encouraged to establish and maintain farming groups. However, in Bawku Municipal the woman agriculture officer indicated that due to the high cost of fuel and mobility restrictions, extension agents are limited in their ability to go into communities, especially those located far away from district capitals. In an effort to assist with this, the officer has recruited women volunteers, or 'contact farmers', in the communities to serve as liaisons among the women/groups and the district MOFA office. However, according to the MOFA policy, the use of contact farmers (or in the case of Bawku Municipal, women volunteers) has worked, but can often limit the access of poor, risk-prone farmers to extension services

(FASDEP II, 2007: 15). The policy claims that extension agents 'prefer to work with farmers who are outgoing and can demonstrate ability to utilize technologies' (FASDEP II, 2007: 15). The officer's efforts, however, appear to be more basic, and focused primarily on sharing information and providing support.

The officer also noted the limited funds that the MOFA in Bawku Municipal now receives. As a result, the MOFA's primary purpose in relation to women is to conduct and provide education related to land. She (the officer) indicated that land is traditionally not given to women as stated in the MOFA's policy. However, the circumstances have changed slightly over the years. Now, women are being given land, but the land is unproductive. The MOFA now tries to meet with opinion leaders in communities to encourage men/husbands to release productive land to women/wives for farming. The MOFA in Bawku Municipal is also doing a livestock project where women in the district are given livestock to rear, as well as provided with seeds and fertilizers. The MOFA officers explained that they prefer to work with groups, but as the groups tend to not own land (land ownership is traditionally based on kinship rather than FBO membership), much of the government subsidies are given to individuals instead. The MOFA in Bawku Municipal works with the Bawku East Women Development Association, but indicated that they do not work with the Community Development Office (CDO), despite the CDO's assertion that the MOFA was one of its primary 'partners'.

Comparatively, the MOFA in Bawku West encouraged the formation of groups. Through our conversations with an agricultural extension agent, we learned that the MOFA in Bawku West appears to be more active in assisting with registration of groups, etc. than in Bawku Municipal. This could be a result of the mobility restrictions that affect extension agents in Bawku Municipal. Extension agents in Bawku West are more mobile and thus may have greater interaction with groups due to greater accessibility. Many of these strategies were expressed by both officials and women in all of the Bawku West communities. At the district level, efforts by the MOFA to assist women and women's groups are limited. The need for financial support was listed as a primary concern for the overwhelming majority of the groups interviewed. As mentioned previously, the FASDEP II strategies do not provide clear steps as to how women can increase initial capital in their bank accounts, so that they can obtain additional financial assistance for the operation of their particular group activities.

At the community level, the structure of the community leadership also greatly affects group operations. For example, when asked who or which office they sought assistance from, the majority of the women's groups responded that they did not know who to ask. For most groups, if they had a problem that needed to be addressed, they would either ask the Queen Mother or the Chief. This type of response reveals that many of the groups function and operate within the community level only. Besides the process of group registration, which requires them to seek assistance from district level officials, women's groups still function within traditional power structures, deferring to the rules of the Chief, Queen Mother, and community leaders rather than those at the district offices. When asked who they would seek assistance from when facing a problem, women's groups rarely identified their assembly member as a primary source of assistance; and if they identified their assembly member at all, it was only after additional probing. While there is a national policy that outlines how to better assist women in the agricultural sector, the policy is only effective if those for whom it is written are aware of the policy to begin with. As mentioned above, women at the community level still primarily function within the realm of traditional governance. They can and do seek assistance from district officials, such as the extension agents and officers of the MOFA, but the women of both districts still remain marginalized despite the efforts to improve the status of women in agriculture at the national level. The framework for gender-inclusivity exists, but it is not translatable in the context of both districts and their communities.¹⁰

¹⁰ The research team was unable to speak with a representative from the MOFA at the regional level

The Ministry of Women's and Children's Affairs

The Ministry of Women's and Children's Affairs (MOWAC) is Ghana's national governing body charged with coordinating and implementing national level policies focused on the promotion of gender equality and progressing the rights of women and children. The MOWAC's mandate is to 'formulate policies to promote gender mainstreaming across all sectors that will lead to the achievement of gender equality and empowerment of women and facilitate the survival, development and growth of children' (MOWAC, 2012). The MOWAC focuses primarily on issues such as human trafficking, early childhood care and development, and domestic violence. The ministry's main policy is the 'National Gender and Children Policy (NGCP)', whose overarching goal is 'to mainstream gender and children's concerns in the national development process in order to improve the social, legal/civic, political, economic and cultural conditions of the people of Ghana, particularly women and children' (Government of Ghana, 2004). The primary policy objectives include:

- Redressing imbalances that arise from existing gender inequalities through policy review, legal reforms and enforcement of existing legislation
- Providing a national framework from which policies are derived
- Implementing activities designed to strengthen women's roles in economic development
- Implementing activities designed to promote children's development and protection
- Promoting women's equal access to, and control over economically significant resources and benefits
- Enhancing the survival, development and protection of children (NGCP, 2004: 11)

While there is no explicit link made in the policy document between these stated objectives and IWRM/natural resources management, the fifth objective noted above could easily be interpreted as relating to water use and management. Unfortunately, more specific strategies are not provided for how to promote a more gendered understanding of access to, and control over, economically significant resources. The NGCP document does identify water, hygiene and sanitation (WASH) as an integral aspect in national development strategies, but focuses more on framing water in the discourse of health than in natural resources management. Again, however, the MOWAC and the Department of Women were identified by the WRC and CPWF V4 implementing partners as important decision-makers in IWRM-related interventions, primarily because women are the largest users of water in the region.

Finally, the policy explicitly states that the responsibilities for program implementation aimed at gender-inclusive poverty reduction and development belong to the local district assemblies (NGCP, 2004: 21). Currently, the main strategies of policy implementation include education and sensitization programs administered through the district level 'gender desk officers' (GDOs). The GDOs are part of the district assembly (DA), and are responsible for coordinating activities and programs related to gender at the district level, including disbursing public funds and gathering and processing data concerning gender programs. The document provides recommended strategies for DAs to consider when addressing poverty reduction programs, including 'enhancing capacity' and 'ensuring equitable devolution of power' (NGCP, 2004: 22). Unfortunately the strategies lack specificity, including clearly defined indicators and measurable outcomes.

The MOWAC is supported in its work by two departments: the Department of Children and the Department of Women. These departments are considered 'the implementing agencies in the delivery of MOWAC's mandates' (MOWAC, 2012). The ministry strongly emphasizes promoting a multi-sectoral approach to gender and development in which the regional-level departments act as 'umbrella organizations' that support coordinated action across and between various other government departments.



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The MOWAC recognizes its responsibility to work closely with other ministries, organizations, and sectors not only in policy planning; but also in monitoring and evaluation due to the stated understanding that issues relating to women and children are 'cross-cutting' (MOWAC, 2012).

According to the Acting Regional Director of the DOW in Ghana's Upper East Region, the ministry emphasizes that at the regional-level each department should take a region-specific approach to addressing women's issues and concerns, resulting in varying mandates for each regional office. In the Upper East Region, the mandate of the Department of Women is focused primarily on female genital mutilation and women's equality (gender-based violence is included under the purview of promoting women's equality). The department achieves these mandates through education and sensitization programs. In our first interview with the Acting Regional Director, a strong emphasis was placed on the role of the department as an 'umbrella organization' through which multiple sectors and organizations could collaborate and work together to achieve this mandate. This primary identity as an instrument of facilitation and collaboration is important, because it adheres to the official national narrative of the role of the MOWAC and its supporting departments. Furthermore, it creates the impression that the institutional linkages in place in the Upper East Region are relatively strong and aimed at promoting a gender-inclusive approach to development in all the sectors. The Acting Regional Director repeatedly emphasized that the department 'works through allies', which includes a variety of actors and stakeholders, from representatives from other regional offices such as the Department of Social Welfare and Community Water and Sanitation, to NGOs and other formal and informal women's groups and networks.

A deeper analysis of the Department of Women and its supporting policies, however, highlights certain discrepancies between what the MOWAC/DOW and its policies claim to be doing and the actual issues and concerns raised by the women with which we spoke.

Despite the national and regional rhetoric on departmental collaboration, regional and district level departments continue to be plagued by certain structural barriers, e.g., limited finances and staff that inhibit their ability to collaborate effectively. In our follow-up interview with the Acting Regional Director, when describing to her the types of issues and concerns that the women identified during our fieldwork, including issues related to health (potable water and clinics), education (day care services), and access to loans and capital; she made it clear that those types of issues were the responsibility of other ministries, such as the Ministry of Health or the Ministry of Education and, therefore, did not fall under the department's regional mandate of female genital mutilation and gender-based violence. When asked why she thought that the majority of issues and concerns identified by the women of the UER were not being addressed by the DOW, she responded that the department's limited purview, resources and staff made it difficult to address women's issues that fell outside the realm of FGM and GBV. According to the Acting Regional Director, "many of the households are still very patriarchal and male-dominated and women are seen as submissive, therefore there are many cases of domestic violence that occur that go mostly unreported." The primary policy that is used and distributed in the Upper East Region through the Department of Women is the Domestic Violence Act (Act 732). However, domestic violence was not mentioned as a primary issue or concern in our conversations with the women of the Upper East Region. The Acting Regional Director did, however, express that, in reference to the concerns identified by the women about their own financial constraints, the Domestic Violence Act explicitly links economic abuse to a form of 'non-maintenance' domestic violence. According to her, men are culturally responsible for providing income for household consumption goods and services, such as children's school fees, but in most households male income is not contributed to the overall household structure; instead it is kept and spent on things like alcohol and cigarettes. This is characterized as non-maintenance domestic violence. Unfortunately reporting rates of non-maintenance domestic violence cases are extremely low and less prominence is given to 'economic abuse' in the Domestic Violence Act 732 when compared to physical and emotional abuse. Thus, little is currently being done to address economic abuses. Furthermore, it is a safe assumption that the women most likely felt uncomfortable or unsafe discussing such sensitive and private issues with outside researchers. It is interesting to note that very few of the other issues and concerns identified by the women in the focus group discussions were identified as important focus areas by the UER's Department of Women.

When probed as to why the department didn't extend its mandate to include these broader issues and concerns, the response was repeatedly limited resources, staff and time. Despite being unable to identify more systemic reasons for such a restrictive focus on FGM and GBV, we can hypothesize that the broader structural environment, dictated largely by certain funding streams and stipulations, has resulted in regional departments' prioritization of certain issue areas over others. Addressing gender equity issues such as FGM and GBV through the department's current strategies of sensitization workshops is a more 'popular', or rather more 'fundable', approach than is addressing productivity restrictions like the ones identified by our focus groups. While addressing issues like FGM and GBV is undoubtedly important, it is only part and parcel of the broader environment in which women function. This is not to say that production-related issues are more important than rights-based issues; rather both need to be addressed simultaneously for true gender inclusion and equity to be achieved.

What this discrepancy highlights is how important it is to have comprehensive data on women for any program initiative, anywhere. The department would benefit greatly from an increased understanding of the production-related issues that women in the UER currently face in conjunction with issues related to FGM and GBV. Understanding how these separate issue areas are related to each other could also provide

opportunities for more holistic programming efforts. For example, instead of organizing sensitization workshops for women on FGM and GBV, the gender desk officers in each district could partner with the MOFA extension agents to deliver FGM and GBV education during women's production-related farming group meetings, thereby more effectively addressing the broader spectrum of production issues and rights-based issues simultaneously. Increased partnerships across departments as well as with national and international NGOs would also benefit the department greatly. So many of the NGOs currently operating in the Upper East Region are focused on women's issues, and by working through partnerships with these NGOs, the DOW could easily address the broader spectrum of women's issues that go beyond FGM and GBV. Although the rhetoric of collaboration currently exists, the institutional linkages between organizations and departments seem low or non-existent.

Women and Water: The Ministry of Water Resources, Works and Housing, Community Water and Sanitation, and the National Water Policy

Finally, the Ministry of Water Resources, Works and Housing (MWRWH), and its accompanying National Water Policy (NWP) - influenced largely by IWRM rhetoric and policy recommendations - attempt to achieve gender-integration by including a 'gender mainstreaming and good governance' focus area in the NWP (Government of Ghana, 2007). This focus area, however, falls only under the responsibility of the Community Water and Sanitation (CWS) subsector, one of many subsectors in the MWRWH, and the gender and policy recommendations take up only one page of the seventy-page NWP document.

The policy identifies two challenge areas to gender mainstreaming and good governance in Ghana: (1) adhering to the principle of integration of women and gender sensitivity; and (2) ensuring active involvement of women in decision making, promoting transparency and accountability (NWP, 2007: 50). These two challenges highlight the difficulties in not only incorporating a gender perspective into policy, but also ensuring that women are represented in decision-making processes. In order to overcome those listed challenges, the NWP outlines two specific objectives and three measures and actions. The objectives are: (1) to ensure active participation of women as a tool for empowering them to take responsibility of water and sanitation issues at all levels; and (2) to ensure that there are transparent processes for accountability of managing and delivering the NCWSP (National Community Water and Sanitation Program) -- (NWP, 2007: 50). The measures and actions include: (1) empowering women through training at all levels to perform their roles in part with their male counterparts; (2) ensuring accountability and transparency through timely reporting and participatory discussion of results; and (3) facilitating effective coordination of the sector and harmonizing development partner (DP) activities and collaboration, particularly between the MWRWH (Ministry of Water Resources, Works and Housing) and MLGRD (Ministry of Local Government and Rural Development) -- (NWP, 2007: 50). What these policy objectives and measures/actions fail to specify are the actual steps necessary to implement said recommendations. For example, what does 'active participation of women' actually look like in practice, and what are women's 'roles' in relation to 'their male counterparts'? Furthermore, the policy objectives and measures/actions are so specific to the water, sanitation and hygiene (WASH) sector that they fail to address the social, economic, cultural and political facets of water use for production, subsistence and well-being that go beyond WASH-only frameworks and interventions.

Interestingly, the DOW's Acting Regional Director did relay that the department had recently been identified as a key stakeholder by the Community Water and Sanitation subsector based on the recognition that the responsibility for many water-related activities, such as fetching water, fall disproportionately on the shoulders of women, proving that there is room for potential collaboration between governmental sectors in relation to gender. During our follow-up interview, she explained that this stakeholder identification was an important acknowledgement of the CWS in their commitment to ensure that their approaches to water management at the community level are truly gender-inclusive. As previously

mentioned in the review of the National Water Policy, one of the primary policy objectives to ensuring gender mainstreaming and good governance included the ‘active participation of women.’ The CWS is responsible for a number of Water and Sanitation Boards, which have in the past included at least one female representative (NWP, 2007: 43). However, as the Acting Regional Director explained:

“Before, if you looked at the Water Boards at the community level, they (the CWS) would pick seven or eight men and just one woman to be on the Board, and they called that gender. They think just because they included one woman means they think they are addressing gender issues”.
(Action Regional Director, Department Of Women)

What this excerpt showcases is how in many instances just because a woman might be placed in a position of leadership, due usually to ‘gender-inclusive’ requirements mandated by NGOs and/or governments, that doesn’t necessarily equate to ‘gender-sensitive’ outcomes such as the meaningful engagement of women in decision-making processes. The Acting Regional Director further stated that she hopes the newfound partnership between the DOW and CWS would prove beneficial and help both the Department of Women and the Ministry of Water Resources, Works and Housing achieve their individual mandates of collaborating to promote gender-inclusivity.

6. Conclusions and Recommendations

Women in the Upper East Region (UER) are engaged in an expansive array of activities, relationships, systems and structures that, on the one hand pose barriers to their inclusion in broader decision-making processes, and on the other hand offer opportunities to integrate them more systemically into IWRM-related policies and initiatives. The baseline data presented in this paper provides a more comprehensive and foundational understanding of women-specific activities, issues, concerns and social groupings/FBOs in the UER. Taken in conjunction with the work currently being conducted by the Challenge Program on Water and Food V4 Project to support on-going IWRM policy initiatives in the White Volta watershed, the conclusions and recommendations of this paper outline ways to more meaningfully and appropriately target participative gender-inclusion strategies for those IWRM initiatives focused on coordinating government policies directed at water resources management. We will align our conclusions and recommendations with the four initial primary aims of this investigation: (1) identified women's activities; (2) identified women's issues and concerns; (3) ways in which women's social groupings reflect their activities, issues and concerns; and (4) recommendations for addressing women's activities, issues, concerns and social groupings in IWRM-related policy models.

Aim 1: Identified Women's Activities

Women in the UER, as elsewhere in Africa, are engaged in multiple activity areas, including farming, processing, and trading/retailing, and many of these activity areas are highly gendered. This is an important conclusion in and of itself because, as previously mentioned, having accurate and comprehensive baseline data is integral to creating and implementing contextually appropriate gender-inclusive policies in general, and IWRM-related policies in particular. However, understanding the broader array of women-specific activity areas is likewise important in that it sheds light onto the multifaceted, and time-bound, lives of women in general. While most women identified themselves first and foremost as farmers, they also demonstrated that they are not exclusively farmers, but are additionally mothers, wives and caretakers, as well as economic actors engaged in additional non-farming related endeavors. The identification as mothers, wives and caretakers, and the activities that are thusly related to these categories, is insurmountably important when understanding and taking into consideration women's activities and time budgets. Work done by women as mothers, wives and caretakers is referred to as unpaid care work, or tasks that women are expected to engage in (such as housework, cooking, caring for children, the sick and elderly, etc.) whether willingly or unwillingly, but for which they receive no form of monetary compensation (Budlender, 2002:3). Unpaid care work is an important concept to consider in relation to policy reform, because unpaid care work many times limits the 'time available for (paid) productive work' as well as limits women's 'choices of income-earning activities' (Budlender, 2002: 7). This is why women's additional income-generating activities are highly gendered, and usually specific to processing and retailing. While farming as an activity supplements the family's food supply, the processing and retailing activities provide the supplementary income that is necessary to cover those additional household expenditures, such as school fees that their male counterparts struggle to provide, due to larger economic and social factors such as the outmigration of male labor. Thus, **this combination of unpaid care work, farming, and additional income-generating activities, when taken together, show that women's time budgets are extremely restricted.**

Recommendation:

We recommend that time budgets be extensively considered when designing policies that address gender-inclusion; policies and programs should be incorporated into those activities that women are already involved in so as to prevent adding even more activities and expectations (such as being arbitrarily placed on water user associations whose meetings are time consuming and usually located far away) to the purview of 'women's responsibilities'. Instead of creating additional water-governance structures that



Woman processing stone to sell to a concrete distributor (identified as a women-specific income-generating activity in addition to farming responsibilities)

include women, the focus of IWRM policies and initiatives should include more vigorous efforts to incorporate women in the decision-making structures that are already in place.

Aim 2: Identified Women's Issues and Concerns

There are a number of women-specific issues and concerns that are directly linked to the activities they engage in, but many of these issues and concerns are being poorly addressed by policies. As previously highlighted in the policy analysis section of this paper, the MOWAC policies tend to target equity issues such as female genital mutilation and gender-based violence over productive issue areas such as increased access to agricultural inputs like seeds and fertilizer. The MOFA policies target equitable access to irrigation, strengthening women's groups and providing women with improved access to financial services and land. While these policies clearly recognize many of the concerns that women have, particularly in relation to irrigation and financial assistance, they fail to provide a detailed framework of how to appropriately address these issues and concerns with regard to both women's reproductive and productive roles.

Recommendation:

We recommend there be a focus on understanding and addressing women's issues and concerns more comprehensively by addressing production-related issues in conjunction with issues related to FGM and GBV. Understanding how these separate issue areas are related to each other could also provide opportunities for more holistic programming efforts. For example, instead of organizing separate sensitization workshops for women on FGM and GBV, gender desk officers in each district could partner

with MOFA extension agents to deliver FGM and GBV education during women's production-related FBO meetings. This strategy would not only allow the broader spectrum of production issues and rights-based issues to be addressed simultaneously and more effectively, it would also take into consideration women's time budgets. Doing so would likewise allow extension agents to facilitate discussions about women's rights and decision-making processes more generally (at both the household level and at the policy level), hopefully solidifying the linkages between the two, thereby promoting empowerment approaches at a more systemic level.

Aim 3: Identified Social Groupings

While informal collective action is not a new occurrence in West Africa, formal collective action (collective action encouraged by governments and/or NGOs) such as registered farmer-based organizations have become the preferred vehicles through which to overcome barriers associated with rural agricultural development. Therefore, women (and men) form FBOs (either independently or through the recommendation of local governing bodies) to pool certain resources such as capital, labor, and knowledge, and to more easily gain access to available support and services such as agricultural inputs and financial assistance. Government departments recognize that **services are easier to disburse to FBOs over individuals, but despite this recognition service provisioning is still difficult due to logistical barriers involving staff, budgets, and transportation on the part of government; and limited time, mobility and income on the part of the farmer.** Furthermore, a certain catch-22 situation concerning whose responsibility it is to initiate contact, (i.e., do local governments reach out to farmers, or should farmers reach out to their government representatives and ask for help) plagues the system, making government service provisioning through FBOs inefficient.

Finally, even though women recognize the value of operating in groups in order to alleviate challenges and fulfill mutual support functions, they still rely heavily on traditional community governance structures such as chieftaincies to represent and/or advocate for their needs. As expressed in our focus groups, if a woman's group does encounter an issue they report it to the village Queen Mother who then communicates it to the Chief. Because this structure of legal pluralism grants the Chief decision-making primacy in noncriminal matters (Laube, 2007: 423), women's issues are dealt with primarily at the local level. Women's interactions with district and regional level officials remain limited, making it difficult for policymakers to explicitly detail steps for gender-inclusion in policies that are attempting to improve women's social and economic livelihoods.

Additionally, our research suggests that **women form groups only with other women in their own communities and, as such, they are fairly isolated from potentially larger social networks.** This can present barriers to the flow and spread of knowledge that could facilitate women's broader engagement. While additional literature suggests that there are women's 'marketing groups' that are much larger and embedded in extended value chains formed at multi-village markets, this research was unable to identify these extended networks. **Integrating locally isolated women's production, processing and multipurpose FBOs into these larger marketing FBOs could not only increase the visibility of women's groups, but also provide a leverage point for improved productivity.** For example, based on the discovery that guinea fowl rearing is a women-specific activity, the creation of a women's guinea fowl production FBO that also includes a mutual support function (potentially through a rural micro-savings and lending structure) and is connected to a larger marketing FBO, could ensure that FBO's goods reach larger regional traders and/or urban markets, thereby increasing their productivity.

Linking local production, processing and multipurpose FBOs to larger marketing FBOs, and thus to larger, multi-village markets is vital. Marketing FBOs allow local goods to move to larger markets along value chains previously inaccessible to local farmers. This not only allows for the greater dispersion of goods, but also prevents those good from over saturating local markets, thereby lowering prices. According to authors

Thompson, et al., governments, donors and NGOs across sub-Saharan Africa are ‘rushing to promote the scaling up and diversification of farmer organizations’ activities and membership’ (Thompson, et al., 2009: 1). However, ‘with often meager resources and limited organizational and technical capacities, many FBOs need external support to start-up and/or expand their operations’ (Thompson, et al., 2009: 1). Without the right ‘seed/input provisioning, extension and education, market access, and advocacy and policy engagement’ FBOs could easily become another ‘development disappointment’ (Thompson, et al., 2009: 1). Therefore, it is not enough for government policies to simply support the formation of production and processing FBOs rhetorically (which is the case currently), but they (or the private sector) must also support the creation of an enabling environment – whether through infrastructural development, i.e., better roads to move goods, reformed tax structures and incentives for the production of certain goods etc. - to ensure that there is a demand for local goods at larger, urban markets. Shifting the focus from only creating FBOs, to ensuring those FBOs are supported in their operations, will likewise have a direct effect on how water resources like the White Volta River are managed, by who, and for what purposes.

Recommendation:

Therefore, we propose three recommendations to achieve the inclusion of FBOs in IWRM-related policies in the UER. First and foremost, government ministries and departments should undergo gender audits in order to reorganize and reallocate staff, time and resources to facilitate the creation of FBOs. Second, there should be increased interactions between women’s FBOs and local governments so that women don’t rely exclusively on traditional chieftaincy power structures to rectify any problems they may encounter. This is not to propose that women should circumvent their Queen Mothers and Chiefs, but rather the pluralistic legal configuration should include more accountability structures between traditional authorities and elected officials. And finally, governments and other involved actors should focus not only on supporting the creation of processing and production FBOs by providing goods and services such as fertilizers, seeds and capital for increased household production, but must also either support the creation of marketing FBOs or support/create enabling institutional and policy environments such as building better roads to transport goods to larger urban markets or increasing demands for certain products or both, in order to ensure that goods produced by FBOs don’t over saturate their own local markets.

Aim 4: Addressing Gender-Inclusion in IWRM-Related Policy Models

As was demonstrated in our policy analysis, **the rhetoric of gender-inclusivity is evident in most, if not all, IWRM-related policy documents. However, the means and resources to achieve gender integration do not exist at present.** For example, the MOFA’s FASDEP II recognizes the weaknesses surrounding gender inclusion in its first FASDEP policy, and thus offers ways to better incorporate ‘gender’ into the MOFA program and project implementation, data analysis, and monitoring and evaluation strategies. However, FASDEP II does not specifically outline objectives or delegate resources on how to actually ensure gender mainstreaming and integration in districts and communities. Currently, there is great potential for collaboration among sectors (at least rhetorically), and the recent partnership between the Department of Women and Community Water and Sanitation serves as a promising example of this.

Recommendation:

Part of bridging the gap between rhetoric and action includes using tools such as innovation configurations and multi-stakeholder platforms (MSPs) in order to identify all relevant actors, motivations, opportunities and constraints for a given issue or policy-area. However, **MSP dialogues must go beyond simply facilitating discussions and spreading rhetoric, and include developing stakeholder commitments to institutional and policy reforms that are implementable and actionable.** Furthermore, the policies that currently exist should include more clearly defined indicators and measurable outcomes in order to go beyond the rhetoric of gender mainstreaming to show exactly what is meant by that phrase. For example, instead of using phrases like ‘enhancing capacity’ and ‘ensuring equitable devolution of power’

(Government of Ghana, 2004, which are ambiguous and do not provide clear pathways of measurement, policymakers can create outcomes like ‘women and men participate in decision-making in private and public more equally’, which can then be measured by indicators such as ‘has the influence of women on decision-making increased in relation to that of their male counterparts?’ (Moser, 2007: 21). While this may not fall under the responsibility of national policymakers, it is important that at least regional and/or district level policymakers consider exactly what they want their policies and programs to achieve, and then create contextually-specific and gender-sensitive indicators and outcomes that will not only help guide gender-inclusive policy implementation, but will also hold them accountable to their commitments on gender (Moser, 2007: 1).

In summation, while this study is in no way exhaustive of the entire UER, it does provide more comprehensive baseline data and insights into the complex lives of women in the region. **Ultimately it can be concluded that national IWRM-related policies focused on agriculture, gender, and water-use are at least attempting to achieve gender-inclusivity in their strategies and objectives. All the same there still remains a pervasive disconnect between what these policies aim to achieve, and the realities and implementation barriers that still exist at the regional and district levels.**

Action-research projects like the CPWF VBDC are invaluable in their ability to link scientific and expert knowledge with indigenous knowledge about ecosystems and natural resources management. However, as stated in the introduction of this paper, indigenous knowledge includes the perceptions of both males and females, and is contextually and geographically specific to those populations. Therefore, for a project like the CPWF V4, whose objective includes supporting on-going IWRM policy initiatives in the White Volta watershed, to be successful, it must be grounded in a comprehensive understanding of not only women’s perceptions (including what they do, what they care about, and how they organize themselves), but also how policies related to land and water management are attempting to address and include these women’s perceptions, and for what purposes.

The conclusions of this study can provide valuable insights to organizations like the CGIAR’s Challenge Programs on Water and Food on how to appropriately integrate women into future research and programming efforts, by taking into consideration women’s time budgets, what women care about, and women’s processes of social organization. In so doing, the implementing partners of CPWF V4 can work more effectively with other actors, such as government ministries, in order to support institutional and policy reform that can bridge the gap between rhetoric and action. In addition, **this study’s proposed recommendations will hopefully engage government officials and involved nongovernmental organizations to improve current policies to ensure that women’s inclusion and participation is more meaningful and representative of their lived realities; barriers that prevent their inclusion are more concisely targeted; and potential opportunities that can lead to their own empowerment and equality are correctly developed and utilized.**

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Appendices

Appendix A: Women's Activities

Type	Activity
Household Chores	Sweeping Compound Cooking Fetching Water Gathering Firewood
Livestock Rearing	Small Ruminants Guinea Fowl
Farming Dry Season	Weeding Onion Pepper Okra Lettuce
Rainy Season	Rice Maize Sorghum/Millet Soybeans
Processing	Sorghum Malt Processing Rice Processing Dawa-dawa Processing Shea Nut/Butter Processing
Production	Pito Brewing Porridge Making/Selling
Trade/Retailing	Fish Fertilizer Petty Trading Cement
Professional Occupations	Hairdressers Tailors

Appendix B: Groups Identified in Interviews and Focus Groups*

*Note: Entire groups were not interviewed, but at least one representative from each group was present during focus group discussions

Community	Group Name	Group Purpose
Binduri	Asungtaba	Shea butter extraction, dawa-dawa processing, rice processing
	Ateygam	Petty trading, malt processing, spice trading
	Madagile	Rice parboiling, shea butter processing
Nafkuliga	Asungtaba	Weeding
	Pito Brewing Groups	Pito Brewing
	Rice Processing Group	Rice Processing
Bansi	Asungtaba	Onions, dawa-dawa, shea butter
	Atelataba	Dawa-dawa processing
	Almalteng	Soy beans, rice
	Asongteng	Pito brewing
Zongoyiri	Mother to Mother	Organized by the clinic for health education
	Asungtaba	Pool labor, capital and knowledge – purpose varies depending on need
Binaba	Asungtaba	Pito brewing
	Ate'el taaba	Onions, rice
Widnaba	Anungtaba	Women's farming group
	Zalego	Mixed farming group

Appendix C: Interview/Focus Group Discussion Guides for Women

I would like to first thank you for agreeing to meet with us today. My name is _____, and this is _____. We are from the International Water Management Institute (IWMI) and we want to ask you some questions about women in your community; how they're connected and what their issues and/or concerns are. We are talking to many people within your community and other surrounding communities. With the information you provide us we hope to better understand what you do, and what is important to you.

We will be taking notes, but we would like to tape-record our discussion so we can refer back to points you raise, and so we also do not miss anything you say. Our discussion will remain completely confidential. The information you provide will only be used for this particular project. Is it okay to tape-record the discussion? _____.

I will also be writing down your answers as you provide them. Again, your responses will only be shared with the research team. If at any point you do not feel comfortable answering one of our questions, please let us know. Our interview will last approximately one hour. Are there any questions before we start?

(Sub-bullets are possible probes and/or follow-up questions)

1. Please tell us about yourself (name, age, what you do, etc.)
2. Tell me about your 'typical' day. What do you do during a typical day? (Activities)
 - a. What activities do you do on your own?
 - b. What activities require you to interact with other people?
 - i. Who are those other people? (*names/numbers/position*)
 - c. Which of your activities do you need/rely on water?
 - i. How?
3. What do you talk about with other women?
 - a. *Generate a list of issues. For each issue identified:*
 - b. With whom do you talk about issue/concern X? (*names/numbers/position*)
 - i. If they identify a group/assn/org → ask "group" questions
 - ii. If they identify an individual → ask the following questions
 - c. Where is she located?
 - d. How often do you interact with that person?
 - e. What do you 'do' with that person, (e.g. do you just talk, or do you ask for support/help, make a decision, sell/buy/exchange information, etc.)?
 - f. Who else is important to consider for this activity, even if you do not interact with her?
 - g. If I had to meet a few of the people you have just mentioned, which ones would you recommend and why? Could you please give me their contact details?
 - i. *If they don't have their contact information, ask if they know someone who does.*
4. What do you talk about with men?
 - a. *Generate a list of issues. For each issue identified:*
 - b. With whom do you talk about issue/concern X? (*names/numbers/position*)
 - i. If they identify a group/assn/org → ask "group" questions
 - ii. If they identify an individual → ask the following questions
 - c. Where is he located?
 - d. How often do you interact with that person?
 - e. What do you 'do' with that person, (e.g. do you just talk, or do you ask for support/help, make a decision, sell/buy/exchange information, etc.)
 - f. Who else is important to consider for this activity, even if you do not interact with him?
 - g. If I had to meet a few of the people you have just mentioned, which ones would you recommend and why? Could you please give me their contact details?
 - i. *If they don't have their contact information, ask if they know someone who does.*
5. How/do you think women can address these issues and concerns?
6. Which groups/associations/organizations are you involved in?
 - a. Who do you interact with and for which purpose? (*names/numbers/position*)
 - b. Which of these groups/associations/organizations are exclusively for women?
 - c. Where do these groups/associations/organizations meet?

Appendix D: Individual Interview Guides for Government Representatives

I would like to first thank you for agreeing to meet with us today. My name is _____, and this is _____. We are from the International Water Management Institute (IWMI) and we want to ask you some questions about the work that you do in the region/district and how it relates to women. We are talking to many people within the region and districts. With the information you provide us, we hope to better understand what this ministry/department does and why.

We will be taking notes, but we would like to tape-record our discussion so we can refer back to points you raise, and so we also do not miss anything you say. Our discussion will remain completely confidential. The information you provide will only be used for this particular project. Is it okay to tape-record the discussion? _____.

I will also be writing down your answers as you provide them. Again, your responses will only be shared with the research team. If at any point you do not feel comfortable answering one of our questions, please let us know. Our interview will last approximately one hour. Are there any questions before we start?

1. Please tell us about yourself (name, age, what you do, etc.)
2. What do you do during a typical day (activities)?
 - a. *Sub-question:* how important are women for your activities?
3. Does this department belong to/participate in any group/associations/organizations (which one)?
 - a. *Sub-question:* can you tell us who else participates in this group/org/association – identify departmental linkages
4. Which activities does this department focus on? Are any of these exclusively women's activities? Does it require collaborative action? If so, how does that collaborative action happen?
5. Regarding activities XXX:
 - a. With whom do you interact? (men and women)
 - b. Where is this person located?
 - c. How often do you interact with her/him?
 - d. What do you 'do' with that person, (e.g., do you just talk, or do you ask for support/help, make a decision, sell/buy/exchange information, etc.)
 - e. Who is important to consider (even if you do not interact with her/him)
 - f. If I had to meet few of the persons you mentioned previously, who will they be? Why? Can you give me their contact details?
6. What do you think are women's issues/concerns in the area?
7. How are those concerns addressed and by whom?
8. Regarding water (and more broadly natural resource management):
 - a. With whom do you talk?
 - b. Where is she located (community, another community, district, Bolga, elsewhere)
 - c. How often do you interact with that person?
 - d. What do you 'do' with that person, (e.g., do you just talk, or do you ask for support/help, make a decision, sell/buy/exchange information, etc.)
 - e. Who else is "important" to talk to regarding issue/concern X (even if you do not interact with her/him)
 - f. If I had to meet few of the persons you mentioned previously, who will they be? Why? Can you give me their contact details?

About CPWF

The CGIAR Challenge Program on Water and Food was launched in 2002, with the aim to increase the resilience of social and ecological systems through better water management for food production (crops, fisheries and livestock). We do this through an innovative research and development approach that brings together a broad range of scientists, development specialists, policy makers and communities, in six river basins, to address the challenges of food security, poverty and water scarcity.

The CPWF is part of the CGIAR Research Program on Water, Land and Ecosystems. WLE combines the resources of 11 CGIAR centers and numerous international, regional and national partners to provide an integrated approach to natural resource management research. The program goal is to reduce poverty and improve food security through the development of agriculture within nature. This program is led by the International Water Management Institute (IWMI).

www.cgiar.org www.waterandfood.org

Mailing address

CGIAR Challenge Program
on Water and Food
P.O. Box 2075, 127 Sunil Mawatha
Pelawatta, Battaramulla, Sri Lanka
T: +94 11 288 0143
F: +94 11 278 4083
E: cpwfsecretariat@cgiar.org

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