



UPPSALA
UNIVERSITET

Examensarbete i Hållbar Utveckling 53

Women's Role and Participation in Water Supply Management -

The Case Study of the Republic of Ghana

Karolin Svahn

INSTITUTIONEN FÖR GEOVETENSKAPER

Women's Role and Participation in Water Supply Management

- The Case Study of the Republic of Ghana

Master thesis in Sustainable Development
Karolin Svahn

Institutionen för Geovetenskaper
Uppsala Universitet
2011

Table of Contents

Acknowledgements	5
List of Abbreviations and Acronyms	6
1. Introduction	7
1.1. Scope of the Research.....	7
1.1.1. Thesis Purpose	7
1.1.2. Research questions.....	8
1.1.3. Constraints of the Study	8
2. Methodology & Research Design.....	8
2.1. Literature Review	9
2.2. Document Analysis.....	9
2.2.1. Content Analysis.....	9
2.2.2. Comparative Analysis.....	11
2.3. Interviews	11
3. Background.....	12
3.1. The Republic of Ghana Country Profile	13
3.1.1. Water accessibility	13
3.1.2. Water Management	14
3.1.3. Cultural Environment.....	15
3.1.4. Integrating the Aspect of Gender	16
4. Theoretical Framework – Participation	16
4.1. Female Participation	17
4.1.1. The Concept of Gender	17
4.1.2. Cultural Rules and Norms.....	18
4.1.3. Social and Economic Issues and Challenges	18
4.1.4. Increasing Female Participation – Approaches	20
5. Results, Analysis and Discussion	23
5.1. Women’s Roles and Responsibilities	23
5.1.1. Water Collectors	23
5.1.2. Treasurers	24
5.1. Female Participation - Issues and Challenges.....	24
5.1.1. Traditional Norms and Practices.....	25
5.1.2. Education and Illiteracy	27
5.1.3. Time Allocation	29
5.1.4. Power Imbalances	30
5.1.5. Motherhood.....	31
5.1.6. Women’s Ability to Pay for Water – The Importance of Female Participation	32
5.1.7. Technology	33
5.1. Approaches to Increase Female Participation and Integrate Gender Issues in the Water Management	34
5.1.1. Capacity Building	34

5.1.2.	Improve Education.....	35
5.1.3.	Alter Traditional Norms and Practices.....	36
5.1.4.	Quotas	38
5.1.5.	Governmental Support.....	39
5.1.6.	Information and Communication	41
5.1.7.	Laws and Regulations.....	42
5.1.8.	Policies and Programs.....	43
6.	Summary	45
7.	Conclusions	47
8.	Reference list.....	48
9.	Attachments.....	52
9.1.	Coding Instructions.....	52
9.2.	Code Scheme	52
9.3.	Interview Guide; Questions	52

Women's Role and Participation in Water Supply Management – The Case Study of the Republic of Ghana

KAROLIN SVAHN

Svahn, K., 2011: Women's Role and Participation in Water Supply Management – The Case Study of the Republic of Ghana. *Master thesis in Sustainable Development at Uppsala University*, No. 53, 53 pp, 30 ECTS/hp

Abstract: Women are increasingly being recognised internationally as essential actors in successful water supply management. Despite this, women are nevertheless still being excluded from water management activities which have proved to frequently result in water project failure. This has great consequences for water supply and water distribution capacity and efficiency. Women's exclusion often stems from traditional and deeply rooted gender differences where women, compared to men, are not given the same rights and opportunities. Therefore, in particular focuses in this study are cultural barriers and socio-economic obstacles and challenges that may hinder female participation. Although Ghana is considered to have rich water resources, the production, distribution and use of water is not efficient, sufficient, or sustainable. This impedes the country's socio-economic development. Most affected are women and children as they are often directly linked to the water source through their role as water collectors. In relation to this, the study investigates the importance of women's participation in water management within the Republic of Ghana. Furthermore, the study examines the efficiency and adequacy of measures and actions implemented to improve female participation in water supply management.

For data collection, a case study approach was adopted including an in-depth literature review, interviews with essential actors in Ghana and document analysis of Ghana's National Water Policy and National Gender and Children Policy. Interviews and documents were analysed with a content analysis and a comparative analysis approach.

The study found that women in Ghana, despite acknowledging their important role in Ghanaian water 'society', experience great limitations in their participation in water management. Traditional norms and practices constitute a major obstacle together with a strongly male-dominated society that often prevents women from participating in the public sphere. The study indicates that there is a need to reform the legal system and the procedures of enforcement to encourage female participation in the water management. Furthermore, the Government of Ghana ought to improve financial, human, and material support within its agencies and associates to facilitate and enable female involvement. Moreover, there is a great need to improve women's rights to, and attendance in, education. Additionally, raising the awareness of gender and women's issues in general is crucial in order to initiate changes of traditional norms and practices and consequently improve their participation in the water management. By reforming Ghanaian women's situation, their role and status will be strengthened, not only within water management, but as well in the wider society.

Key Words: Sustainable Development, Female participation, Water Management, Water Supply Management, Ghana

Karolin Svahn, Departement of Earth Sciences, Uppsala University, Villavägen 16, SE- 752 36 Uppsala, Sweden

Acknowledgements

It is a pleasure to thank those who made this thesis possible.

I would like to give special thanks to my supervisor Lina Suleiman for her support throughout my work.

Many thanks to the Ghana Coalition of NGOs in Water and Sanitation, the International Water and Sanitation Centre's (IRC) WASHCost program in Ghana, the Canadian International Development Agency, the Danish International Development Agency, and Grassroots Africa interview respondents for sharing their experiences and knowledge.

Last but not least, this thesis would not have been possible without the great support from my family and friends. Thank you for believing in me.

*Karolin Svahn
London, September 2011*

List of Abbreviations and Acronyms

CIDA	Canadian International Development Agency
CONIWAS	Ghana Coalition of NGOs in Water and Sanitation
DANIDA	Danish International Development Agency
DAs	District Assemblies
FHH	Female Headed Household
GDOs	Gender Desk Officers
GWA	Gender and Water Alliance
GWP	Global Water Partnership
IWRM	Integrated Water Resource Management
MDGs	Millennium Development Goals
MHH	Male Headed Household
MOWAC	Ministry of Women and Children Affairs
MWRHW	The Ministry of Water Resources, Works, and Housing
NGCP	National Gender and Children Policy
NGO N	Non Government Organisation
NWP	National Water Policy
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UN Habitat	The United Nations Human Settlements Program
WASHCost	International Water and Sanitation Centre's (IRC) WASHCost program in Ghana
Water Boards	Water and Sanitation Development Boards
WATSAN	Water and Sanitation

1. Introduction

With an increasingly growing population currently reaching over 6 billion people, the pressure on the earth's water resource grows. (UNESCO-WWAP. 2003) Great parts of the world suffer from water scarcities as a result of an imbalance between water use and available water resources. (World Water Council. 2010-08-02) Consequently, tensions among different users are intensified and most affected and vulnerable are the world's poor people. Additionally, lack of water critically impedes countries' prospects to socio-economic health and development. The Ghanaian National Water Policy (NWP), the overall framework for water management and domestic water utilisation in Ghana, states that although Ghana is considered as having abundant water resources, the production, distribution and use of water is still not efficient, sufficient, or sustainable. (MWRHW. 2007. p vi) Despite efforts to improve the situation, great parts of the country experiences insufficient and poor water supply and quality.

Women, and children, suffer the most rigorous affects from the lack of access to municipal water as they commonly carry the main responsibility for collecting water for domestic purposes. (UNESCO-WWAP. 2003) According to Acheampong, (2008. pp 257-258) this greatly influences women's and girls' opportunities to develop as they often miss out on education, income generating activities, and are further limited in participating in political activities. Acheampong argues that women all over the world experience unequal possibilities where [...] *"girls and women are not given the same rights, opportunities, responsibilities and choices in life that males consider their birthright"*. This dilemma is widely accepted as gender inequality. (Dzimhiri & Pendame. 2008. p 128) Globally, water and gender issues are commonly interrelated. (GWA. 2006. p 4) Women and men experience unequal water roles and responsibilities. Women struggle hours every day to collect water for the household, whilst men occupy the decision making positions regarding the water supply management and development, locally and nationally.

The World Bank (2002. pp 9-11) states that social and cultural gender roles have in Ghana resulted in frequent and persistent gender disparities in the form of unequal access to and control of assets. This is most apparent in human capital assets of education and health, productive assets, such as labour, land and finances, and social capital assets regarding participation at different levels in society, legal rights, and legal protections. The World Bank estimates that participation of Ghanaian women and men in public activities and decision making processes is greatly unequal. The women are not

only sparsely represented at governmental level, but also at community and household level. Women are, particularly in rural areas, often completely excluded since political activities and decision making processes are considered male responsibilities.

In Ghana, women and children are traditionally responsible for the collection and utilisation of domestic water. (GWA. 2010-09-15) Furthermore, they have been acknowledged as key actors in implementing water and sanitation (WATSAN) measures. The Ministry of Water Resources, Works, and Housing (MWRHW) (2007. pp 37-38) states that in order to reach sustainable and adequate water supply, efficient and effective management of the country's water resources must be approached. As part of this management, the NWP further states that *"Women must be seen not only as beneficiaries and water users, but also as water [...] managers and decision-makers"*. Although it is widely recognised that Ghanaian women carry valuable knowledge and experience in water supply management, their participation is often disregarded or under-utilised in developing WATSAN measures and policies.

Wallace and Coles (2005. p 17) states that efficient participation tools that encourage female participation within the water management at all societal levels constitute a vital element for promoting sustainable and efficient water supply management and distribution. This is important in two aspects. Firstly, improving female participation contributes to reduce gender inequalities in general as well as with regards to water management. Secondly, recognising and addressing gender issues also results in improved female participation within water management. (UNESCO-WWAP. 2003) This has greatly been acknowledged and incorporated in Integrated Water Resource Management and the Millennium Development Goals (MDGs), the major principles and targets tackling the world's complex water state.

1.1. Scope of the Research

1.1.1. Thesis Purpose

In acknowledging the water situation in Ghana, and in understanding the importance of women's involvement, the overall aim of this study is to investigate women's role and participation in Ghana's water supply management. Through this investigation, the study will examine the efficiency and adequacy of Ghana's current measures and actions taken to promote female participation in the water supply management.

Specific objectives of the study are;

1. To study cultural barriers and socio-economic limiting issues and challenges in order to develop an understanding for the complexity of, and obstacles to, female participation.
2. Investigate current applicable laws, regulations, and policies implemented to facilitate female participation.

The study mainly focuses at micro level water supply management, i.e. community and household level in Ghana. However, the macro level will also be investigated in order to provide an insight in women's role at regional and national level as part of a greater, comprehensive picture.

1.1.2. Research questions

In order to meet the purpose of the study, following research questions will be applied;

1. What role do women play in Ghanaian community water management?
2. What issues and challenges can be identified as obstacles to female participation in Ghanaian water management?
3. How is a gender perspective integrated in Ghanaian water management?
4. How is female participation improved and enforced in Ghanaian water management?

1.1.3. Constraints of the Study

Interviews carried out for first hand data collection were initially intended to include relevant ministries, water organisations, as well as development agencies. However, the interviews were restricted to include merely water organisations and development agencies. The ministries that were contacted either did not respond or were unable to participate in any interview. Thus, the study does not include first hand data of ministries' views. However, the governmental level is rather well represented in published documentation, both from the government itself as well as in former research. Thus the study is supported through this second hand data.

As the study proceeded, particularly after spending time at site, additional actors were identified as important in the context of the study. However, as the field study was financially and temporally limited, the study could not, at this time, include following relevant actors; District Assemblies

(DAs), Water and Sanitation Development Boards (Water Boards), Local Community Leaders, and Gender Desk Officers (GDOs). It should also be acknowledged that some of the previously identified key actors were not able to take part in the study due to various reasons. Thus, the study is limited in that it does not represent these actors.

It should also be understood that some aspects in the study are less supported by previous research due to the fact that there is little research covering this field within the Republic of Ghana.

2. Methodology & Research Design

As this study was aimed at examining a single case, a case study research approach was designed. A case study is an acknowledged method within the qualitative research area when studying a single or a few specific cases. (Punch. 1998. p 150) In the case study design, the main purpose is to generate a holistic view of the studied case, thus recognising the case in its entirety. Selecting the case is commonly based on theoretical assumptions or on certain inherent conditions and characteristics of specific interest to the researcher. (Svenning. 2006. p 110) The case in this matter was to investigate women's role and participation in the water management in the Republic of Ghana, with a main focus at micro (community) level. However, in being interrelated, the macro level was also investigated as part of the greater picture. Similar cases exist, although each case is unique, and other cases could have been object for investigation. However, Ghana was selected due to following reasons;

- Various water related issues, both economically and physically
- Culturally relevant as women play a great role in utilising the country's water resources, and furthermore, the country faces great issues related to women's participation in the water management and the society at large
- Anglophone, facilitating the research with respect to language
- Safety issues, the country is relatively safe to visit for conducting field research

According to Punch (1998. pp 153-156), in investigating a single case, due to each case's uniqueness, it was recognised that it would not be possible to draw generally applicable conclusions to other cases. For more comprehensive conclusions, several cases ought to be examined identically and

subsequently compared. The scope of the study is thus limited to water supply management in the Republic of Ghana. However, the purpose of a case study is not to generalise but rather to understand the specific context and complexities of the individual case (Punch. 1998. pp 153-156). Nevertheless, as the individual case may have similarities with other cases, the more similarity, the greater probability to generalise.

Within the case study research design, various data collecting methods may be applied (Punch. 1998. pp 153-156). Here, following methods were carried out in four main stages;

- An in-depth survey of current studies and research within the field of water management and female participation with a specific focus on Ghana.
- Document analysis of the National Water Policy (NWP) and the National Gender and Children Policy (NGCP).
- Interviews with key actors in Ghanaian water management.
- Analysis of transcribed interview data.

2.1. Literature Review

An in-depth literature review was carried out in order to seize secondary data from reports, books, and other publications on the sociological approach to water supply management, women participation, and water management related gender issues, with a specific focus on literature concerning Ghana. Findings relevant to the thesis purpose are presented in the background chapter (*Heading 3. Background*)

2.2. Document Analysis

In order to create an understanding for what policies currently guide the development agenda in Ghana and thus consequently guides the development plan for water and women's issues, two key documents were selected for analysis;

- **The National Water Policy**; the main guiding document for water development in Ghana published by the Ministry of Water Resources, Works, and Housing. (MWRWH. 2007)
- **The National Gender and Children Policy**; the main guiding document for issues relating to gender, women and children. (MOWAC. 2004)

The NGCP is developed by the Ministry of Women and Children Affairs (MOWAC), the main body

handling women and children issues in Ghana. (Dejene et.al. 2008. p 6) Although the NGCP do not specifically regard water management, the document still hold important information on women's and gender issues in Ghanaian society. The document thus also indicates how such issues are addressed in the development agenda at large and consequently also likely influence the country's water management. Furthermore, as stated in the NWP, the MOWAC with its NGCP is the main body to tackle women's issues at governmental level. (MWRHW. 2007. p 52)

The data was collected through a quantitative content analysis and a comparative analysis. Each document was analysed in accordance with the thesis purpose and research questions.

2.2.1. Content Analysis

The study adopted a content analysis methodology, as presented by Bergstrom and Oréus. (2005. pp 43-85) A content analysis is first and foremost applied with the intent of quantifying something of a specific research purpose. It may also be applied to systematically describe the content of a document.

Within the content analysis methodology, specific words, expression, metaphors, or arguments may be the subject of analysis. (Bergstrom & Oréus. 2005. p 44) According to Bergstrom and Oréus (2005. p 45), most common is the approach of asking; what the text can tell us? The method is particularly relevant when trying to find patterns in large amounts of text.

According to Krippendorff (2004. pp 59-60), the content analysis enables understanding of the intention and meaning of a text through the frequency of which words, phrases, idioms, metaphors, themes, arguments, or ideas occur throughout the text with the assumption that they individually have intrinsic meaning. The words, phrases, idioms metaphors, themes, arguments, or ideas are subsequently captured in a set of predefined content variables which, according to Krippendorff, facilitate a deeper understanding of the meaning of the text. The content variables constitute categories of meanings into which words or phrases are sorted. The content variables are then studied and analysed statistically with the aim to search for patterns of meaning. The content analysis thus constitutes a structural tool which allows the researcher to explore patterns and structures in the text.

2.2.1.1. Practical Steps

Following practical steps based on Bergstrom & Oréus' analysis methodology were applied (Bergstrom & Oréus. 2005);

- Define Material

- Analysis Framework
- Develop Code Scheme and Code Instructions
- Dual Coding
- Result Compilation
 - Code Unit Frequency
- Result and Interpretation

Define Material; in an early state and in addition to the analysis' purpose, the scope of the analysis material must be clearly defined. (Bergstrom & Oréus. 2005. p 48) For this study, as mentioned above (*Heading 2.2. Document Analysis*), following documents were chosen;

- The National Water Policy (MWRWH. 2007)
- The National Gender and Children Policy (MOWAC. 2004)

The documents were analysed in their entirety. However, front page, table of contents, acknowledgements, foreword, list of acronyms, and definitions were excluded from the analysis as they merely held limited information.

Analysis Framework; next step in the analysis was to develop the *Analysis Framework*, the tool applied to guide what words, phrases, idioms, metaphors, themes, arguments, or ideas shall be noted and counted throughout the documents. (Bergstrom & Oréus. 2005. p 49) This is commonly referred to as a *Code Scheme* where what shall be noted, i.e. coded, is given a number. Thus, the codes are information in quantifiable form. Alongside the Code Scheme, a separate *Code Instruction* was developed to give instructions for how to code. Since content analysis aims to find patterns within the text material, it is essential to follow the code scheme consistently. If the aim is to compare different documents with each other, as within this study, it is important to analyse the documents identically. (Bergstrom & Oréus. 2005. p 50) The code scheme and coding instructions can be found below under attachments (*Heading 9.1. Coding Instructions and 9.2. Code Scheme*)

To develop the analysis framework, the documents were first reviewed to understand them in their entirety. When developing the analysis framework it is essential to have an understanding for the surrounding context, thus appreciating the discourse and greater social context where the documents figure (Bergstrom & Oréus. 2005. p 50). This was accomplished through the in-depth literature review from which the analysis framework took shape. The framework draft was subsequently tested in order to discover interpretation issues and uncertainties.

Codes that are to be noted and counted are commonly referred to as *recording units*. (Bergstrom & Oréus. 2005. pp 49-50) The recording units are thus the words, phrases, idioms or ideas that are to be noted throughout the texts. In order to create a valid and reliable code scheme, defining the recording units require substantial background knowledge of the surrounding context. This was acquired through the in-depth literature review. The recording units in this case were words to be noted and coded throughout the documents. The recording units were structured in a hierarchical code scheme structure (*Heading 9.2. Code Scheme*)

The *sampling units* refer to the individual parts of the text that are to be analysed separately. (Bergstrom & Oréus. 2005. p 50) The sampling unit can thus be divided into chapters, paragraphs, phrases, or sentences. The sampling units are the separate parts in which recording units were noted and counted. In this study, paragraphs are considered sampling units.

At completion of the analysis framework, before realising the final analysis, a small part of the material was tested according to the coding instructions and codes identified and developed in the framework. (Bergstrom & Oréus. 2005. p 50)

Dual Coding; to ensure that the documents were analysed identically and consistently, dual coding was carried out. (Bergstrom & Oréus. 2005. pp 50-51) This implies that parts of the material were re-coded at different occasions and subsequently the results were compared with the earlier coding. It is then important to leave enough time in between not to remember how the material was judged. The dual coding enables a check of the intrasubjectivity, i.e. how the different codings of the same material comply. If the results appear not to comply this may indicate that the coding judgement has not been consistent and thus the analysis framework must be re-framed. It may also indicate that some judgements are so vague that the results are not reliable and these judgements may then have to be left out. The dual coding may also indicate that some codes are very similar and thus may be merged. Last, but not least, the dual coding increases the method replicability, enabling other researcher to come up with the same results, consequently improves the reliability of the results. (Bergstrom & Oréus. 2005. p 51) This also enables other researchers to use the analysis framework and code scheme to analyse other texts, where the results then can be compared. To what extent various deviations may be accepted depends on how this would influence the results.

When analysing large amounts of text, often from different sources, the analysis may tend to proceed in a particular direction. For instance, how clearly something must be written in the text in order for it to represent a specific code may transform as the analysis proceeds. (Bergstrom & Oréus. 2005. p 52) This may consequently result in reliability issues. To avoid this, the different documents were analysed simultaneously. This reduced the risk of the analysis being misled into a particular direction throughout one text, thus following document may be judged differently. By simultaneously analysing the texts, these 'misleadings' were detected at an early state.

Result Compilation; When the entire material had been analysed, the results were compiled. In this stage, commonly frequencies of various code units are calculated, i.e. the number of times the individual codes had been marked were summarised. (Bergstrom & Oréus. 2005. p 52) This indicated how frequent something was mentioned throughout the texts as well as making it possible to analyse relationships between the code units, for instance correlations. In this study, a *code unit frequency* of the results were applied. A detailed description of these are further presented below.

Code Unit Frequency; A code unit frequency was applied in order to view how frequent each variable occurred. The frequency indicates the materials' emphases and focuses. Since the documents and interviews were different in size (number of words), and to be able to compare them, the documents and interviews had to be made "equal" in words. If merely counting word frequency for each document and interview, the great variation in size would largely affect the results. Thus, by calculating the ratio of the document's and interview's length to 10,000 words, and subsequently dividing occurrences by each document's ratio, the occurrence frequency per 10,000 words were calculated and thus all documents were made equal.

$$\frac{\text{document word count}}{\text{document length to 10,000}} = \text{ratio of}$$

$$\frac{\text{variable occurrence}}{\text{ratio}} = \text{occurrence per 10,000 words}$$

By this calculation, the documents and interviews could be equally compared.

2.2.2. Comparative Analysis

According to Hellspong (2001. p 79), the comparative analysis aims at comparing different texts. This implies analysing differences, similarities, and influences between texts. Hellspong presents six analytical aspects; context, language, content, the social tone, style, and

correlations. In this study the content aspect was applied since it enables viewing and structuring the material systematically and illuminates main topics and aspects. The other aspects were excluded since they mainly look at the linguistic aspect of the text except the correlation aspect that mainly deals with whether the documents have influenced each other which is not of interest to this study.

Within the content aspect, following questions were approached;

- What themes can be identified, main and sub- themes?
- What similarities and differences can be identified?
- What are the main perspectives?

The content aspect was analysed from a gender and water management perspective in accordance with the thesis purpose and research questions. The results were subsequently compared between the different materials in order to illustrate how the materials correspond or conflict with each other.

2.3. Interviews

The interviews were based on a semi-structured individual interview procedure. (Grönmo. 2006. p 131) The semi-structured interview procedure implies a dialogue between the interviewer and the respondent where questions and answers generally are not previously determined. Rather the interview is structured according to an interview guide of in advance identified themes designed to enable a discussion. Thus the themes help to support the particular focus of the interview to ensure the interview stays within the scope of the study.

In this study, the interview guide was created in relation to key elements and patterns detected in the initial literature review, based on water management, public participation, gender mainstreaming, women empowerment, and women participation. The guide comprised six themes and was developed in relation to the thesis purpose and core research questions of the study, created to guide the interviews. The themes were thus applied as an analytical tool to organise the respondents' answers. The six themes were as follow (*for a detailed interview guide with interview questions, see Attachments, heading 9.3*);

- **Women's role;** this theme looks at the role women currently play in water utilisation and water supply management.
- **Issues and Challenges;** this theme investigates issues and challenges to female participation in water management.

- **Underpinning cultural norms and beliefs;** this looks at cultural norms and beliefs that govern behaviour and activities within water management and water utilisation.
- **Integrating a gender perspective;** this theme concerns how a gender perspective is integrated in to Ghanaian water management.
- **Increase and enforce female participation;** this regards what measures and actions have been taken to increase and enforce female participation within the water management.
- **Improvements;** this theme regards areas where improvements have been recognised as well as what areas require further improvements.

Key actors were selected according to the concept of Applicability (developed by Burrow and Kendal. 1997. pp 244-253) where applicability refers to the subject's knowledge and involvement in the studied area. Due to experiences of, participation in, and relevance to the water sector and gender related issues in Ghana, following nine key actors were strategically selected and targeted for interviews;

- WaterAid
- The Water Directorate
- The Ministry of Water Resources, Works, and Housing (MWRHW)
- The Community Water and Sanitation Agency
- Ghana Coalition of NGOs in Water and Sanitation (CONIWAS)
- International Water and Sanitation Centre's (IRC) WASHCost program in Ghana
- Canadian International Development Agency (CIDA)
- Danish International Development Agency (DANIDA)
- Grassroots Africa

The respondents were contacted via e-mail where a short description of the study was presented with an enquiry to meet for an interview. In the e-mail, the time commitment suggested was specified to be no more than one hour. The initial e-mail contact was followed up by another e-mail closer to the date of each interview and further, in some cases where e-mail contacting were difficult, the first e-mail contact was also followed up with a phone call.

Out of the nine originally selected actors, six actors were available for interviews from following agencies and organisations;

- Ghana Coalition of NGOs in Water and Sanitation (CONIWAS)
- International Water and Sanitation Centre's (IRC) WASHCost program in Ghana (WASHCost)
- Canadian International Development Agency (CIDA)
- Danish International Development Agency (DANIDA)
- Grassroots Africa

The actors were identified as key in that they, each in different ways, play a great role in developing, monitoring, and improving the water situation and women's role in the water management in Ghana. It has been acknowledged that the interview data derives from the representatives of selected key actors and therefore show the representatives' individual perspectives rather than the view of the entire key actor. Thus, if studying the entire actor as such, the results may differ. Nevertheless, as representatives for each key actor, the respondent's views pose significant information for this study in that they provide an illustrative description of the current gender and water environment.

By using the themes and questions developed for the interview guide, in-depth qualitative data of each respondent's knowledge, perceptions and experiences were collected. By collecting data from the key actors, the aim was to gain a comprehensive understanding for gender awareness and women's role in the Ghanaian water management as well as create and understanding for underpinning cultural norms and behaviour influencing these concerns. Furthermore, the interviews aimed at determining what areas require further improvement to increase gender awareness and improve female participation in the water management.

Each interview lasted for approximately one hour and was recorded with a digital voice recorder. Subsequently, each interview was transcribed for further analysis. The transcribed data was analysed using the content analysis code scheme (*see heading 2.2.1. Content Analysis*) and the data was also structured according to the comparative analysis procedure (*see heading 2.2.2. Comparative Analysis*)

3. Background

The following chapter aim to provide a detailed review of key areas and concepts of water management, female participation within water management, and issues related to women's participation.

3.1. The Republic of Ghana Country Profile

According to Dejene et.al. (2008. p 3) Ghana had, in 2000, a population of 18.912.079, of which 50.5 % were women of which 43.8 % were living in urban areas. By 2010 the population had grown to nearly 24 million. (Ghana Statistical Service. 2010-09-20) The population of Ghana is young where 55 % of females and 51 % of males are under 30 years.

According to the United Nations Human Settlements Program (UN Habitat) (2006. p 20), in year 2000, Female Headed Households (FHH) in Accra constituted 33.2 %. Year 2008, according to Dejene et.al. (2008. p 3), still one in three households were headed by women, however with diverse differences between the various regions. FHH is most common in rural coastal areas, where 40 % of the households are FHH. In urban areas, specifically Accra, FHH account for 39.3 %, rural forest areas 32.9 % and rural savannah 19.8 %.

With Ghana's independence 1957, major changes of the governmental system took place. (Dejene et.al. 2008. p 4) Ghana has been making continuous progress towards democratisation and economic reforms in the 1980s facilitated great growth in the socio-economic development. According to Dejene, Ghana is successfully decreasing poverty and will likely achieve the Millennium Development Goal of halving the poverty rate by 2015. Nonetheless, as of 2010, Ghana is still considered as having rather high levels of poverty with 20 % of the total population considered being poor (Rural Poverty Portal. 2010-09-21) and where 85% in rural areas live below the poverty line. (Dejene et.al. 2008. pp v-vi) Most poor are the northern parts of the country as there are great economic disparities between the dry northern areas and the southern thriving areas. This is mainly a result of that southern areas have two growing seasons which consequently implies additional economic opportunities.

Women hold a largely vulnerable position in Ghanaian society as women constitute the major part of the poor. (Dejene et.al. 2008. p 4) Half of those considered poor earn their income as food crop farmers, mainly a female activity for women in rural areas. This suggests that women are highly vulnerable to poverty. However, when comparing poverty between Men Headed Households (MHH) and Female Headed Households (FHH), FHH are on average less poor. Nevertheless, this does not give a true picture of the real level of poverty and women's related situation. In the MHH vs. FHH analysis, poverty among individuals within the households is not apparent. Women often experience poverty in MHH even though the household is not considered poor. This is caused by

the fact that women in Ghana commonly experience restricted rights and access to essential resources of land, labour, credit, and ownership thus limiting their possibility to income. Thus, a reduction of poverty within FHH does not imply a reduction of poverty among all women. Furthermore, considering labour force comparisons, women are commonly employed in work with higher risks of poverty due to low wages where women's hourly wage on average is 25 % less of what men earn. (Dejene et.al. 2008. p 12)

3.1.1. Water accessibility

Although Ghana appears to have abundant water resources, the country faces difficulties in providing adequate water for the whole population. (WaterAid. 2005. p 2) In 2005, according to the WaterAid organisation (2005. p 2), 10.3 million people, constituting 51% of the population, had access to improved water supplies where 61% of the urban population and 44% of the rural was estimated to access safe water.

By 2010, the Ghanaian population reached almost 24 million people, an increase of nearly 27 per cent since 2000. (Ghana Statistical Service. 2010-09-20) As stated by the MWRWH (2007. p 13), the country faces times of rapid urbanisation as extensive migration from rural to urban areas fuel urban growth. According to Opoku-Agyemang (2005. p 27-1), with an increasingly growing population and consequently increasing water demands, the need for efficient water management becomes more and more apparent. For instance, in parts of the country, inadequate water supplies has resulted in stunted growth and development of children as well as greatly affecting women's economic activities and productivity. (Fuest. 2005. p 9)

According to Fuest (2005. p 9), particularly the northern parts of Ghana face severe water shortages during dry season since many natural water sources partly or completely dries up. Consequently, water hunting becomes the main activity for women and children as they are responsible for water collection. Commonly, the women often must spend more than 5 hours per day to collect water for the household, occasionally walking up to 20 km to reach the nearest water source.

Inadequate WATSAN facilities are considered to be the most common cause of severe illnesses. (Fuest. 2005. p 9) Furthermore, women and children are most vulnerable to these waterborne diseases as they are in charge of water collection and other domestic water activities. (CAP-NET, GWA. 2006. p 3-4) The country experience serious infestations of guinea worm, mostly common in remote areas where there are few wells and the people commonly

fetch their drinking water from infested ponds and water holes. (Nana Ama Serwah Poku Sam. 2006. p 26)

3.1.2. Water Management

Integrated Water Resource Management (IWRM) has, since the International Conference on Water and the Environment in Dublin and the United Nations (UN) Conference on Environment and Development in Rio de Janeiro in 1992, been stated as the major approach in tackling the world's water crises. (GWPa. 2010-08-02) IWRM implies a cross-disciplinary approach, thus managing land and water resources within and between various disciplines. (Duda & El-Ashry. 2000) A common understanding of IWRM is that it presents an "[...] environmentally sound, equitable and sustainable manner to utilization and development of water resources" and can be understood as a systemic process for sustainably developing, managing, allocating and monitoring water resources. (Dungumaro & Madulu. 2003. p 1010) Through close international collaboration processes leading up to the Dublin conference, four IWRM guiding principles were formulated where the third principle that "*Women play a central part in the provision, management and safeguarding of water*" is of specific interest for this study. (GWP. 2000. p 13) Hence, essential in successful IWRM is recognising and addressing gender issues within water management. (GWPb. 2010-08-02) Integrating gender aspects of when developing water policies, projects, and programs, are thus of great importance to improve women's participation in water management.

Since its independence 1957, Ghana's water management has undergone a number of reforms. The most important reform has been to introduce a decentralisation process of managing the country's water resources which implies empowering people and improving public participation. (Fuest. et.al. 2005. p 18) In 1959 the then Ministry of Works and Housing were assigned the main responsibility for the water sector. (Eguavoen. 2007. p 81) The ministry was recently renamed Ministry of Water Resources, Works and Housing (MWRWH), the now leading government institution responsible for the country's water. In 1992, the Water Resource Commission was established under the MWRWH as the main regulatory body for the water sector. (Aagaard-Pedersen. 2006. p 3) With the decentralisation process, the government initiated a delegation of responsibilities to several smaller regions. Today, Ghana is divided into 10 administrative regions with 138 distinctive districts. (Government of Ghana WEB. 2011-07-22) Within each district is a District Assembly (DA), the highest political authority responsible for "[...] the planning, implementation, operation and

maintenance of water and sanitation facilities and the legal owners of communal infrastructures in rural communities and small towns." (MWRHW. 2007. p 48-52)

In 2002, the Water Resource Commission prepared a draft for the NWP, the main document supporting the country's water development agenda. (MWRHW. 2007. pp 8-9) In 2004, with the establishment of the Water Directorate, the policy was further updated to include specific policies for urban water supply and community WATSAN services. The NWP is based on the principles established in the Ghana Poverty Reduction Strategy, the MDGs and the "Africa Water Vision" of New Partnership for Africa's Development. (MWRHW. 2007. p vi) As of 2008, according to the UN, Ghana has fully acknowledged and initiated the implementation of IWRM (UN-water. 2008. p 22) The policy refers to IWRM for urban and rural water management as well as recognising international legal water frameworks.

In acknowledging the importance of efficient water management, the MWRHW (2007. p 6) states that "*Water, in its various occurrence, management and uses, is an essential component of human development [...]*" and is thus an imperative priority in the countries current development. The MWRHW (2007. p 52) further states that the MOWAC is the lead agency responsible for water issues that has impact on women and children. MOWAC is responsible for implementing the National Gender and Children's Policy (NGCP) that is to handle women's and children's issue in all sectors in the society at large.

The institutional re-arrangements enabled the government of Ghana to formally launch and implement the National Community Water and Sanitation Program in 1994. (MWRHW. 2007. pp 37-38) The NCWSP stresses the importance of community ownership and management and promoting community participation in the planning, implementation and management of WATSAN measures. (MWRHW. 2007. pp 48-52) The NCWSP aims at decentralising services and emphasises giving "[...] *women a larger role in decision-making than has historically been the norm.*" (Whittington et. al. 2009. pp 696-697) At district and local level, within the DAs, Water and Sanitation Development Boards (Water Boards) have established through byelaws, the management and supervision of water supply systems within small towns and communities. Furthermore, essential in the water supply management in Ghana is the Community Water and Sanitation Agency, active in all 10 regions with the aim to further facilitate and support DAs in their work with

WATSAN at the regional and community level. (MWRHW. 2007. p 37)

3.1.2.1. The Millennium Development Goals

The MDGs contain the commitment that all countries ought to achieve gender equality and women's empowerment by 2015. (Goetz. 2009. p 1) The concept of empowerment is the process which enables individuals or groups of people to improve their position regarding social, economic, political, and physical aspects. (Muylwijk. GWA. 2010-08-18. pp 2-3) In the context of WATSAN issues, all four aspects are equally important to consider where particularly principles of equal participation, human rights and social justice are in focus. (Goetz. 2009) By empowering women and enhancing women's capacity to participate in public decisions, gender biases and exclusion from part taking in public and decision making activities would be counteracted.

The Government of Ghana has completely adopted the MDGs and has integrated the goals as a critical and guiding part of the country's development agenda for socio-economic growth. (TREND Group. 2010-09-16. p 2) For instance, the main national development guiding strategy, the Ghana Growth and Poverty Reduction Strategy (2006-2009), have been consistently formulated with the MDGs. Within the WATSAN sector, the strategies state that the government shall commit to supporting tariffs and to set a regulatory body to uphold water provision to the poor.

Although the goals have been fully adopted, implementing and achieving them are accompanied by many challenges. (WaterAid. 2006) For Ghana, the main challenge relates to financial resources as implementing and reaching the goals are costly. Also, Ghana suffers complex and insufficient institutional arrangements for water provision in inadequate sanitation, few technology options, limited community involvement, inadequate participation by women and a slow decentralisation process.

3.1.3. Cultural Environment

Ghana is a greatly diverse and multi-cultural country with a socio-economic and political development influenced by both internal and external factors and forces. (Dejene et.al. 2008. p 2) The reigning socio-economy and political systems were formed in the traditional pre-colonial societies, now transformed and integrated into the modern-day Ghana. These traditional structures of social systems, economics and trade, politics and governance, were shaped to support the then reigning forms of social interactions and power positions. This lead to direct consequences for

economic, social, and political systems negatively influencing women's situation and status in Ghanaian society. Today, these traditional structures are still clearly apparent in country's the social, economic and political sphere.

3.1.3.1. Matrilineal and Patrilineal Systems

Although there are other social groups determining inheritance, there are mainly two traditional lineage systems; the matrilineal and patrilineal, where the northern parts of the country are mainly patrilineal and the southern mainly matrilineal. (Dejene et.al. 2008. p 2) In the matrilineal system, inheritance is passed through the female line. In the patrilineal system, inheritance is organised through the paternal side. These systems greatly affect Ghana's current socio-economic and political life and acknowledging their influence is essential in understanding Ghana's gender structure and development.

During the pre-colonial period, women played a great role in decision making. (Dejene et.al. 2008. p 26-27) Although women to some extent played greater roles in pre-colonial Ghana, the colonial system excluded women and reinforced the already existing subordinate female positions in the society. According to Dejene (2008. p v), "*The post-independence development initiatives continued to draw from and build on existing patriarchal structures in ways that resulted in the deepening of social and gender divides.*" While the colonial system integrated men, as the country's political governance transformed, women's key roles were not translated into the new governance and decision making which restricted women's participation in economic, social and political activities. Furthermore, men were largely favoured in terms of benefits from and access to the formal sector. (Dejene et.al. 2008. p 3) This is clearly indicated in the female parliament representation as women in 2008 merely amounted to 10.8 %.

With nationwide acknowledgment of the role female activists played in the struggle for independence, a few women were appointed to legislation. (Dejene et.al. 2008. p 3) In 1960, the National Council of Women was established. With this, day nurseries, vocational centres and educations programs for women were initiated. However, the post-independence government initiatives were still greatly influenced by existing patriarchal structures which intensified social and gender differences. Apart from recognising unfair social and gender segregation and despite the establishment of the National Council of Women, development initiatives lacked essential considerations for gender and women's vulnerability and underprivileged situations. First in

the 1980s, with the Structural Adjustment Program, gender and women's issues started to gain thrust and were finally initiated on the development agenda.

Traditionally, women still hold strong positions in Ghanaian society in the form of 'Queen Mothers'. (Dejene et.al. 2008. pp 27-28) Dejene et.al. states that Queen Mothers embrace various roles within the community where they function as advisors to the male leaders, the Chiefs. The Queen Mothers are commonly either the biological mother or a relative to the Chief. Furthermore, they function as mediating and participating actors in important issues to the community. The Queen Mothers also have the direct responsibility of family matters concerning women and children. However, although Queen Mothers are widely acknowledged within the community, due to their gender they are often excluded from local, regional and national decision making processes. Excluding the women's strongest speakers constitutes a major gender issue. However, according to Dejene, Queen Mothers have now begun to collectively organise themselves with the aim to voice their issues and needs in the community and society at large.

3.1.4. Integrating the Aspect of Gender

Ghana has since the 1980s adopted a decentralised government structure. (Dejene et.al. 2008. p 28) This has implied a gradual delegation of administrative and financial decision making to regional, district and local levels. Since 2001, the main body handling women and children issues in Ghana is the MOWAC with legal support in Executive Instrument (E118). (Dejene et.al. 2008. p 6) In 2004 the Ministry developed the National Gender and Children's Policy to be integrated in the national development agenda with the aim to support implementation of gender related objectives nationally. The Ministry has ten regional directorates dealing with women and children's issues at the regional level but there is yet no representation at district level. The country's DAs have each been assigned to delegate one gender focal person for their respective area, a Gender Desk Officer (GDOs), with the responsibility to implement the National Gender and Children's Policy at community level. According to Dejene et.al. (2008) the policy aims at;

- Mainstreaming gender into existing public policies and programs.
- Developing efficient enforcement in the forms of laws, conventions and policies.
- Reinforcing human and institutional capacity of the Ministry as well as key

actors at national, regional, and district levels.

- Enabling small loans to women to start business and expand already existing small businesses.
- Facilitating access to useful and professional skills.
- Supporting and increasing women's access to Information Communications Technology.

The MWRHW (2007. p 38) states that the roles of women is essential and must be completely operationalised in Ghanaian water management "*All water and sanitation interventions must recognise and protect the specific needs and roles of women.*" However, Dejene et.al. (2008. p 6) argues that the implementation of the National Gender and Children's Policy has had uneven progress nationwide. Dejene et.al. further states that the DAs have not equally taken the implementation seriously and as of 2008 merely a few districts had assigned a GDO. Furthermore, the Ministry has experienced issues in implementing the policy, mainly due to lack of financial resources.

Promoting female participation and counteracting gender issues in water supply management is also greatly supported by influential NGO's and other Non-Governmental stakeholders and interest groups. (MOWAC. 2004) For instance, "*Women's organizations and networks play extensive roles in sensitization, advocacy, collation of information, and monitoring of public [gender] commitments.*" (MOWAC. 2004)

4. Theoretical Framework – Participation

Former research indicates that public participation in water management has been acknowledged as key to successful management. (Tennyson. 2005. p 20) and (Achouri. 2005. p 14) Swallow et. al. (2005. p 183-184) states that successful and sustainable water management approaches can only be developed when communities and all stakeholders are involved in the water management planning and implementation. This enables directly affected water users to gain a greater sense of ownership and responsibility for the water source.

Participation further enables local people to develop knowledge, understanding, and awareness for different water projects. (Dungumaro & Madulu. 2003. pp 1013-1014) Consequently, public trust and interest for the projects increases. Accordingly, with increased understanding and awareness, changes related to the water projects are easier to

accept. Thus, the water projects increasingly gain public support. Through a participatory approach, water user's requirements can be more readily understood, local problems can be discovered and concerned people can assist in solving problems and improving their situation according to their needs. (Bonnal. 2005. p 117)

Bonnal (2005. pp 121-122) stresses that in order to increase public participation in water management projects, it is essential that people are genuinely aware of their individual roles. Furthermore, all concerned stakeholders must be made aware and convinced of how they will benefit from any project and them participating in it. Bonnal (2005. p 118) further argues that a participatory approach must be multi faceted, involve all stakeholders, genuinely listen to local people, empower local participants, and through discussions develop appropriate solutions. However, as argued by Tennyson (2005. p 20), a theoretically sound participatory approach is commonly difficult to practically apply and implement. In a complex world of users, ownerships, political and social constraints alongside biophysical water systems, successful application of an ideal participatory approach is complicated.

4.1. Female Participation

According to the Gender and Water Alliance (GWA) (GWA. 2006. p 13), specifically women's participation is one of the greatest factors associated with water project effectiveness. Furthermore, equal participation improves project outcomes as well as enables sustainability, i.e. projects are more likely to be successful if women and men are equally active participants and decision makers. Although women globally are being recognised as vital actors in water supply management, they are commonly excluded from decision making and formulating, planning and implementing management policies and measures. (GWA. 2006. p 80) Hamdy et.al. (2004. p 37) argues that IWRM approaches do not automatically recognise gender inequalities and promote women participation but that these issues must be actively enforced and implemented in water management.

According to the GWA (2006. pp 16-17), gender differences and inequalities must be recognised if participatory approaches are to involve all stakeholders, women as well as men. In developing countries, women's participation is commonly hindered by gender and power imbalances within the community, intra-household and family relations with various constraints and limited abilities for women to participate. Alongside this there are commonly doubts about real benefits from participating. In cases where women do take part, it

is commonly solely at local level. (GWA. 2006. p 80)

Equal participation when choosing technology and maintenance tools enables efficient water use, optimal funding arrangements, as well as reducing breakdowns. (Dejene et.al. 2008. pp ix-x) Recognising women's knowledge of optional water sources in addition to reducing water demands in relation to individual use enables enhanced compliance during periods of water shortage. Furthermore, increased female participation in water projects regarding location, financing, and management, improves access to water supply in both quantity and quality. Additionally, involving women in water projects, as women often are directly linked to the water collection, further improves identification of water utilization problems.

With a gender approach promoting equal participation between women and men, burdens from and benefits of water activities will be more equally divided, both within the community and the household. (Hamdy et.al. 2004. p 35) Programs that disregard differences between women and men and their different opportunities risk being unproductive, inefficient and unsustainable. (GWA. 2006. p 129)

4.1.1. The Concept of Gender

Acheampong (2008. pp 257-258) describes the concept of gender as socially constructed roles, benefits, attributes and relationships ascribed to women and men. Thus, as these roles are socially constructed, gender is not biologically determined but rather derives from historical, cultural and religious patterns and traditions. Hence, gender roles embrace socially constructed behaviours, roles, and norms that societies and communities ascribe as being specifically male or female. Gender relations, constituted in legal and institutional systems, as well as within the family, are hierarchical relations of power, commonly disfavoured women. (Muylwijk. GWA. 2010-08-18. p 1-2)

Gender roles and relations are deeply embedded in traditions, culture, and history and vary between regions and societies. (Wallace and Coles. 2005. p 5) Thus, they are deeply rooted and context dependent. However, Muylwijk (GWA. 2010-08-18. p 1) argues that it is possible to change gender ideology, though it requires specific attention, inputs, and incentives. Wallace and Coles (2005. p 5) state that to achieve such changes, women's condition and position in each cultural and societal context ought to be largely recognised.

Dzimhiri & Pendame (2008. p 128) states that gender inequalities have globally become accepted as greatly constituting different opportunities for women and men. Consequently, according to Acheampong (2008. pp 257-258), gender inequalities engender situations where women, in relation to men, have inferior rights and privileges to social, cultural and human development. Isaac Were (Were. 2008. pp 218-219) recognises that women globally have substantially less or no voice in decision making processes as opposed to men. Thus, women and men experience different opportunities in how they can influence their lives, their act and the wider society and consequently they also respond differently to changes. (GWA. 2006. p 15)

4.1.2. Cultural Rules and Norms

Minoia (2007. p 10) states that the concept of culture does not only mean the social creation of a specific society. It also includes all conduct within a specific group of people, where this conduct is rooted within the group's relationship to surrounding natural and socio-economic resources. In the context of water culture, various cultural norms and behaviour determine the utilisation of those natural and socio-economic resources. These norms and behaviors further produce and reproduce social conduct for whoever is involved in the specific water culture.

Rules and social norms within water management are commonly not clearly visible but appear when governments or international agencies implement new policies and projects. (Minoia. 2007. p 11) Thus, without thoroughly studying the situation, these unwritten rules and norms may not be recognised and are consequently ignored. According to Minoia, as regarding gender issues and women's participation, intrinsic in water management are traditional rules and norms which cannot be disregarded.

According to Rathgeber (1997), it was for long believed that women's and men's perceptions and experiences of the world were identical. In some cases it was even assumed that women had no opinions or perceptions. This image has changed and it is now known that women's and men's experiences often differ greatly. However, from old times still lingers the fact that women's views often are ignored. Women are traditionally viewed as being dependant on men, when young their father, when older their husband. (Samwinda-Imasiku. 2008. p 30) This is more obvious in developing than developed countries, however, according to Samwinda-Imasiku, marginalisation of women is continuously universal where women experience

constraints to equal participation in social, economic and political activities.

In many water projects, livelihoods and social relations are limitedly understood and it is a common idea that gender merely is the act of working with both men and women, further reflected in policies and programs. (Minoia. 2007. p 11) This implies seeing gender simply as unequal power relations between men and women, however this enables overlooking other disparate social relations. In the light of this, Minoia argues that the "[...] *water sector is and remains highly stereotyped, although development projects on water management are supposed to change both behaviours and concepts in water uses and water users.*" (Minoia. 2007. p 11) Minoia further provides the example of predefined water roles and interests in that it is commonly assumed that, for instance, "[...] *pastoralists are seen to be concerned mainly with water for cattle, farmers with irrigation water and women with drinking water [and] more significantly, intricate webs of reciprocity with neighbours and patrons shape people's willingness to publicly participate in, or to question dominant norms of water management.*" (Minoia. 2007. p 11)

Minoia (2007. p 10) states that there is a common assumption that by improving women's right to water, additional problems related to inequitable access established in tradition and culture will consequently be overcome. However, as Minoia further argues, several projects and research indicate that central traditional and cultural norms are the source of impeding women's participation and consequently preserving participation inequity. Still, cultural limitations to women's participation are commonly restricted to regard merely norms specifically inhibiting women's full participation in public decision making and thus not embrace other influencing cultural norms.

4.1.3. Social and Economic Issues and Challenges

Acknowledging the importance of improving female participation in the water management and decision-making is increasingly recognised globally. (Were. 2008) Women are increasingly being identified as key to successful water resource development, yet women's knowledge and roles in water management is nevertheless unacknowledged. According to Dejene et.al. (2008. p ix), women's low participation in public activities mainly stems from "[...] *discriminatory beliefs and attitudes towards women, women's unwillingness to take up such challenges, and the lack of programs that mentor and empower women and young girls to build their capacity and prepare them for leadership positions.*" (Dejene et.al. 2008. p ix)

According to Wallace and Coles (2005. p 18), addressing social inequalities in general and gender and women's issues specifically cannot be a voluntary act. If not tackling gender disparities, social and economic inequalities may increase and furthermore aggravate and stress social injustice. Equal participation in social and political issues embraces women's equal right to articulate their needs and interests, as well as their vision of society, and to shape the decisions that affect their lives. (GWPb. 2010-08-02) The World Bank further states that gender differences have great impact on the "[...] flexibility, responsiveness, and dynamism of the economy, and directly limit economic growth." (The World Bank. 2002. p 2)

4.1.3.1. Social

As women are frequently excluded from decision making processes and additionally experience restricted and different opportunities, they often have differing perspectives of various issues as compared to men. (Stamp. 2010-02-01) Since repeatedly being excluded from decisions made, women have in several cases lost "[...] opportunities upon which their social activities were based." (Stamp. 2010-02-01) For instance, Stamp illustrates this in that;

"[...] in removing water collection from the daily routine of women, new water systems (such as pumps) remove an important occasion for women to gather and talk while working. Although nobody would argue that women should go back to collecting water from polluted rivers, the loss of this social time must be recognized as a serious setback for women's ability to network and, hence, for their ability to sustain the social and economic life of the community." (Stamp. 2010-02-01)

Changing the provision of water supply and act of water collection will thus subsequently also have an impact on additionally rooted social patterns in the community. (Minoia. 2007. p 11) This does not imply that women should continuously collect water from their traditional water source. Rather, it implies that the social context of women's water collection must be acknowledged and considered in water supply projects and when developing new water systems.

The necessity of women participating in water decision making is further clearly illustrated in one evident example of water projects and measures commonly lacking considerations to women's and girl's menstruation needs, an essential part of WATSAN projects. (UN Habitat. 2006. p 58-59) Since men do not share this experience, they in

general do not see nor understand issues related to menstruation as being part of community and municipal responsibilities for residents. As men dominate in decision making, these issues are rarely considered. For instance, many girls are forced to drop out of school due to insufficient toilet facilities. Women are often silent on this subject as it is commonly considered a women concern only and sometimes even thought of as filthy. Women's needs are thus ignored and often menstruation is even used as a means to condemn and exile women. (UN Habitat. 2006. p 59)

Minoia (2007. p 8) argues that gender constraints imposed on women's participation commonly derives from "[...] social structures, the gendered division of labour, hegemonic social identities and norms, and the distribution of social, political and economic privileges [...]" Communities are commonly strongly divided by power relations following age, religion, class, and gender. (GWA. 2006. p 16-17) It may then be difficult to oppose those in power, commonly men, if having a contradicting opinion. Furthermore, power differentials generally decide who participates in various meetings, dialogues, and decisions. Often only community leaders, commonly men, are invited to participate in project meetings and thus women are excluded. In different cultures, women may find it difficult to show their opinions in front of the men. Furthermore, in some cases, women may believe that some matters should not be discussed in public, for instance regarding workload or gender discrimination issues.

Women also often have less time to indulge in new activities in addition to their normal daily routines. (Ivens. 2008) With their daily workload, women may have difficulties attending to meetings set at times of the day when they are busy with household work or childcare. In many cases, women are also constrained by informal or formal norms denying them the right to participate. There are also gender biases in education, where women and men have different possibilities to educate themselves, often due to women's and girls' heavy workload. Consequently this results in higher illiteracy among women and girls. Men are also commonly more experienced when it comes to raising their opinion in general and thus feel more confident with new people and situations. Women and men may also experience the costs and benefits from participating differently. As women already carry a high workload, they have little time to allocate to participation processes. Thus, women may find that participation constitute higher opportunity cost than it is beneficial.

Gor (2008. p 220) claims that there is widespread evidence demonstrating great benefits from

expanding women's rights and participation and further generating cultural changes to enable full advantages from economic growth. Neglecting women's needs and rights attenuate the possibility for entire communities to grow and develop as "*Gender relations influence the distribution of output, work, income, wealth and power.*" (Gor. 2008. p 220) Incorporating women in managing natural resources is vital to reach sustainable and efficient management. (Were. 2008. pp 218-219) It can thus be understood that gender relations and gender inequalities are essential, not only for the sake of human rights, but also in that it addresses issues of development, growth, poverty, and natural resource management. Hamdy et. al. (2004. p 36) state that without opposing gender issues, projects may even reproduce gender inequalities and augment imbalances between women and men.

4.1.3.2. Economic

According to Davila-Poblete (2004. pp 3-5), stemming from women's role within the household, it is often assumed that women's main responsibility of water lies within the use of domestic water. Women as water users are associated with the private sphere with main responsibilities for collecting water for food, hygiene and child care, i.e. limited to social aspects. Nevertheless, it has been proven that women are essential in direct and indirect participation in the economic aspects of water utilisation, both regarding productive and non-productive areas. As further stated by Davila-Poblete (2004. pp 3-5), women are key "[...] *not only as water users but also as economically feasible social actors at the local, national and regional level.*"

Women, as well as children, pay considerable opportunity costs in that they daily often spend hours collecting water, thus countless school hours and working hours are lost. (CAP-NET, GWA. 2006. pp 3-4) This is further aggravated by insufficient and inadequate water pipe systems as this adds to the time and energy spent to collecting water. With little access to water for productive purposes, women are often most affected during water shortages. (CAP-NET, GWA. 2006. pp 3-4) When water is scarce, whether in quantity or quality, great burden in time and effort is posed on women who fetch the water. (Gor. 2008. p 220) This, according to Gor, "[...] *decreases their opportunities to engage in other productive activities which could enhance their attainment of the socio-economic advancement.*"

In increasing female participation to identify essential issues and by increasing gender awareness, economic opportunity costs may reduce. (CAP-NET, GWA. 2006. pp 4-6, 13-14) For instance, time and energy spent in collecting water may be used in productive, domestic, and

community activities. This implies that by enabling women to increase their productivity, their economic situation can improve. With better water access, women spend less time collecting water and it is possible to improve their economic situation. Furthermore, measures can be tailored to reduce female unemployment and counteract gender income inequalities. Better access to water also gives women more time for income-generating activities, thus the economy as a whole benefits. Involvement in water related projects thus empowers women, especially when project activities are linked to income generating activities. This gives women the chance to earn and expand their income. Better access to water enables women to spend more time on their own welfare and leisure. (CAP-NET, GWA. 2006. pp 4-6, 13-14) Improved water access also increase agriculture yield, additionally improving food security and health. Improved health enables better possibilities to generate income.

According to the GWA (CAP-NET, GWA. 2006. pp 4-6, 13-14), there are evidence indicating that equal participation of both women and men reduces costs of water supply systems as activities are increasingly more efficiently targeted. Additionally, this strengthens future operation and maintenance. Water projects with equal participation have proven to be more successful regarding service and financial performance, as well as improved local management. Recognising both women's and men's perspectives provides indications for what may work and what may not, and furthermore builds trust and respect within communities. Moreover, with optimal technology and effective management stemming from equal participation, water systems are improved and consequently further economically sustainable.

4.1.4. Increasing Female Participation Approaches

Gender inequality and participation imbalances generally lingers and although water institutions increasingly include gender units within their institutions with specific aim to tackle gender issues, this has had little impact on the way the institutions work. (GWA. 2006. p 55) For instance, governments and citizens often assume that policies and legislation are gender neutral even when they are not. (CAP-NET, GWA. 2006. pp 6-7) Furthermore, when there is no explicit mention of men's and women's different roles, responsibilities, and situations, it is likely that men will inevitably benefit more than women as regards to land and water rights, education, participation, employment etc. Yet, gender concerns are not widely considered within water policies and legislation. In cases where

gender is apparent in policies, they rarely have a comprehensive and consistent gender focus. (GWA. 2006. p 55)

The essential role of women in water utilisation and management is rarely understood and recognised. For instance, according to Wallace and Coles (2005. p 17), it is often ignored that women are involved in both the consumption as well as the production of water. By failing to acknowledge women's active roles, women's needs and interests are commonly misunderstood resulting in further disempowerment. Participation is an essential means to tackle this.

However, although not specifically relating to increasing women's participation in water activities, Bonnal (2005. pp 121-122) proposes a set of measures to assure equal participation in general;

- Hold information campaigns informing all stakeholders of principles, methods, and benefits of a participatory process.
- Provide information regarding socio-human issues to government and people's community organisations to increase understanding of such issues and promote participation.
- Strengthen capabilities of local organisations.
- Decentralisation of decision making by all involved stakeholders.
- Promote communication, corporation and coalition among stakeholders.
- Set up national and local networks to facilitate communication and cooperation between stakeholders.
- Focus on the most vulnerable groups, such as women and poor to ensure their voice is heard to develop and use their skills as well as promoting equal access and rights to resources and opportunities.

According to Bonnal (2005. p 119), although improving participation has been acknowledged as essential, this does not guarantee it being implemented. External experts often have difficulties in altering their already existing methods accordingly. Furthermore, increased participation implies increased responsibilities. Previous active involvement, participants often viewed themselves as merely recipients where external experts and professionals provided material support. Thus, complex issues are related to entering this new type of relationship between the public and outside experts.

4.1.4.1. Gender Mainstreaming

In order to strengthen women's situation and consequently improve female participation, consistently and thoroughly integrate gender issues in all societal spheres and at all levels, the concept of gender mainstreaming has become a globally adopted approach. (GWA. 2006) The GWA defines the concept of gender mainstreaming as "*the process of assessing the implications for women and men of any planned action, including legislation, policies and programmes in all areas and at all levels.*" (GWA. 2006. p 9) Thus, gender issues must be acknowledged at global, national, institutional, community, and household level. (GWA. 2006. p 18-19) Gender mainstreaming can be understood as a strategy to make women's and men's opinions and knowledge part of the designing, implementing, monitoring, and evaluating policies and programmes in all political, economic, and societal areas. (GWA. 2006. p 9) Through this, the strategy aims at making women and men benefit equally in political matters, economic issues, and the society at large, consequently generating gender equality. (Hijab & Zambrano. 2007. p 3)

Gender mainstreaming implies enabling equal participation for both women and men to actively participate in planning, implementation and evaluation steps in water development and management measures. (Zwarteveen. 2006. p 7) It must be understood that mainstreaming is not only about female empowerment and increasing women's participation but that it entails the act of equally expressing women's and men's knowledge, experiences and interests. However, as mentioned above, commonly women are excluded and thus the focus is usually at increasing women's participation rather than men's.

4.1.4.2. Capacity Building

Female participation must be promoted carefully to ensure that women who are usually excluded can participate by building confidence and developing essential skills. (Wallace & Coles. 2005. p 17) Furthermore, efforts must be made ensuring that men allow women to participate. However, in order to address gender in participatory approaches, it must be understood that gender is not always the sensitive topic it is assumed to be. (GWA. 2006. pp 17-18) Moreover, it must be recognised that gender is not a theoretical concept but rather a fact that women and men can address. With specific efforts, gender can be discussed and addressed through participatory approaches using the right methods and attitudes.

Despite efforts made to increase women participation in water projects, Minoia (2007. p 8) states that this is commonly poorly translated into

practice. Facilitating actors must be experienced, skilled and have the ability to deal with possible conflicts. (Hamdy et. al. 2004. p 37) Facilitators must be flexible and adaptable so that methods used can be adapted within specific contexts. Men and women must be supported in their sometimes awkward positions that may follow from exploring new issues. As participatory processes may take time, sometimes years, support must be available accordingly. Organisations and facilitators must also actively and frequently follow up on results and feedback rising from the participatory processes.

4.1.4.3. Altering Cultural Rules and Norms

By recognising both women's and men's views as well as understanding reigning gender roles and social differences, water managers attain a more comprehensive and genuine picture of a community or a situation enabling accurate approaches. (GWA. 2006. p 14) Thus, with a gender perspective that integrates women in decision-making processes, women's knowledge will engender more sustainable and efficient approaches to water management. For instance, a document provided by the Samoa Ministry of Natural Resource and Environment (MNRE. 2010-10-12), indicates a strong link between the level of women's participation and the level of success in water management projects. It claims that water projects that do not include women are more prone to fail. Women's participation should thus be part of the overall water management policy framework. (GWPb. 2010-08-02) Muylwijk further argues that participation approaches in water projects are only adequate if established gender beliefs are considered where both women and men are invited to view their opinions and ideas regarding responsibilities, problem solutions, and maintenance. (Muylwijk. GWA. 2010-08-18. p 5)

According to Ivens (2008), effective female participatory approaches require processes where power imbalances in the household as well as in the public sphere are addressed. This further considers ownership of resources and assets and how power relates to roles, responsibilities, and opportunities. An enabling environment must be created where women feel comfortable raising their voices and concerns so that women and men equally can be involved in designing the development agenda. Ivens further state that successful approaches to female participation must also acknowledge that "[...] women are not a homogeneous group but that characteristics such as age and class further define their roles, responsibilities, and opportunities." (Ivens. 2008) Thus, complex social phenomena must be recognised to successfully implement and improve female participation.

Swallow et.al. (2005. pp 183-184) argues that female participation in water projects is commonly obstructed in inadequate project designs since projects merely handle a few gender issues and do not commonly address key issues. Furthermore, increasing female involvement is often hindered by cultural and social constraints, especially for rural women. However, if existing norms, policies, and laws are not modified in relation to gender equality norms, new laws and policies will likely be insufficient and ineffective and thus have little success. (Buvinic et.al. 2008. p 294) If there are no policies or legislation to support women's involvement and initiate required changes, their participation will continue to face restrictions.

4.1.4.4. Legislation, Regulations, and Policy Incentives

To maximise benefits from any gender approach in water management, gender considerations should be integrated at all societal and institutional levels; in policies and laws, institutions, as well as at the operational level. (CAP-NET, GWA. 2006. p 14) According to the GWA (CAP-NET, GWA. 2006. pp 14-16), essential in improving stakeholder participation and women participation is to formulate it as a principle of law. Thus, women's involvement ought to be explicitly expressed in legislation. Furthermore, there ought to be explicit legislation stating women's equal right to water and other natural resources. Davila-Poblete (2004. p 2) states that since gender is socially constructed, gender approaches must be actively implemented in programs and projects in order to obtain gender equity.

However, in cases where governments have included gender issues in their water agenda, practical implementation has often been unsuccessful. (CAP-NET, GWA. p 7) Gender is commonly considered a marginal issue and is relegated by separate powerless gender units with little impact. Commonly, water institutions and decision making processes also include women based on quota policies which often reinforce gender disparities and thus fail to empower women. Also, implementation of water policies including gender does not appear in day-to-day activities as there is a lack of interest, commitment, or know how from those responsible for the gender approach implementation.

Formulating and implementing sufficient and effective policies that promote gender equality and female participation is thus complicated in circumstances of well established cultural traditions and conduct. Furthermore, according to Buvinic et.al., (2008. pp 297-298) enforcing certain policies and laws may generate public resistance.

Additionally, altering cultural norms and traditions is time consuming and may take generations. (Buvinic et.al. 2008. pp 302-303) As stated by Buvinic et.al., “when men are the policy makers, there tend to be fewer incentives to engage in long-term processes that challenge the status quo.” (Buvinic et.al. 2008. p 302) Moreover, not only decision makers, but also other groups may oppose such changes. Buvinic et.al. (2008. p 303) suggests three types of governmental policies to successfully implement gender equality policies;

- Increase awareness about ongoing discrimination against women,
- Promote the societal value of female contribution and participation,
- Increase the productivity of female-dominated activities resulting in women empowerment and improving women’s economic potential.

Gender disparities may be reduced through changing or imposing new legislation in society, thus introducing new enforcement of legislation against discrimination against women. (Buvinic et.al. 2008. p 298) By modifying policies and rules so that they are designed for women as well as operated by women, this would further reduce the gender gap. (Buvinic et.al. 2008. p 299) Another option is to tailor programs according to women’s needs, so that women are assured equal or better access. (Buvinic et.al. 2008. p 301) Government benefits, goods, services, and interventions are then tailored to women’s requirements. Health and WATSAN programs may be such interventions, aiming at addressing specific problems or limitations experienced by girls and women. By creating a virtuous circle, equally and simultaneously considering cultural norms, rules of society, and societal determining mechanisms, positive social effects will improve not only water management but will develop further opportunities for people in general and women specifically. (CAP-NET, GWA. 2006. p 6) With new water policies and legislation, property and access rules can be changed. This would assist in reducing inequity and addition, benefit development.

5. Results, Analysis and Discussion

The following chapter presents the results derived from interviews and document analysis. The results are further analysed and discussed in relation to the theory developed for the study.

5.1. Women’s Roles and Responsibilities

5.1.1. Water Collectors

The interviews and document analysis results show that women in Ghana first and foremost are associated with the role of collecting water for domestic purposes. This is further supported by the GWA (2010-09-15) stating that women’s main water responsibility is to collect, use and manage the physical water source. The fact that women carry the main responsibility for water collection stems from their domestic reproductive roles, as argued by the CIDA respondent; “[...] it’s related to their reproductive roles, so because of their domestic reproductive roles you will find the women responsible for water collection”. (Quote, CIDA Respondent) According to the MWRHW (2007. p 26), most women walk various distances daily to fetch water from streams, rivers, wells or boreholes. Sometimes it may be a mechanized water source, like a tap. However, provision of a piped water supply is far from universal. Merely a few families mainly in the bigger cities are connected to the cities’ water system and thus get their water through household taps.

The CIDA respondent claims that women are very little or not at all associated with any decision making role in the water management, “[...] there’s no regeneration or management in terms of decision making.” (Quote, CIDA Respondent) The women also commonly have the responsibility for managing the water site in terms of cleanliness as the “The women take turns by family to clean it up.” (Quote, CIDA Respondent)

Although women and girls carry the main responsibility for the water collection, boys do sometimes fetch water as well, however mainly young boys, particularly before school age; “Basically you see that the women collect the water by themselves and they use their children, mostly the girls, and the boys to a lesser extent.” (Quote, CIDA Respondent) Occasionally the men also help out with the water collection tasks, “[...] if the water source is very far away, sometimes you find the men helping with bicycles and containers.” (Quote, CIDA Respondent) However, as further stated by the CIDA respondent, in such situations the water is usually not collected for household purposes; “You will find men carrying water but sometimes they go to sell it to earn an income but some of them, some of the times, depending on the critical situation would support the family to fetch water.” (Quote, CIDA Respondent)

Since the women carry the main responsibility for water collection they are first to notice if taps break

down, to see physical changes in the water, for instance if the water source starts to decline, or to identify apparent water pollution. Consequently, as the WASHCost respondent stresses, “[...] *women are very key in the water service provision, water service management and the use of water.*” (Quote, WASHCost respondent) This is further supported by the UN Educational, Scientific and Cultural Organisation (UNESCO. 2010-01-29), in that women, over thousands of years, have developed and acquired a great pool of knowledge, possessing crucial knowledge of managing, preserving and the use of local water resources.

Women’s local knowledge is crucial for successful access to water both in quantity and quality. (Dejene et.al. 2008. pp ix-x) According to the DANIDA respondent, “[...] *because it’s women who fetch the water, they will know when the taps are broken, they will know when it’s working, they will know.*” (Quote, DANIDA respondent) Women are essential actors in finding and collecting water and thus have vital understanding of characteristics like availability, distance, time, quality, and use. (International Fund of Agricultural Development. 2010-01-29) For instance, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) states that “*Women’s knowledge and experience in the supply and use of water is invaluable, and many problems could be avoided if women were consulted on such items as local sources of water, the location of a well or the design of a pump*”. (UNESCO. 2010-01-29)

5.1.2. Treasurers

Besides the role as water collectors, women also assume the role of treasurers collecting water tariffs where the water source is a borehole or a tap. The WASHCost respondent stresses that “[...] *the women when they come over in their water community, by a kind of natural means, they take over positions like being a treasurer.*” (Quote, WASHCost respondent) Women’s roles as treasurers relate to their productive water utilization as “[...] *this is more in terms of productive use of water where women are very key.*” (Quote, WASHCost respondent) This stems from the belief that women are more responsible and trustworthy than men in keeping money; “[...] *the perception is that women are honest and when they keep money they keep it well, they don’t touch it.*” (Quote, CIDA respondent) This is further supported by the DANIDA respondent stating that “[...] *the women tend to be more accountable for the proceeds for the collection of stand pipes.*” (Quote, DANIDA respondent)

As a consequence, women have started to enter decision making level as treasurers for Water and Sanitation Development Boards (Water Boards)

and WATSAN teams. However, as the CIDA respondent emphasises, “[...] *we are yet to see women in the highest level in terms of being the chairman of the boards or the WATSAN teams.*” (Quote, CIDA respondent) It can thus be understood that women increasingly do take more active roles in the administration of water.

Safe keeping of the money within a water collection system further ensures financial means to maintain and repair the system in cases of breakdowns; “[...] *when they [the women] keep the money, they will provide the funds to do the routine maintenance, and even if it breaks down there will be funds to do that. They are much more concerned, so when they are put in those positions it’s better.*” (Quote, WASHCost respondent) Thus, since it is in the women’s direct interest to have a functioning water source, they make sure to have sufficient funds to maintain and repair it.

According to the DANIDA respondent, for many of the women, this becomes a good form of employment. However, in cases where women are already occupied it becomes an issue “*if they had other employments it becomes challenging so there are dynamics in it which are not necessarily good.*” (Quote, DANIDA respondent) Consequently, if the women are forced to take on the roles as treasurers on top of other employment and domestic tasks, it becomes an additional burden.

5.1. Female Participation - Issues and Challenges

As Chart 1 (below) illustrates, the content analysis results indicate that reigning traditional norms and practices constitute a major constraint to female participation in the Ghanaian water management. Furthermore, lack of education and high levels of illiteracy are identified as the main obstacles hindering women’s involvement. Additionally, time allocation issues have been given great attention as obstructing women’s equal participation. Power imbalances, motherhood, water tariffs and poverty, and technology, although to a less extent, constitute considerable barriers to allowing and increasing women’s participation in the water management. The great difference in occurrences between interviews and the NWP and the NGCP can be explained with the fact that the interviews were specifically focused towards the thesis purpose and research questions, however, the documents were much broader and did not specifically address issues of participation.

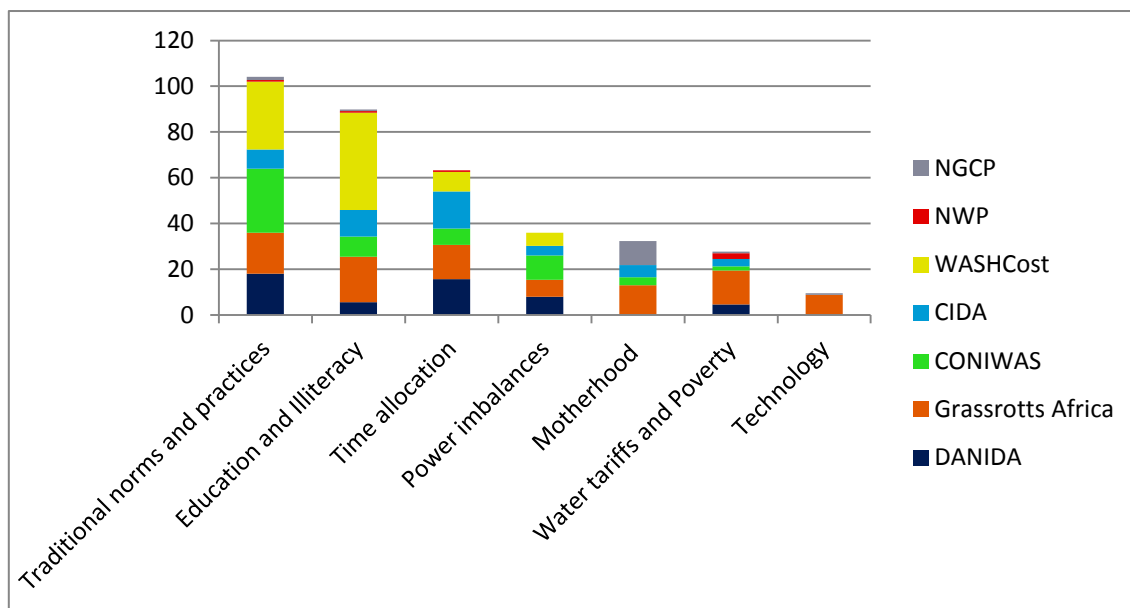


Chart 1. Barriers to women’s participation – Content Analysis Results (numbers indicate occurrence of variables/10,000 words)

Gender disparities greatly impact on Ghana’s economic and social development as it limits the country’s growth and poverty reduction goals. (World Bank. 2002. p 2) Poverty in the country is clearly gender divided, as a disproportionate percentage of the poor are women. Gender differences in employment, time allocation, school attendance and literacy, health and affects of HIV/AIDS, and furthermore gender differences regarding access to and control over human, economic, and social capital assets have great impact on growth and poverty reduction in Ghana. Women are nationally underrepresented in almost all employment fields with exceptions from the manufacturing and trading fields. This applies in both rural and urban areas.

5.1.1. Traditional Norms and Practices

The results show that traditional norms and practices in the Ghanaian society constitute a major obstacle for women to enter the public arena at large and specifically to participate in water management. First and foremost, these traditional norms and practices originate in deeply rooted socially constructed roles that heavily favour men, thus creating a strongly male-dominated society.

5.1.1.1. Socially Constructed Roles

Gender differences does not only relate to women and women’s roles, but stem from the socially constructed roles for women as well as men; “[...] it’s about the roles that we have shared between children, men and women in our daily business of life, [...] the traditional roles we have split and it has dictated the way we organise our lives. (Quote,

CONIWAS respondent) The Grassroots Africa respondent further argues that these traditional roles have through generations become norm in the Ghanaian society and are rarely questioned or challenged;

“The roles have been socialised and determined for them over centuries. So even the women and girls, they find it normal. In fact, a girl who cannot actually do the work well would be left out by her fellow girls. Because they are socialised to think that it is an honourable role and that a woman or a girl ought to know and have ability to do that.” (Quote, Grassroots Africa)

Although men and boys would likely better manage the physically demanding water collection, females have traditionally and socially been assigned this role; *“That’s where the gender injustice comes in. It’s a gender bias against girls, or women, or females. It’s not about physical strength.” (Quote, Grassroots Africa respondent)* Thus, this constitutes a great gender injustice within Ghanaian water ‘society’.

According to Buvinic et.al., (2008 p 295) these cultural norms assign women with certain roles, consequently restricting women within the household and the community. The norms are reproduced through generations and are assumed to be normal procedures of society. Thus, discrimination against women and gender disparities are often deeply inherent in these cultural norms and traditions. The CONIWAS

respondent further states that “[...] *unless we unpack and examine how those roles are assigned we cannot reach sustainability. That’s why I believe that the level of non functionality in the water facilities is so high.*” (Quote, CONIWAS respondent)

Minoia (2007. p 10) argues that these traditionally and socially constructed roles determine the social behaviour within water management culture. This has further large impact on the level of success of water management practices. For instance, there are often already established practices among donors and international institutions that often disregard existing norms within a cultural context. Thus, complex cultural barriers stemming from social roles and behaviour that limit women’s participation are often ignored and disregarded when developing water management practices. Siles further states that “[...] *social and economic norms often reinforce unequal participation and decision-making in community organizations such as water users’ associations.*” (Siles. 2010-06-03) This may additionally hinder water managers in understanding and addressing fundamental causes of water problems. A common reason is the misconception that societies and communities are homogeneous rather than heterogeneous. (CAP-NET, GWA. 2006. p 6) However, societies are in reality diverse with numerous variations of individuals and groups with complex differences in “[...] *power, wealth, influence and ability to express their needs, concerns, and rights*”. (CAP-NET, GWA. 2006. p 6)

In Ghana, traditional roles and behaviour are slowly changing as women gradually are joining the public sphere “[...] *especially because more and more women are becoming economically independent [and] it’s becoming very difficult to enforce old traditional roles.*” (Quote, DANIDA respondent) However, although it is changing, progress is slow. The DANIDA respondent further stresses that this partly is due to deeply rooted behaviour deriving from religious beliefs,

“We have our traditional religion, then we have Christianity, then we have Islam. In all of the three, the role of the women is next below the man, unless it’s translated differently elsewhere, so you would realise that even if it’s not enforced at one level, it’s likely to be enforced at the faith level.” (Quote, DANIDA respondent)

Thus, entrenched traditional and religious norms and practices reproduce and reinforce complex gender roles that strongly limit women to improve their situation and increase their participation in the

Ghanaian community. This is further supported by Lopez-Claros and Zahidi (2005. pp 1-2) in arguing that realising gender equality and improving female participation is a slow process since it challenges deeply rooted human beliefs and attitudes. Altering entrenched ideological behavior is complex since it requires far more than merely developing laws or policies to change practices and beliefs in the home, the community, and in the public environment.

5.1.1.2. Male-Dominated Society

It is believed that women’s exclusion from water management likely stems from that “[...] *the men are preventing the women because they feel that their roles are not that.*” (Quote, WASHCost respondent) This is further supported by Dejene et.al. (2008. p 27) arguing that women’s exclusion from water management commonly originates from the fact that husbands do not support their wives to take part in such activities and positions.

In a water project implemented by the UN (2006. p 14), women who wished to participate were hindered by male family members who strongly opposed the women participation. As further stated by the UN (2006. p 12), the water project indicated that the women lacked support from their male family members in participating both at household level as well as at the community management level. It was also evident that married women had most difficulties with gaining support from their husbands. However, as further stated by the WASHCost respondent, it is not only the fact that men prevent women to participate, also the women hinder themselves; *“I want to emphasise that it is not only men preventing them. The women themselves prevent themselves by thinking that it may be the role of men.”* (Quote, WASHCost respondent)

In a study conducted by the World Bank (2002. pp 9-11) it is stated that participation in public and political activities and decision making processes is highly unequal between Ghanaian women and men. This is also supported by the WASHCost respondent who states that, within Ghanaian culture, women are not given the same opportunities as men to be active in the public sphere; *“Culturally the opportunities for women to have equal involvement is not really there.”* (Quote, WASHCost respondent) There is little female governmental representation and women are furthermore often excluded at community and household levels. (The World Bank. 2002. pp 9-11) This is most apparent in rural areas where women are often completely excluded from political activities and decision making processes as these are considered male responsibilities.

According to Stamp, (Stamp. 2010-02-01) as women are frequently excluded from decision

making processes and in addition experience restricted and different opportunities, they often have differing perspectives of various issues compared to men. This has in many situations lead to increasing conflicts between women and men regarding development processes and resource management. Furthermore, these conflicts increase disparities between women and men and “[...] threaten the balance of power in gender relations.” (Stamp. 2010-02-01)

Raises as an issue by the Grassroots Africa respondent, men in Ghana do not feel that it is their duty to collect water, “[...] because it’s not my role, the woman must bring me the water whether she is sick or not, whether she has other things to do or not.” (Quote, Grassroots Africa respondent) This stems from the deeply rooted cultural behavior where “[...] the gender roles have been conditioned over years and the men feel comfortable about it.” (Quote, Grassroots Africa respondent) Consequently, with this being a normality, the men fail to notice the women’s domestic workload and thus the men are rarely aware of women’s huge work burden “they [the men] don’t feel anything because they think it’s normal and they don’t even appreciate the woman is suffering.” (Quote Grassroots Africa)

These gender differences has great implications for the climate between women and men; “[...] we have evidence of domestic violence related to water where the man gets up and he shouts ‘where is the water’.” (Quote, Grassroots Africa respondent) Thus, there are situations where a man feels that the woman has failed in her responsibilities and duties that at times may lead to sanctions, sometimes even violence. The Grassroots Africa respondent further stresses the importance of that water policy and decision makers also acknowledge issues of domestic violence that relate to water practices; “There’s conflict over the use of water. So these are all issues that policy makers need to really look at very scientifically.” (Quote, Grassroots Africa respondent)

5.1.2. Education and Illiteracy

A great barrier to women’s equal participation in the water management is women’s unequal opportunities to education. Additionally, this results in high levels of illiteracy which further impedes women’s opportunities to become active participants in water management. Illiteracy in general is a problem in the country; “We don’t have a good literacy rate in this country [however] it’s worse for women. More boys go to school than women.” (Quote, Grassroots Africa respondent) The link between education and women’s role within the water community can be understood in two ways. First, girls schooling is highly limited

due to their domestic work load of which water collection constitutes a major part. Second, women are highly limited to participate in the water management due to illiteracy and the fact that they lack education.

5.1.2.1. Restrictive Domestic Workload

Girls in Ghana are strongly limited in their schooling due to their heavy domestic workload. Since women and girls daily often spend hours collecting water, girls lose out on numerous school hours. (CAP-NET, GWA. 2006. p 3-4) The CIDA respondent states that in many situations, the girls may be completely prevented from attending school. In other circumstances, the girls first spend hours in the morning to collect water and then head off to school, “[...] if the source is far away from home, then the girls would continue till maybe the household got the required amount of water and then they would go off to school.” (Quote, CIDA respondent) The CIDA respondent further stresses that;

“Even if she is in school, for each time she has to search for water she will miss a certain amount of hours and then when she finally gets to school, what happens, she’s tired and she’s probably dozing in class or she really can’t pay attention and then all those hours that she’s lost cumulatively, she’s lost all that, so it affects her performance. It does really affect it.” (Quote, CIDA respondent)

The unequal division of workload for girls has significant impact on their school attendance and performance. (Dejene et.al. 2008. p 12) This is further stated by the Grassroots Africa respondent who claims that “[...] most girls do not make it in school because they have to get up at three am to go get some water because there is no water in the house and by the time they get to school they are tired, they sleep through classes.” (Quote, Grassroots Africa respondent)

Even though boys take part in the water collection this is only at a young age; “Basically you see that the women collect the water by themselves and they use their children, mostly the girls, and the boys to a lesser extent because when it comes to going to school they would rather the boys went off to school.” (Quote, CIDA Respondent) Thus, a girl’s access to education is very limited from an early age. A case study from the Samari-Nkwanta Community in the Ejura-Sekyedumasi District in Ghana shows that during the dry season when water sources dry up, women and girls were forced to walk about three to four miles in heavy terrain to find water, occasionally more than once a day.

(Nana Ama Serwah Poku Sam. 2006. p 26) As a consequence, “[...] *many girls had to abandon their schooling to search for water [...]*” (Nana Ama Serwah Poku Sam. 2006. p 26) The WASHCost respondent states that these patterns are first and foremost due to cultural norms, for instance in that Ghanaian culture favours boys over girls, “*The reasons are because of culture. Culture is the thinking part, if much money is not in the family to send one to school you just say ‘hey Adwoa’, (‘Adwoa’ is the name of a female born on a Monday) ‘Adwoa’ you don’t go to school, your brother should go.*” (Quote, WASHCost respondent) Thus, with little or no education, girls are greatly underprivileged with few possibilities to take part in the society beyond the household and further have little prospects to become economically independent.

5.1.2.2. Limiting Water and Sanitation Facilities in Schools

Girls’ schooling is limited not only by their domestic chores but also due to often sub-standard WATSAN facilities in the schools. This has great impact on girls’ school attendance; “*It’s so bad that women, girls, when they are menstruating they don’t come to school because if, they can’t do anything when it happens at school because there is no place to clean themselves. [...] It’s simply not female friendly.*” (Quote, Grassroots Africa respondent) The DANIDA respondent further stresses “*If you don’t have sanitation facilities in the school, maybe not for the very young girls, but usually girls who’ve reached puberty, for that week they wouldn’t go to school.*” (Quote, DANIDA respondent) This largely limits girls schooling and, apart from them losing out on important school hours due to domestic chores, they also lose out on several days each month due to poor WATSAN facilities. According to the UN Habitat, (2006. pp 58-59) in these situations, considerations have not been made to women’s and girl’s menstruation needs, an essential part of WATSAN projects.

Since men do not share this experience, they in general do neither see nor understand issues related to menstruation that ought to be part of community and municipal responsibilities. (UN Habitat. 2006. pp 58-59) As men dominate the decision making, these issues are rarely considered. For instance, many girls are even forced to drop out of school due to insufficient toilet facilities. Women are often silent on this subject as it is commonly considered a female concern only and often thought of as filthy. Women’s needs are thus ignored and menstruation is often even used as a means to condemn and exile women. (UN Habitat. 2006. pp 59) With increasing female participation in the water management, such issues would be raised and girls’ access to

schooling would be greatly improved. Thus, this clearly illustrates one great aspect of the importance of women’s participation in the water management.

5.1.2.3. Women in Higher Education

With limited possibilities to schooling, the ratio of men to women in higher education is highly uneven; “*When you look at the ratio of men and women in higher education [...] in this part of our world, the men outnumber the women by far.* (Quote, WASHCost respondent) A United Nation survey shows that there is a distinct difference in educational levels between Ghanaian women and men, where more than twice as many women compared to men have never been to school. (UN Habitat. 2006. p 20) Half as many women compared to men have reached secondary or higher qualifications. With high illiteracy, lack of education, or low levels of education, women are often greatly limited to participate in water management.

According to Dejene et.al. (2008. p 27), the great gender gap in professional water decision making positions is likely due to the fact that local authorities find that women do not hold sufficient education or essential information about public affairs. With no higher education, the women cannot take higher positions in water management. The Grassroots Africa respondent states that there are few professional, educated women capable to occupy any senior positions, “[...] *there are also fewer women up there with the skills that are required for managing water systems.*” (Quote, Grassroots Africa respondent) The CONIWAS respondent stresses that “*Because of the gender challenges to women’s advancement in the educational ladder a lot of the women do not qualify up to that level.*” (Quote, CONIWAS respondent) As women are not given the opportunities to reach higher education, there are very few women who actually can fill these positions; “*There is just not enough educated women to take these positions.*” (Quote, WASHCost respondent) However, as argued by the CONIWAS respondent, the required qualifications that are set as criteria for water management positions are often unrealistic; “*I believe that the criteria that are set for managers are just unrealistic. You really don’t need those levels of qualifications.*” (Quote, CONIWAS respondent)

Education systems commonly do not encourage girls to study technical subjects as these are seen as masculine. (UN Habitat. 2006. p 37) Case studies have also shown that few women are employed as managers, technicians, and engineers. This further limits women’s career opportunities. The DANIDA respondent stresses that “*The policy level is mainly*

male because engineering, in the past, most engineers have been men. So there's quite a lot of male presence. Usually the females are supporting staff. (Quote, DANIDA respondent) Lack of women professionals additionally discourages women and further reinforces gender imbalances and hinders female participation. (UN Habitat. 2006. p 37) Thus, it can be understood that if more women were occupying these professional positions, it would pave the way and encourage other women to enter. However, the process of change is complicated as this likely is a consequence of the often patriarchal nature of Ghanaian institutions and such changes commonly strongly are opposed.

5.1.3. Time Allocation

The analysis results indicate that issues related to time allocation constitute a key obstacle for women's equal participation in Ghanaian water management. This is further supported by the UN Habitat (2006. p 37) stating that women are often limited in participating in water management and water project activities due to the double workload this brings in relation to the household and child care workload. Ivens (2008) argues that women spend between one and sometimes up to eight hours per day collecting water. This largely varies between the dry north and the rainier south and also varies between seasons. Dejene et.al. (2008. p 26) argues that women in Ghana spend over 700 hours a year at collecting and transporting water. Additionally, Costa et.al. (2009) states that approximately 82 % of the men are completely absent in water collection tasks. On the contrary, 66 % of the women collect water.

A case study by Ivens (2008) describes that Ghanaian women in general spend 12 hours per day on different productive, household community, and family care tasks. Men spend 9 hours per day, thus women spend 25 % more hours per day working. A case study from the Samari-Nkwanta Community shows that women work in average 19 hours per day, compared to men working 12 hours per day, a difference of almost 40 %. (Nana Ama Serwah Poku Sam. 2006. p 26) In total, domestic and employment work time is considerably higher for women where 19.3 % of the women work 112 hours per week compared to the men where a proportion of 10 times smaller spend the same amount of hours weekly.

As women on average spend a considerable amount of hours on water collection and other household responsibilities, time is a great issue for women and girls. (Dejene et.al. 2008. p 26) With little spare time, they have few opportunities to take part in any other activities that could improve their situation. (Dejene et.al. 2008. p 12) The WASHCost

respondent states that *"Because women are more involved in household activities that is taking much more care of the home, of families, of children, it becomes as if they don't have much time to be involved."* (Quote, WASHCost respondent) Thus, with a heavy domestic work load, women spend, on a daily basis, hours in collecting water and additional domestic tasks. This consequently generates large opportunity costs. With little or no spare time, the women are restricted in participating in any public activities and thus their involvement is greatly limited. Furthermore, the women lose out on valuable time that could otherwise have been spent on productive or educational activities.

According to the World Bank (2002. p 6), Ghanaian women and men experience different structural roles in the economy at large, accompanied by unequal and unbalanced roles in the household. The World Bank further estimates Ghanaian women's workload as approximately 15-25 % higher than that of Ghanaian men's. Men only compensate for 1/3 of this difference by engaging in paid activities and, where "[...] the gender gap in time devoted to household activities is widest for the most productive age group (20-49)". (The World Bank. 2002. p 6) Thus, by addressing these specific needs, women and girls would likely reduce their time spent on these activities and as a result enable more time for economic productivities, education and to further improve household welfare.

Although a common goal is to improve women's participation in the water management, women often feel greatly over burdened due to the additional work load this implies;

"The women were fed up, they didn't want to be part of it. So all the women in some of the communities they thought it was just too much additional work because they had their own work they were doing, nothing is taking away from their role at the house and they still had to show up for these WATSAN meetings." (Quote, DANIDA respondent)

Due to the lack of time, women are often unwilling to take part in water management activities. Dejene et.al. (2008. p 27) However, as the DANIDA respondent states, this is not the overall case. Many women find it important and happily take part in the WATSAN meetings. According to the GWA (2006. p 31), professionals' often lack skills for enabling women's participation in meetings and for the majority of women time is a precious resource. The GWA further argues that for women to attend to and participate in water management activities, there must be a realistic incentive for time that would otherwise be concentrated on domestic and

income generating purposes. Thus, both long-term and short-term benefits from participation must be made obvious in order to encourage women to participate.

5.1.3.1. Mobility Constraints

With little spare time, women have few or no opportunities to travel beyond their own community. The CIDA respondent stresses that women's mobility is a major constraint to their participation, especially at district and regional levels and in many parts of Ghana, means of transport are limited. It is further culturally unusual that women know how to ride a bike. Although rare, men would sometimes give a woman a ride on their bike, be it their own wife, family, or women of acquaintance. However, in the northern parts, men would not at all offer a ride to anyone but their wife, "*Because women don't ride bicycles, the men will say, particularly in northern Ghana where it's mostly Muslim area, the men will say 'I can't pick somebody's wife behind on my bicycle' because it is not done culturally.*" Thus, due to inadequate transportation in addition to their already heavy work burden, women are limited in their ability to reach meetings where essential water activities are discussed. As the CIDA respondent further states, "*This is one of the number of excuses where women can't be part of that advocacy that comes with decision making issues on the Water Boards or the WATSAN teams.*" (Quote, CIDA respondent)

With little time and limited mobility to travel beyond their immediate surroundings, women have very restricted interaction with women in other communities. As the CIDA respondent states, "*The amount of women's work at the household makes it difficult for you to even have time to travel outside your community.*" (Quote, CIDA respondent) According to the CIDA respondent, this interaction is of great importance for women to learn and share from other women's experiences. The women then bring back essential and useful information to be used in their water activities. This is also connected to women's limited mobility. This information sharing is also of great importance to women's participation in that it strengthens women's role and status within the community, "*Women are then being able to express themselves and share information amongst each other across communities and across initiatives [This] is something that is very empowering for women.*" (Quote, CIDA respondent)

Participating in these meetings is crucial, not only for women's participation and enabling them to raise their voices on important water issues, but also as a means to empower women within society at large; "*[...] for women who go there, they feel that it is empowering and they share experiences while talking to the district executive they've not*

seen before and express themselves and everybody accept what they say, for a lot of them they find that very empowering." (Quote, CIDA respondent) However, as the CIDA respondent further states, women in general do not get this opportunity. Thus increasing women's time availability and their possibilities to reach meetings at a district or regional level requires further attention.

5.1.4. Power Imbalances

Ivens (2008) argues that effective female participatory approaches require processes where power imbalances in the household as well as in the public sphere are addressed and altered. This further considers ownership of resources and assets and how power relates to roles, responsibilities, and opportunities. Since Ghanaian society is highly hierarchical and male-dominated, there are great power and status imbalances stemming from traditional norms and practices. (Dejene et.al. 2008. p 3) As a result of this male-dominance, in many parts of the country, women would not be addressed without the permission of a man. As stated by the DANIDA respondent, "*[...] traditionally when you go to a village or a rural area in many parts of the country you will not speak to a woman without consent of a man unless it's a female headed household.*" (Quote, DANIDA respondent) Traditionally, even in situations where a woman has the decision making role, for instance in Female Headed Households, if there is a man present you would not speak to the woman; "*[...] if you ask to speak to somebody who makes decisions, even if it's the woman who makes decisions, if there's a man in the house, by default you will speak to the man [but] traditionally the head of the house is male.*" (Quote, DANIDA respondent) This is reflected clearly in community activities and the decisions made where women rarely raise their voices in front of the men, "*[...] a lot of women do not open up unless you specifically ask them.*" (Quote, DANIDA respondent)

The DANIDA respondent states that although women in general do not speak up in front of men there are a few women who do raise their voices, however, this is rare. While men in the traditional setting are more outspoken, this is more apparent in mixed groups of men and women, "*[...] if you mix the genders it will look like that but when one single gender meet [...] women speak much more and then you would get a lot more information.*" (Quote, DANIDA respondent) It can thus be understood that women are culturally hindered to raise their voice when men are present. As the GWA (2006. pp 16-17) states, women may find it difficult to show their opinions in front of men, their husband or father. Additionally, women often believe that some matters should not be discussed in public, as

they are considered taboo, especially regarding women related issues.

Traditionally, you would not elect a woman as a chair person in a community WATSAN committee, “[...] *there’s no way you expect a woman to consider ‘I will be chairman’ or someone to nominate a woman ‘you’ll be chairman’. It won’t happen. It doesn’t exist. They will not even think of it.*” (Quote, CONIWAS respondent) The Grassroots Africa respondent stresses that, by law, women are supposed to be given equal opportunities as men. However, this is not the case because it is a male-dominated society that favours men and disfavours women, “[...] *because of our gender inequity, this predetermines the role a woman can play at higher levels.*” (Quote, Grassroots Africa respondent)

According to the UN (2006. p 14), existing power structures within Ghanaian society hinder women’s empowerment. This is evident in a water project implemented by the UN, where women’s involvement was greatly opposed since “*Community leaders insisted that only men serve on the project management committee.*” Additionally, the GWA (CAP-NET, GWA. 2006. pp 3-4) states that gender and water issues commonly stem from power relations where most commonly male-dominated powerful groups often exploit water resources systematically on a large scale. These activities have, for instance, often vast impact on the environment, as compared to women’s activities which commonly comprise water utilisation on a smaller scale.

There is a general assumption that men have better leadership skills, “[...] *because traditionally they are the head of the household and they are expected to be responsible but that doesn’t necessarily translate into reality but it’s an assumption.*” (Quote, DANIDA respondent) The CIDA respondent states that men are to a much greater extent involved in the planning and decision making process. As a consequence, water projects are often subject to failure. The CIDA respondent further illustrates the importance of female participation in the decision making with an example from a CIDA project;

“I remember one of the main concerns of the time was the siting of the borehole, that was a huge issue and women felt that they should be part of that decision making and there were a number of boreholes that were sited at places that raised some concern for the communities. So, not factoring in what the community thinks at one level and also not factoring in what women think was resorted in a number of boreholes that were sited at places that traditionally were

supposed to be graveyards for the community or that boreholes were sited between two communities so the issues of who owns the borehole sort of arose.”
(Quote, CIDA respondent)

The male-dominated Ghanaian society strongly hinder women to take part in the public sphere, “[...] *it’s just men’s chauvinism, men dominance [and] they push the women away by that but women naturally want to be allowed to come on stage before they come, and if you don’t create that environment for women to come they don’t.*” (Quote, WASHCost respondent) Thus, without creating an enabling environment where women are allowed to take the stage, they cannot and will not participate in the water management.

5.1.5. Motherhood

As a natural part of life, and with no public child care system, child birth and upbringing poses a heavy work load on Ghanaian women. (Costa et.al. 2009) This often contributes to an already heavy work burden which further limits women’s opportunities to participate in activities outside the household. The UN Habitat (2006. p 37) stresses that women, as a consequence, commonly are greatly limited to participate in various public activities.

Girls entering motherhood at a young age is a common occurrence which has great impact on their school attendance and opportunities for an academic education. (Costa et.al. 2009) This is further aggravated by the highly vulnerable position of young girls when collecting water. According to the Grassroots Africa respondent, there is evidence that there is a high level of rapes taking place around the fetching points, “*In the early dawn when the girls are going, you know they pry on them. So sometimes you found twelve years, 15 years, 16 years girl pregnant and all that. So it is a vulnerability point for teenage girls.*” (Quote, Grassroots Africa respondent)

The CIDA respondent stresses that childbirth and upbringing actually is a limiting factor to women’s participation in the water management, “[...] *sometimes you hear the men say that there is no one stopping the women, but I think that the number of challenges that women experience and the fact also that our reproductive role affect your ability to rise, you know, within a certain time frame. So you find the men going ahead of the women.*” It can thus be understood that women, as a result of their reproductive and domestic roles, cannot compete with the men to rise in the society and actively participate in water management activities.

In employment and productive terms, because of women's reproductive roles, when being pregnant or having to stay home with small children, the male counterparts may rise up ahead of them. The women may also lose out on training while they are away and in many circumstances they would have to end their employment. As the CIDA respondent states, *"This is merely subject to interpretation of whoever at that time is the manager or the boss. And if that person is not predisposed to encouraging women to rise it might not happen."* (Quote, CIDA respondent) Thus, without a specific policy or enforcement measures to support the women, it is solely up to whoever is in charge to decide how the situation will be managed and most of the time it will not favour the women.

5.1.6. Women's Ability to Pay for Water - The Importance of Female Participation

In many societies, there is a water tariff on drinking water. (CAP-NET, GWA. 2006. pp 4-6, 13-14) The tariff system is part of the financial management of the water source, *"For the system to be sustainable you have to have a kind of fee for the water and that money is used to maintain [for instance] a borehole."* (Quote, Grassroots Africa) Due to restricted assets, Women commonly experience great payment constraints, thus restricting them in their ability to pay for water. This consequently further influences their water collection. (CAP-NET, GWA. 2006. pp 3-4) Yet, women often pay despite having limited economic assets compared to men's greater income.

According to the CONIWAS respondent, the men do not engage in the economics of getting water, *"The burden on a daily basis of how water is coming to the home, this is left to the women. How she gets the money, the man won't worry about it."* (Quote, CONIWAS respondent) This has further been known to cause gender conflicts. (CAP-NET, GWA. 2006. pp 3-4) Additionally, with little financial assets, women are restricted in developing efficient and sustainable water use practices, consequently limiting their partaking in water activities merely as a means of survival.

Because of women's limited abilities to pay, many women are forced to collect water from their traditional water source, *"[...] they still use the old sources [...] cause then you don't pay for the water."* (Quote, DANIDA respondent) Thus, water projects where a tap or a borehole has been assembled may likely not be as successful as desired since the women return to the old source;

"It means that the results that you're expecting in the community, you won't achieve it. Because if you were expecting health related water diseases to drop, it wouldn't. Especially in cases where you have problems with bilharzias, you shouldn't even be in the water, or other water related issues, you shouldn't even be in the water." (Quote, DANIDA respondent)

According to the Grassroots Africa respondent, since women are the people who use the water source, be it a borehole or a tap, it should be the women who are in charge of collecting the money. This is also common in that the women take on the role as treasurer. Because the women use the water source, they have a greater idea of the economic situation in the village and know who can and who cannot afford the water;

"They can actually have a more visible idea of estimated income, because they are always at the place. They do their talking and gossiping together and they'll know what is happening in which home, they know each other, they know the vulnerable, they know who cannot pay." (Quote, Grassroots Africa respondent)

As further stated by the Grassroots Africa respondent, towards the fundamental principle obligatory in the UN that water is a right, when developing a water system, the model must have a specific component for those who cannot pay. Not all women can afford their total amount of water that they need daily but due to the fact that water is a right, it is believed that there must be exceptions, *"[...] and those who can best decide who should not pay are the women themselves."* (Quote, Grassroots Africa) Thus, the women are essential in acknowledging who is poor, *"Bringing women into water management is important in determining who is poor and who should be exempted from paying. And therefore, involving women in water management, whether rural or urban is important in upholding the right to water."* (Quote, Grassroots Africa) Thus, in developing efficient water tariff systems, women are crucial in managing and determining who is poor.

Trough increasing women's participation in decisions made regarding the tariffs systems, women's and men's different economic positions and abilities to pay would be acknowledged. (CAP-NET, GWA. 2006. pp 4-6, 13-14) Consequently, tariffs systems may be developed to make water affordable for both women and men and thus reduce potential conflicts related to lack of payment.

5.1.7. Technology

Men and women often have different views of what water technology is most appropriate in the water utilisation. (CAP-NET, GWA. 2006. pp 4-6, 13-14) Although women carry the main responsibility for water collection and are directly affected by available technology, they are often excluded from decisions made of which technology is most appropriate to use. However, as essential water stakeholders, their experiences are crucial when it comes to deciding what technology is most practical. Furthermore, different types of technology vary in prices and expensive technology may be difficult to sustain in service and reparations. This further implies higher water tariffs to maintain the finances. Moreover, since women are excluded from decisions regarding water utilisation technology, decisions are mainly made by men with often limited knowledge about the local conditions. Although technological aspects does not directly affect women's participation in the water management, interesting aspects were raised during the interviews of the importance in involving women in decisions regarding technology were raised.

According to Ivens (2008), in the event of a water supply system break down, women are directly affected. For instance, in cases of water shortage or when water systems break down, the women and children are the most affected as they consequently must travel far to search for additional water sources. (GWA. 2010-09-15) This further increases their work burden and additionally limits their time that they could be engaged in economic or public activities. Since women are directly affected by any water system breakdown, they are likely to demand immediate repair and thus the water supply service would be maintained. (Ivens. 2008) However, as women often are overlooked and since a breakdown does not immediately affect daily responsibilities of men, a repair may not be immediately possible. Henceforth, evidence has shown that it is likely that the water service would eventually degrade.

The Grassroots Africa respondent stresses that since women culturally are responsible for collecting the water, they are key in determining appropriate

technologies, *“One of the main reasons why we should be concerned about women is the fact that they actually traditionally and culturally are responsible for bringing in water for household use and therefore their participation in water management will be key to getting the appropriate technologies that will be useful to them.”* (Quote, Grassroots Africa respondent) Furthermore, women are more likely than men to be careful and ensure that the technology is maintained because they know that if it breaks down they will have to carry the burden. Also the WASHCost respondent recognises the issue, *“We find that the women need it more than the men, even the men don't care, but we find that the women are really key.”* (Quote, WASHCost respondent) Thus, when the men are in charge, there is a tendency to have much longer down time, *“[...] because their felt need is not so much compared to the women's.”* (Quote, WASHCost respondent)

By recognising these different experiences and opinions between women and men, technology can be tailored to specific needs, and efficient and equal payment and management systems can be developed. (Dejene et.al. 2008. p ix-x) Furthermore, funding can be optimally invested in both human and water resources. Thus, equal participation when choosing technology and maintenance tools enables efficient water use, optimal funding arrangements, as well as limits breakdowns. Although the type of technology used for water utilisation does not directly impede women's participation, it does greatly influence their domestic water tasks and time spent to collect water. Consequently, women experience time and work burden restrictions which may further impact women's possibility to participate in water management activities.

Furthermore, adjusting to unexpected changes in the environment and water resources is more efficient when all members of a community are able to contribute with their ideas of how to cope with the changes. (CAP-NET, GWA. 2006. p 4-6, 13-14) In general, everyone in a community is interested in maintaining a healthy environment. Making such interests obvious, by equal participation, improves the likelihood in finding realistic solutions to water system maintenance and protection.

5.1. Approaches to Increase Female Participation and Integrate Gender Issues in the Water Management

As shown in Chart 2 (bellow), the content analysis results indicate that capacity building is essential in improving women’s participation in water management. Furthermore, improving women’s education and reducing illiteracy levels is an

important means to ensure women’s equal participation. The act of altering traditional norms and practices is also rated high. Additionally, quotas, governmental support and improved communication have been given rather equal attention. Laws, regulations, policies and programs that specifically approach improving female participation were mentioned to a lesser extent. However, laws, regulations, policies, and programs were indirectly discussed within other more specific actions.

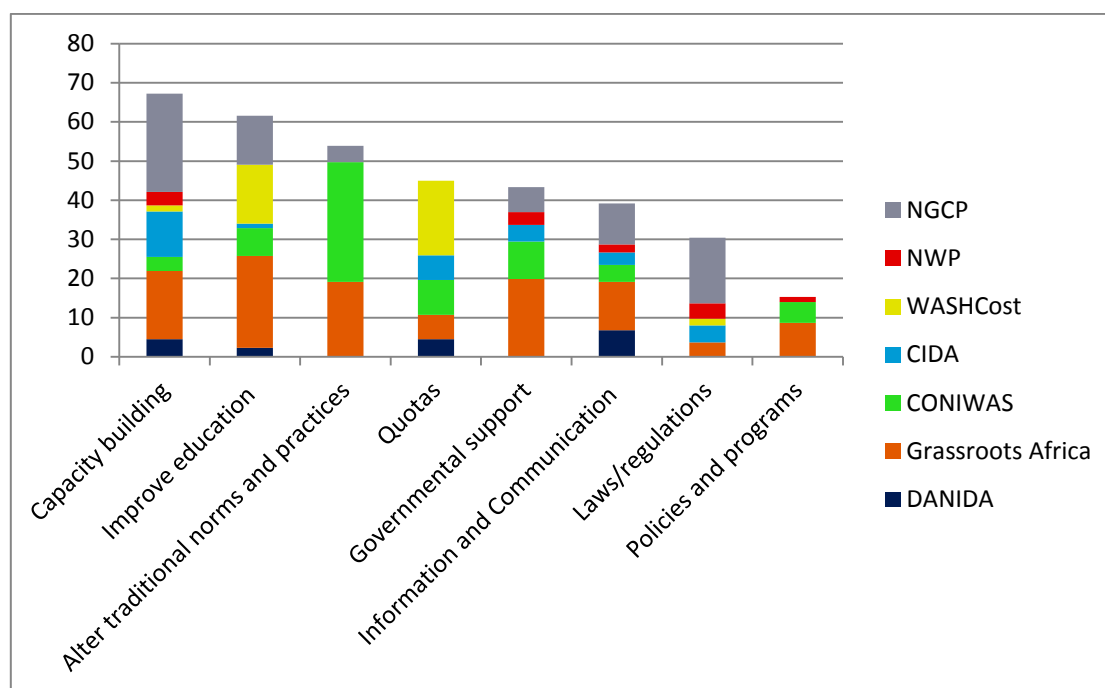


Chart 2. Approaches to Increase Female Participation – Content Analysis Results (numbers indicate occurrence of variables/10,000 words)

5.1.1. Capacity Building

Dejene et.al. (2008. p 34) states that in order to increase support for gender equality and women’s empowerment “*from the margins to the mainstream*”, clear accountability is essential in decision making processes and policy implementations. This may take place through gender training, encouragement, gender mainstreaming and collective cooperation. Capacity building has been recognised as an essential means to improve female participation in water management. With Ghana aiming at a decentralised government structure, capacity building at all levels, particularly at district and local level, is essential since this is where most of development policies and strategies are implemented. (Dejene et.al. 2008. p 34) The CIDA respondent recognises the importance of building capacity at all levels; “*We think that we need to build capacity of women across government, national, regional and the local level, to be confident and take water management roles.* (Quote, CIDA respondent)

5.1.1.1. Building Women’s Capacity

The MWRHW (2007. p 44), recognises in the NWP the importance of women’s capacity training to strengthen their role within water management, “[...] *key measures to be taken by Government include empowering women through training at all levels to perform their roles in partnership with their male counterparts.*” Furthermore, efforts are made to build capacity and strengthen women’s leadership roles, “[...] *to get women involved in the decision making process they do leadership training for women.*” (Quote, DANIDA respondent)

The Grassroots Africa respondent emphasises that increasing women’s participation in the water sector through capacity training is often a long-term process that happens over many years. Women are often so marginalised that they are not even aware of their rights. Thus, the capacity training is not only about improving skills, but also about making women aware of their rights, “*What the women*

need is capacity training and the capacity training is not necessarily a very sophisticated workshop where people come with power point presentations. It's a simple way of helping women understand that they have the right of say, a right to participate." (Quote, Grassroots Africa respondent) Furthermore, the women ought to be encouraged to raise their voices and dare to participate in water meetings and activities, *"The women must overcome their fear and be encouraged to participate and ask questions, that is the beginning of the revolution for them. That is the kind of capacity training I am talking about."* (Quote, Grassroots Africa respondent) Essential capacity building is also in terms of learning how to use and access information on a computer and how to use phones.

As projects progress, it is not unusual that capacity built over the years get lost. The CIDA respondent recognises the issue; *"[...] people move, and transfer capacity gets lost, or because the lack of funding things are not sustained."* (Quote, CIDA respondent) Thus, capacity must be built that can be sustained, capacity that the government takes ownership of and provides leadership in so that when an initiative ends, capacity built and experience gained would be maintained.

5.1.1.2. Capacity Building at Higher Levels

Building capacity refers not only to increasing women's capacity but also to build capacity among water institutions and professionals, to improve facilitators and managers skills to handle issues related to women's participation. This is further supported by Hamdy et.al. (2005. pp 34) and the GWA (2006. pp 32, 81) stating that capacity building at all levels, including water sector professionals and experts, is crucial to improve women's participation.

Furthermore, the MOWAC states that capacity building among planners and policy analysts is essential to improve their gender awareness and to develop their skills in collaboration with the Ministry *"[...] to ensure comprehensive gender and children responsive planning at all levels."* (MOWAC. 2004) In all sectors of society, MOWAC aims to build capacity as well as provide technical support to identify and implement gender responsive program interventions. (MOWAC. 2004)

CIDA is also focusing on capacity building at the governmental level as a long-term project, *"[...] we are beginning to plan towards a long term project, capacity building across the government."* (Quote, CIDA respondent) By this, CIDA hopes to do a more harmonized approach to technical assistance to the government of Ghana through the MOWAC

and other sectors like, and also connect the work to the local government services decentralization. CIDA is also in charge of a project called Strategic Initiative for Gender Equality that support water specific initiatives where capacity is built, particularly on resource based management but also on women's leadership in WATSAN.

5.1.2. Improve Education

Through improving women's education literacy, women are increasingly participating not only in water management but also in other public activities. The Grassroots Africa respondent states that;

"How it is happening is through education and the effect is that women are now not only participating in water management activities but also in other things. There are actually women now more active in politics which used not to be the case." (Quote, Grassroots Africa respondent)

Furthermore, through improved education, women become not only more educated in terms of educational knowledge but they also become more aware of their role and rights in Ghanaian society.

In order to improve women's situation in water management, the Grassroots Africa respondent stresses that it is only through education and consciously raising awareness that the predominant role system may be altered, *"It is only by a conscious policy of explaining and through education that you can have a reversal of the roles or at least some changing roles system."* (Quote, Grassroots Africa) With improved education, the women are more competent to participate and also to take on higher roles in the water management. Also, by creating understanding and building sympathy for each other's roles, women and men would increasingly share an equal burden and take equal part in the water management. The WASHCost respondent argues, *"Implementation of certain [educational] principles makes provision for women to be part of [the water management] because they are competent."* (Quote, WASHCost respondent)

The CIDA respondent stresses the importance of improving education, especially for girls; *"That's the way to go, educating the girl children. You know, it's the future for all these problems at the district level and we need to do a lot around that."* (Quote, CIDA respondent) Furthermore, the CONIWAS respondent argues; *"If you look at the statistics, where there are female headed households there are tendencies that all children are likely to be educated."* (Quote, CONIWAS respondent) Thus, the more educated girls and

women, the more the process of improving girls' education will increase.

The Grassroots Africa respondent further claims that progress has been made, mainly by Non-Governmental Organisations, and that women are increasingly becoming better educated, "*I think it's the systematic education over the years particularly by nongovernmental organisations that is now paying off.*" (Quote, Grassroots Africa respondent)

5.1.3. Alter Traditional Norms and Practices

Water institutions are established in norms, culture, markets systems and policies, where gender disparities commonly are preserved. (GWA. 2006. pp 31-32) Thus, essential in successful water management is recognising and addressing socially constructed gender issues within the water community. (GWPb. 2010-08-02) This supports managers in realising who should be addressed in different matters, who holds the power, and who is responsible. (CAP-NET, GWA. 2006. pp 4-6, 13-14) Consequently, managers are able to address the appropriate person. Furthermore, by recognising that women and men hold different indigenous knowledge, this enables development of tailored interventions suited to specific local natural and social contexts. Thus, actions and measures must be tailored to suit each specific context. (CAP-NET, GWA. 2006. pp 4-6, 13-14) Nevertheless, there is currently little proof that water management institutions purposely and consciously address gender issues. (GWA. 2006. pp 31-32)

Buvinic et.al. (2008. p 293) argues that one of the main challenges of promoting gender equality and improving female participation is that it challenges cultural norms and traditions. This implies the need for intricate changes in everyday activities and behavior, which are commonly viewed as private concerns. Altering deeply rooted gender roles and empowering women requires fundamental changes in societal and community arrangements. However, such changes are often not desired by many of the community members and unless forced, will meet objections. The DANIDA respondent states, "*The thing with gender dynamics is that it is reflected on what you have in your society so unless it's stated otherwise you are unlikely to see it looking different.*" (Quote, DANIDA respondent) Because Ghanaian society is strongly male-dominated and rules are set by men, men are still in control of most decision making. To initiate a change that likely would jeopardise this dominance is often heavily resisted, "*[...] it's very difficult for them to make rules that will now see them being less off, to lose power and control.*" (Quote, CONIWAS respondent)

Altering traditional norms and practices that govern women's role and participation in water management implies that the whole society must reconstruct its fundamental principles. A first step to do so is "*[...] getting people to understand what gender is.*" (Quote, CONIWAS respondent) It is often difficult to get people to understand that culture and roles in the society is not from God. So, according to the CONIWAS respondent;

"The starting point is to get people to understand this fundamental fact that the roles we have set in the society that determines who does what naturally were set by men, our selves, and because we were men dictating the rule of the society by them we come to the roles that the men are more than the women." (Quote, CONIWAS respondent)

However, altering traditional norms and practices is a complex process that will take time, "*It's not something we should expect to change in one or two years. We should have a long term plan for that, maybe 20, 50 years.*" (Quote, CONIWAS respondent)

5.1.3.1. Top-Down - Bottom-Up Approaches

The CONIWAS respondent stresses that measures to address traditional norms and practices must be apparent at all levels, from national to local. Unless the government also is addressed, there will be no full implementation of measures, "*Unless the top is addressed, mainstreaming women's issues is not going to be affective because you will always hit a barrier.*" Merely following a decentralised bottom-up approach or, on the contrary, following a centralised top-down approach does not work individually. (Achouri. 2005. p 14)

On one hand, through a bottom-up approach, where more people are involved in making decisions, the big picture may disappear. (Bonnal. 2005. p 119) This implies challenges arising from disagreements between local communities initiatives and integrating these initiatives into a broader approach. By improving local people's participation, this generates the issue "*[...] where more people are making decisions without being able to see the broader picture.*" (Bonnal. 2005. p 119) To avoid such issues, Bonnal suggests that the decentralisation must be strengthened at the intermediate levels, i.e. region level. Regions ought to be provided with means to supply a link between national and local demands and expectations.

On the other hand, through merely a top-down approach, decision makers on higher levels far away from the water source of interest may lose the

local knowledge and understanding. For instance, according to Swallow et al. *“Project failures are due in large part to the application of top-down approaches and rigid principles that are not adapted to local conditions.”* (Swallow et al. 2005. p 184) Additionally, it is not sufficient for a water management project to merely establish a community committee at grassroot level isolated from the local and national government. (Tennyson. 2005. p 26) This implies a possible lack of governmental technical and financial support which likely would result in unsustainable management practices in the long term.

Thus, it is essential to approach issues from both ends. First, the government together with regional and district authorities must provide efficient and sufficient support in tackling gender issues and improving female participation. Second, communities must be allowed to raise their voice and their local knowledge must be fully acknowledged. Furthermore, the government must recognise local communities needs and demands equally between women and men.

5.1.3.2. Creating an Enabling Environment

The Grassroots Africa respondent states that although women increasingly enter the public arena, many women have not come out of their normal cultural and traditional roles. The women are yet passive, rather than inactive, in taking part in the public sphere, *“They have opportunities but they don’t take advantage if they don’t have women to fight for them.”* (Quote, Grassroots Africa respondent) Furthermore, this is aggravated by the fact that men are not responding enough, *“I think men are not meeting the demands of women fast enough. I think men are very comfortable in their dominant role.”* (Quote, Grassroots Africa)

Though changing traditional attitudes take time, there are ways to speed up development and alter traditional norms and practices; *“By being organised and actually marching and demanding those changes instead of just waiting you can speed up development, evolution, speed up changes, because change will not come just like that.”* (Quote, Grassroots Africa) Enabling changes in traditional behaviour and attitudes is also a matter of overcoming fear, *“[...] the first barrier to self actualisation, self liberation is the overcoming of fear.”* (Quote, Grassroots Africa) In Ghanaian society, women are socialised to follow their deeply rooted roles and to step outside of these roles often results in alienation, *“When the fear is genuinely out of you, you can speak your mind, you can make your demands, logically, consistent without fear you are on the way to victory.”* (Quote, Grassroots Africa respondent) By building women’s

confidence through meetings where they are encouraged to raise their voice and speak their demands, women overcome their fear and allow themselves to step out of their traditional roles as passive participants.

Although there are women who force their way and take their role in public activities, the traditional male-dominated society still constitutes a great hindrance. There is thus a great difference between the fact that women take, with emphasise on ‘take’, their role, rather than are given the space. Hence, to enable women empowerment, there is also a requirement that the men create space for the women, *“If the women are empowered but they are still not given the space, what it’s actually bringing is conflict and tensions in the community.”* (Quote, CONIWAS respondent)

According to Ivens (2008), an enabling environment must be created where women feel comfortable to raise their voices and concerns so that women and men can be involved equally in designing the development agenda. Ivens further state that successful approaches to female participation must also acknowledge that *“[...] women are not a homogeneous group but that characteristics such as age and class further define their roles, responsibilities, and opportunities.”* (Ivens. 2008) Thus, complex traditional phenomena must be recognised and understood to successfully implement and improve female participation.

5.1.3.3. Raising Awareness

Minoia (2007. p 10) states that there is a widespread belief that traditional cultural barriers to female participation in water management can be simply overcome by imposing western “modern” influences, rather than to acknowledging the societal context. This implies a disrespectful belief in unilinearity, i.e. the idea of development from something primitive to something advanced. Thus, complex cultural barriers stemming from social roles and behaviour that limit women’s participation are often not acknowledged or considered when developing water management practices. The DANIDA respondent claims that enabling change is not about imposing westernised traditions and practices on Ghanaian society. The DANIDA respondent argues that *“It’s an outside influence and contrary to what many people in the west think we do like being Africans, we don’t want to be regarded as being westernized.”* (Quote, DANIDA respondent) Altering traditional norms and practices challenge the very essence of a person’s identity.

According to the CONIWAS respondent, altering traditional norms and practices is also a complex process of self reflection. Through discussion of and understanding inherent roles and behaviour,

individuals themselves “[...] *are able to make their decision for and affect required changes.*” (Quote CONIWAS respondent) A facilitator would lead the dialogue group “[...] *through a path that makes the person reflect on what they are doing and they do, they question themselves as whether this is really good or there’s a better way of doing it.*” (Quote, CONIWAS respondent) This cannot be taught but must come from within “*You need to plant that seed in each community and the seed itself will begin to spread to the other community members and that’s what will cause the changes.*” Thus, it implies a long-term dialogue that leads men and women through practical exercises to understand how rethinking the roles in water management would be beneficial to both genders. The DANIDA respondent further states, these norms cannot be changed “[...] *unless you can argue that there is such an adverse position otherwise.*” (Quote, DANIDA respondent)

5.1.3.4. Identify Powerful Voices

According to MOWAC (2004) within the NGCP, strong actors within the civil society as well as traditional authorities, religious bodies and labour unions, must be encouraged to promote gender sensitivity within their activities. In order to alter traditional norms at the local and community level, influential individuals must be approached, “[...] *we must look at who are the power brokers in this discourse [...] they have so much authority, they have a certain title in the society that makes everybody listen to them,*” (Quote, CONIWAS respondent)

There are certain influential traditionalists and there are purist, i.e. groups of people in the society that think that the culture should be pure and not changed, “[...] *the purists tend to be traditionalists who are entrenched in the cultural way of doing things and that will fight any attempt to alter that.*” (Quote, CONIWAS respondent) There is a need to find a way to identify the purists in a community, the strong voices who are very protective of the culture in order to initiate a dialogue with influential individuals. Without approaching these groups and individuals, a change in traditional norms and practices will be difficult, “[...] *it is the purists who finally decide whether in a joint meeting, or the joint dialogue, you’ll get positive results.*” (Quote, CONIWAS respondent)

5.1.4. Quotas

To improve female representation, the Government of Ghana has adopted an Affirmative Action Policy with a 40 percent female representation quota at the DA level. (Dejene et.al. 2008. p ix) In 2006, the policy had proven effective as women held 35.5 % of appointed members in 97 out of the then 110 existing districts. In addition to this, the MWRHW

(2007. p 23) states in the NWP states that the Government of Ghana will encourage acceleration of women’s representation “*at all levels and in all spheres of water management activities.*” According to the CIDA respondent, “*women’s participation and leadership is very minimal but there are opportunities to increase women’s participation in decision making at all levels. I think there are challenges but I think we are making progress*” (Quote, CIDA respondent) The CIDA respondent further states that the government is developing measures to ensure minimum quotas, however this has not yet been fully implemented and realised; “*The government promise 40 per cent, we are yet to see it.*” (Quote, CIDA respondent)

According to the CONIWAS respondent, since traditionally, a woman would not be considered for a chairperson or holding other higher roles, through the quota system women are forced in to the high positions; “*In that case it will happen, you have to enforce it.*” (Quote, CONIWAS respondent) Thus, with proper enforcements, women are able to take on higher positions within the water management. The WASHCost respondent claims that the quota is not a set rule, it is a means to create an environment for women to participate which does not mean that women cannot be more than a certain number; “[...] *it’s just a way of you know encouraging women participation and not letting the men dominate. So give room, for women to occupy a quota at least.*” (Quote, WASHCost, respondent)

According to the CONIWAS respondent, it is part of the national development agenda that “*consultation must now involve men and women actually not just one group.*” (Quote, CONIWAS respondent) There are now guidelines to ensure that everybody is equally consulted. However, as the CONIWAS respondent states, there are challenges related to how effective the consultation process will be due to the fact that women may not be able to take part in the process even though they are entitled to, “*if you go there in the morning you won’t get them. All the influential people will be gone. And some women will be there but really are not those who will speak up.*” (Quote, CONIWAS respondent) Due to women’s domestic task, they are thus greatly limited in the time available for such consultation and participatory process and would, depending on how the consultations processes are planned, not be able to attend. The CONIWAS respondent stresses that this really is an issue that requires further attention, “*In some places though, the morning is better, but if you go later in the afternoon it will be a bad case. [For some] maybe afternoon is better, but evening, no. So it depends on the community and when you think the women will be free to be able to participate effectively. That is what we don’t do well.*” (Quote,

CONIWAS respondent) Thus, complex studies to acknowledge and understand each community's specific structure is essential to improve women's participation.

5.1.4.1. Ensure Active Continued Involvement

District Capacity Building Projects have made it mandatory in the community water activities that all WATSAN teams must have a quota of at least 40 % women; *"The DISCAPs helped the District Assemblies to develop bylaws and within these bylaws there is a clause that says that every water board should have X number of representative of women. And they did a law to push for that."* (Quote, CIDA respondent) However, although there is female representation this does not guarantee that the women are actively participating, *"It's a very good initiative but we need to monitor that yes, there's a 40/60 quota and the women are represented accordingly, but also that they are able to speak their mind and talk about their needs."* (Quote, CIDA respondent) It should thus be acknowledged that although increasing representation in public activities and implementing quotas improves the physical representation of women, it does not necessarily guarantee that women are actually actively participating. Several factors may influence whether women actively participate even though they are given the physical space to do so. The MWRHW (2007. p 44) states in the NWP that it is essential to ensure active involvement, rather than passive, in the decision making, through promoting transparency and accountability. Thus, roles and responsibilities must be clearly articulated in order to promote women's active participation. Furthermore, as stated in the NWP, the active participation of women will be used *"[...] as a tool for empowering them to take charge of water and sanitation issues at all levels."* (MWRHW. 2007. p 44)

The CIDA respondent stresses that although there is a quota stating that there must be a certain number of women represented, there are still financial issues of implementing such quotas, *"We need to track money to assure that women are represented, that their voices are being heard, that they themselves understand what they are doing within the Water Boards or the teams that they find themselves and that they can project what their needs are in terms of water issues."* (Quote, CIDA respondent) Additionally, there are issues related to people being handpicked for the water boards, rather than through representative electoral mechanisms. This implies that *"[...] the women might not relate to that person and therefore will not even come out and voice out there opinions or what their needs are."* (Quote, CIDA respondent)

Dejene et.al. (2008. p 27) also stresses that there actually is a level of negligence attached to fulfilling the quotas by the DAs which further increases the gap between men and women in decision making and participation in the water management. Furthermore, the quota system is inadequate in that it does not consider whether women are capable or not to fill the set quota; *"[...] their capacity need to be built so that they can meaningfully contribute to the discussions and the programs at that level of the water board."* (CIDA respondent)

As stated by the DANIDA respondent, the quota system is commonly efficient in the beginning of water projects, with high representation of women. However, as time goes, participation declines, *"[only during] the first year after the programs you would find involvement high even with the decision making process."* (Quote, DANIDA respondent) The DANIDA respondent believes that one reason may be that the increased participation constitutes such a major burden for the women so that they gradually give up the participation. There is thus a need to thoroughly monitor and evaluate programs to ensure continued female participation. Furthermore, measures must be developed as a means to deal with the additional work burden that women's participation often involves. The DANIDA respondent emphasises the need to systematically study every community to analyse and consequently understand gender issues adequately, *"[...] we must ensure that as we include female or male participation, we do not burden one group at the expense of the other, and this requires that you do a much more detailed analysis of the community."* (Quote, DANIDA respondent)

5.1.5. Governmental Support

5.1.5.1. The Ministry of Women and Children Affairs

MOWAC was established by an Executive Instrument (EI 8) in January 2001 to become the lead governmental body to practically support gender issues and make sure that these are channeled through all governmental sectors. (Dejene et.al. 2008. p vi) MOWAC's role within the water sector is stated in the NWP claiming that MOWAC is responsible for mainstreaming gender issues within the water management; *"Policy issues on water that affect the well-being of women and children is within the mandate of MOWAC."* (MWRHW. 2007. p 52)

According to the CONIWAS respondent, the MOWAC aims to support the different ministries to ensure that gender issues are mainstreamed within each ministry's area, *"It's about how the MOWAC can link up with the different thematic areas, the*

different ministries, to ensure gender issues are not dropped.” (Quote, CONIWAS respondent) The Ministry states that *“It is the entity designated by Government to initiate, co-ordinate and monitor gender and child responsive issues.”* (MOWAC. 2004) Through MOWAC, the government of Ghana aims to integrate gender issues in the national development agenda and to *“[...] mainstream gender and children’s concerns in all sectors and departments at the national, regional and district levels.”* (MOWAC. 2004) The government stresses the dedication to focus on gender responsive development for which the NGCP is the main guiding document. (MOWAC. 2004)

The government of Ghana shall enable gender mainstreaming and female empowerment in all sectoral areas, including water. (MOWAC. 2004) Thus, the government shall integrate measures to guarantee gender equity and equalise past imbalances and further evaluate the impact and importance of gender policies. The government shall also monitor gender equitable representation on parliamentary committees. Since MOWAC is concentrated to work at national level, the other ministries ought to focus resources and efforts on developing women-targeted initiatives at central, regional, and district governmental levels. (Dejene et.al. 2008. p 7) However, few key professionals and managers have been part of gender training programs and many are not aware of gender and women’s issues. (Dejene et.al. 2008. p 28)

According to MOWAC (2004), DAs are the main actors to implement, monitor, and evaluate gender work at the district and community levels. Regional councils are responsible for integrating local community gender issues and concerns into their development plans. The DAs are assigned to identify relevant gender issues and to further implement policies and legislation to promote gender equity as well as mainstream gender concerns. Furthermore, they should thoroughly monitor and evaluate actions taken through other decentralised departments, community based organisations, and NGOs.

5.1.5.2. Gender Desk Officers

Gender Desk Officers (GDOs) have been appointed in all existing ministries in order to ensure gender mainstreaming within each ministry and their respective areas. (Dejene et.al. 2008. p 7) However, according to Dejene et.al., this task is on top of the ministry’s already full time responsibilities. As a consequence of lacking sufficient descriptions for responsibilities and training the GDOs embrace inadequate capacity to perform their tasks. All GDOs are expected to cooperate with the MOWAC however this collaboration is poor. As a consequence, since effective human and

institutional capacity is essential in mainstreaming gender perspectives into policy and program development and formulation, policies and programs encompass weak gender aspects.

The GDOs often do not have the authority to influence issues at higher level, *“[...] most of the time they are individuals who are in lower positions, who don’t have the authority and mandate to influence at the national level.”* (Quote, CIDA respondent) Thus, there are challenges related to how effectively the GDOs are able to push for gender and women’s issues across the various sectors. With little authority, the GDOs are greatly limited in their ability to advocate and implement essential measures to mainstream gender and raise women’s concerns. As stressed by the CIDA respondent, *“[...] we have Gender Desk Officers but they are not... it’s not yet a legitimate role though they have been there for so long. Some are very good, others still need some capacity to be built.”* (Quote, CIDA respondent)

5.1.5.3. Limited Success in Government Measures

The Grassroots Africa respondent stresses that although the government does acknowledge reigning gender issues within the water management, the respondent questions whether they are prepared to commit money to it or not; *“The Government do good policy, but they don’t carry the policy out.”* (Quote, Grassroots Africa respondent) There must be efforts made towards developing mechanisms to ensure *“[...] that the government walk their talk.”* (Quote, Grassroots Africa respondent) As an initiative to urge the government to take actions, the Grassroots Africa respondent goes further to say that *“[...] water and sanitation is key even to the UN Millennium development goals”.* (Quote, Grassroots Africa respondent) This is of great interest to the government and should work as a strong incentive.

The CONIWAS respondent further argues that while the government of Ghana has recognised that gender issues are real development problems and have begun to initiate change, there are still challenges; *“[...] yes, government has recognised that and is certainly taking certain steps to address that [...] but the overall framework for mainstreaming gender I think that the government has done not a good job.”* (Quote, CONIWAS respondent) Over the years, the Ghanaian government has ratified conventions, created structures and increased support of gender work, however, progress has been slow. (Dejene et.al. 2008. p 1) In 2006, the African Peer Review Mechanism (APRM) team noted *“[...] that the marginalization of women remains a very real problem in Ghana despite constitutional and other*

legislative provisions to protect and secure the rights of women.”

According to the CONIWAS respondent, the government’s progress to approach gender issues has been insufficient. The government began addressing gender issues in the Ghana Poverty Reduction Strategy (2003-2005), “[...] *in that one they tried to program gender issues in the development agenda.*” (Quote, CONIWAS respondent) When the plan expired, and the Government evaluated the process, they could not see any progress on the gender thematic area due to practical difficulties. There had been few approaches in how to actually implement gender aspects. In the second program, the Growth and Poverty Reduction Strategy (2006-2009), gender was mainstreamed across all areas “[...] *so that gender then had to be a component of all the thematic areas.*” (Quote, CONIWAS respondent) Thus, it was forced that in each program, plan and policy, gender had to be mainstreamed, “*So in that case we made progress, then all the sectors begun to talk about gender.*” (Quote, CONIWAS respondent) Now, gender issues are being discussed and there are increasing efforts to raise gender issues.

5.1.5.4. Budgeting

In order to strengthen women’s roles and improve their participation in the water management, the CIDA respondent stresses the importance of gender responsive budgeting; “[...] *we must build capacity on gender responsive budgeting so that the men and women at the sector level will look at their planning from a gender perspective and budget appropriately.*” (Quote, CIDA respondent) According to the CONIWAS respondent, issues of gender budgeting are now increasingly being discussed in the gender planning. This is also supported by the NGCP.

The government’s financial support to mainstream gender and women’s issues is highly limited and main funding comes from donors; “*The government’s resources going into the water sector is less than 10 per cent of the total investments. Donors are providing 90 per cent of the investments in the water sector.*” (Quote, CONIWAS respondent) Thus, finances to practically address gender issues are mainly from donors and NGOs.

5.1.6. Information and Communication

Bonnal (2005. p120) stresses that water management activities must acknowledge demands and needs of local and regional communities and national policies ought to be developed accordingly. Additionally, this requires supportive measures of improved information sharing and

transparency between all stakeholders. In this context, the Grassroots Africa respondent states that if gender and women’s issues are to be addressed, the government must advocate communication between all levels and stakeholders. This should be accomplished, “[...] *through a governance program, where we meet, we talk, we share.*” (Quote, Grassroots Africa respondent) Furthermore, the Grassroots Africa respondent states “*This is not something you can decree or legislate, you must have a program to address that.*” (Quote, Grassroots Africa respondent)

5.1.6.1. Common Meetings

Understanding gender roles, relations and disparities, enables understanding women’s and men’s different choices and options. (Were. 2008. pp 218-219) This may further reduce competition and conflicts over scarce water resources. (Siles. 2010-06-03) There are certain issues that the men are more aware of than the women and vice versa, “[...] *the information must be put together and it has to be representative of everybody and not just one group.*” (Quote, DANIDA respondent) This is supported by the MOWAC (2004) who stresses the importance of consulting both men and women in order to create awareness of gender concerns and responsibilities of all involved actors and stakeholders. According to the CONWIAS respondent, joint discussions between women and men are crucial as “[...] *women’s issues are not only in the hands of women but a lot of it is in the hands of them men.*” (Quote, CONIWAS respondent)

According to the DANIDA and Grassroots Africa respondents, until recently, men and women met separately in water consultation processes as women did not feel comfortable raising their voices in front of the men. This was greatly encouraged by professionals as, according to the Grassroots Africa respondent, experts claimed that “[...] *you had to separate the women from the men. If they were not separated the women would not talk their mind, you would not hear their actual feelings.*” (Quote, Grassroots Africa) Consequently, this approach was supported and there was no incentive or enforcement to alter it. As further argued by the Grassroots Africa respondent “[...] *as long as you encourage that, that you need to meet the women separately or they will not talk, it will perpetrate.*” (Quote, Grassroots Africa) However, as stated by the Grassroots Africa respondent, such approaches result in that the men do not acknowledge or question the women’s situation but rather find it normal, “*The men are not aware. They see it but they are not aware, they are not conscious of it.*” (Quote, Grassroots Africa respondent) The Grassroots Africa respondent further states,

“They are socialised to believe that that is the women’s role, they don’t even see her suffering. That’s why those meetings are important, to address the gender and water problem will let the women speak out about their problems. Whenever you get the men and women together, and the woman tells she had problems, you see the men shocked.” (Quote, Grassroots Africa respondent)

The fact that men often are not aware of the women’s situation is also stated by the DANIDA respondent, “[...] you’re better of bringing male and female into the same room as they do the gender talk because sometimes the exposure also helps the men who cannot appreciate how overburden women are.” (Quote, DANIDA respondent) There is a need to create platforms and forums for communication with an enabling environment where women and men can meet and share opinions and experiences and “[...] if the consultant does the consultations properly then at least the water issues, not just the women’s issue or men’s issue, it becomes everybody’s issue and everybody’s view point is taken into consideration.” (Quote, DANIDA respondent) Thus, in consultation processes and participating meetings, women and men must be able to share their information and raise their voices together. Also, as stated by Were (2008, pp 218-219), it is essential that both genders support each other in order to avoid conflicts over power and water resources.

The Grassroots Africa respondent stresses that the issues of women’s reluctance to raise their voice in front of the men must be addressed. If you do not approach this issue and force it, it will never change, *“I bet you if just one woman stand in front of the men and talk, the rest will get up and talk. My experience is that such liberating force can only come from the women by calling them out to talk in front of the men. Let the men feel the guilt and the women overcome their fear and that’s the end of it.”* (Quote, Grassroots Africa respondent) One means of overcoming this issue is to create a process where men and women both meet separately as well as having common discussions, *“It’s a process of doing these discussions and I think that’s why in the WATSAN documents they try to disaggregate the groups to speak and then get consensus from all the groups.”* (Quote, DANIDA respondent)

5.1.6.2. Making information available

To a large extent, improving women’s participation is also about making information available to the women in the communities; *“There should be more information to the women at the community level,*

more information on what the Water Boards stand for and what they do and how women can participate actively in that.” (Quote, CIDA respondent) Since decisions made at the regional and district level greatly affect the women, they ought to be informed regularly. However, often the women get delayed information; *“[...] information is key and women get information second hand and I think that really needs to be addressed.”* (Quote, CIDA respondent) With an extensive delay, women have no or little possibilities to raise their concerns to affect changes. Hence, they merely act as recipients of information of what has already been implemented or changed. The CIDA respondent stresses that there have been approaches to address this issue through community centres, however, they were discontinued; *“There were centres where, for example, some of these things could be shared. There was a project years ago that provided that centre but a lot of them are not functional anymore.”* (Quote, CIDA respondent)

A new approach is to introduce community radio stations where all community members can receive important information, *“[...] it’s very informative and right to the community level.”* (Quote, CIDA respondent) Nonetheless, as further stated by the CIDA respondent, women are again likely to be disfavoured; *“But again, the men will have the main access, they will listen, and the women will get the second hand information.”* (Quote, CIDA respondent)

There are also traditional ways of getting the information to the women, for instance through so called ‘town criers’ who are subordinate to the community chief, *“There are lots of town criers. The town criers are sent by the chief so if there’s a major activity the chief will send the town crier to the community and that’s how a lot of information is shared.”* (Quote, CIDA respondent) Also, in the north, there are female leaders, ‘Magazia’, *“[...] who represent the women at the chief palace when there’s information to be shared.”* (Quote, CIDA respondent) However, according to the CIDA respondent, there have been concerns about the fact that the women’s leader is not representative of the women because the leader is handpicked by strong male leaders within the community, rather than socially elected by the women themselves, *“[...] so the women might not even relate to that person.”* (Quote, CIDA respondent)

5.1.7. Laws and Regulations

Efficient policy and enforceable legislation that supports public participation in water management is a major factor in achieving sustainable water management. (Tennyson. 2005. p 29) Governments are often slow to recognize and address the need to change their legislation to enable people’s

participation in natural resource management. Consequently, without supporting and enforceable legislation, women specifically will be continuously excluded from water management projects and have limited possibilities to participate. (Tennyson. 2005. p 27)

There is no active law regulating, directing, empowering, allowing or prohibiting women's participation in the water management; "[...] *there's no law, no. The constitution protects the women's right but the challenge is that it's not being implemented.*" (Quote, CIDA respondent) Since there is no law either hindering or enabling women's participation, this can be understood as passive law in that the law is silent on the subject. Consequently, in that the law is passive, women can legally be excluded since the passivity makes the issue legal; if there is no law stating that something is illegal, it by default is legal. Since Ghanaian society culturally disfavours women, exclusion is common, as the DANIDA respondent states, "*There's no explicit law that exists that keeps women out. There is the underlying one that is not written that keeps women out.*" (Quote, DANIDA respondent)

Ghana is, according to Dejene et.al. (2008. p vi) reforming the legal framework that protects women's rights. Although there is no explicit law, the constitution prohibits any gender discrimination as, "[...] *priorities for gender equality is reflected in Article 17 (3) of the 1992 Fourth Republican Constitution.*" (Dejene et.al. 2008. p 7) Furthermore, Ghana has ratified the Convention on the Elimination of All Forms of Discriminations against Women. (MWRHW. 2007. p 8) Thus, the legal framework does to some extent protect women's rights.

Despite progress in improving the legal framework and implementing regulations to protect women's rights, the gender gap is still evident. (Dejene et.al. 2008. p vi) There is also a lack of capacity to fully enforce existing laws; "[...] *challenges of capacity and lack of resources constrain the full implementation of existing laws.*" (Dejene et.al. 2008. p vi)

5.1.7.1. The Need for Legal Reform

Even though the legal framework to protect women and improve their role in society is being developed and strengthened, women are often not yet aware of their own rights. This is obvious in the water management sector as "[...] *the women themselves they don't know what their rights are.*" (Quote, CIDA respondent) In order to approach this issue, according to the CIDA respondent, a gender strategy has been developed where women and vulnerable groups will be targeted where the

strategy aims to implement education programs to inform women of their rights.

The MOWAC (2004) advocates mainstreaming gender responsive legislation. Through legal reforms, and enforcement in the existing legislation, gender imbalances and women's underprivileged status shall be equalised. The legal framework shall be developed "[...] *to regulate the conduct of all and sundry in their dealings with women and children at institutional and individual levels.*" The MOWAC will also adhere to strengthening the existing legal framework to ensure that all policy development is clearly gender responsive.

According to the UN Habitat (2006. pp 6-7), examples from Accra indicate that a new legislative framework slowly will begin to integrate gender and women's aspects. These aspects are further incorporated into plans and policies. However, as the UN Habitat states, implementation of these plans and policies is inadequate in the operational state. Moreover, national gender policies and legislation and the WATSAN sector are not always consistently in line with each other. Thus, this makes implementation difficult and cooperation between sectors problematic. Inadequate financial resources accompanied by deficient human and institutional capacities are claimed to be the main obstacles.

5.1.8. Policies and Programs

Nana Ama Serwah Poku Sam (2006. p 25) states that, although women's invaluable knowledge of water management has been recognised in Ghana, the role and input of women is commonly ignored or overlooked in policy formulation and implementation as well as in the public decision making. To improve women's participation, it is essential to have a written policy stating what must be implemented and realised, "[...] *if it is not something in black and white, a gender specific policy that is written, people get away with saying that there's no blueprint.*" (Quote, CIDA respondent) According to the CONIWAS respondent, women's needs and demands must be reflected in the national policy formulation, "[...] *we need to begin to reflect the role that women play [in the water management] in the policy formulation.*" (Quote, CONIWAS respondent)

According to the CIDA respondent, there are also policies to protect women's right regarding their ability to stay in the workforce during and after pregnancy, "[...] *when women enter in to the work force, the male counterparts may rise up ahead [however] there are gender specific policies that address some of these issues.*" (Quote, CIDA respondent) Additionally, a policy has been developed to deal with the poor WATSAN in

schools that limits girls opportunities to education and school attendance, “[...] *now it’s part of the policy, you can’t construct a school building without adding water and sanitation facilities.*” (Quote, DANIDA respondent) DANIDA has implemented a program where they have developed manuals and formats to deal with gender issues and women’s equal participation, “[...] *under this program we are supporting the district level and these manuals will be used by the local government as their tool.*” (Quote, DANIDA respondent)

MOWAC recognises that there is a need for a new policy framework with clear measureable and realistic targets that guide Ministries and the Government in their work with gender issues. (MOWAC. 2004) The framework should further function as a basis for the national development agenda. The NGCP aims to ensure that; “[...] *all policy formulation and reviews, action plans, and other major planning exercises apply a gender responsive planning approach.*” (MOWAC. 2004) The MOWAC further aims to provide a national framework to clearly guide and support future

policy making. The CONIWAS respondent states that although MOWAC is pushing for the NGCP, “[...] *the gender policy is not a coherent policy [and] the government just neglect them, they don’t give them any resources so they are just hanging there.*” (Quote, CONIWAS respondent)

The CIDA respondent stresses that there is an increasing need to monitor and evaluate ongoing projects and programs and to give feedback on policies that are being implemented, “[...] *there is not an integral part of planning processes or program implementation to monitor and evaluate.*” (Quote, CIDA respondent) As a consequence, important project activities have disintegrated and valuable capacities have been lost. This has been recognised by the MOWAC which aims to implement efficient feedback mechanisms in their work with gender issues. (MOWAC. 2004) Through this, the Ministry aspires to establish an efficient method for monitoring and evaluating development programmes to ensure that these are efficiently realised and that required objectives are met.

6. Summary

The study indicates that women in Ghana experience significant restrictions from participating not only in water management but also in the public sphere in society at large where socio-cultural factors constitute the main cause of women's exclusion. In the water 'society', women are mainly active as water collectors at household level, associated with their domestic reproductive roles. Despite their essential role, women are sparsely represented in any water management decision making or participation. Cultural norms and practices constitute the major obstacle to women's equal participation and while traditional roles and conduct are gradually changing, and while women are slowly but surely entering the public sphere, things are not changing fast enough.

Although the importance of women's participation in the Ghanaian water supply management has greatly been acknowledged by the Government of Ghana, the practical implementation of measures to increase participation has been insufficient. This is mainly a result of restrictive cultural barriers along with inadequate policy formulations, lack of legal enforcements, and insufficient financial and human resources. At local and community levels, women's participation is further opposed as a consequence of a strongly male-dominated society where not only men but also women prevent themselves from taking part in the public sphere.

Within the Ghanaian constitution, there is no active law either hindering or encouraging female participation in water management or the wider society. Although not enshrined in law, the constitution does prohibit any gender discrimination. However, traditional conduct is still the main influence on women's situation and since the society is male-dominated which greatly disfavours women, women's exclusion is common and by default, legally accepted. Furthermore, women are often not aware of their constitutional rights. Without having an actual written law stating women's right to participate, enforcing such measures is complex and implementation is complicated. Thus, there is an urgent need for improved laws and legislation that actively enforce women's rights to participate in water management and the wider society.

Alongside new and improved legislation there is a need for incentives developing women's willingness to participate in the water supply management and decision making. These incentives must strongly outweigh the additional work burden that participation brings as many women find this unmanageable. Furthermore, efficient incentives

must clearly establish a framework for continued participation.

The Government of Ghana ought to increase the support of gender mainstreaming and work carried out to improve women's roles and participation in Ghanaian society, and consequently, water management. Specific areas that require further attention are to introduce sufficient budgeting and give additional support through providing adequate human and material resources.

Since MOWAC have been appointed the main governmental body dealing with gender and women's issues in Ghana, MOWAC ought to be given greater financial means as well as improved support from the Government to successfully mainstream gender in the water management sector. Furthermore, MOWAC ought to be provided adequate human resources with necessary skills related to gender issues. This is essential as MOWAC's work is crucial in strengthening women's role and participation in Ghanaian society at large and consequently also in water management. Additionally, there is a need to improve feedback systems to monitor the implementation of gender mainstreaming and approaches to improve female participation. Feedback mechanisms are essential in that it provides a basis for identifying areas that require further improvements.

GDOs ought to be encouraged to improve their capabilities to work with gender issues through capacity training. Subsequently, after requiring sufficient skills, the GDOs ought to be given greater authority in their work with gender issues. This is important in order to strengthen gender mainstreaming measures and implementation as well as raising awareness of women's role in the water management at regional and district level.

To improve female participation in the water supply management, there is also a need for policy reform where women's roles, needs, demands, and invaluable knowledge in water management is clearly emphasised. This implies developing explicit targets and measures within the policy formulation. Furthermore, when developing policies, local contexts ought to be considered as each situation is unique. Thus, policy makers must be well informed and carry out extensive data collection to develop policies accordingly. Without clearly stating required objectives and actions, changes are complex to enforce. Efforts made and projects implemented must also be supervised, with effective feedback mechanisms, to ensure that the projects progress sufficiently.

The quota system needs further attention in that it also must guarantee active participation in water management, not merely physical. Thus, there is a need to develop measures that ensures women's active involvement. The quota system is also inadequate in that it does not consider women's capabilities. By forcing a certain quota does not guarantee that there are women capable to fill that quota. Therefore, there is a need for capacity training and improved education to improve women's capabilities to actively participate in the water management. This is essential to enable women's efficient and active participation.

Girls' and young women's limited education constitutes a major constraint to women's participation and advancement in water management and Ghanaian society at large. Illiteracy and low education levels further limits women's independence. There is progress to improve girls' education, mainly by Non-Governmental Organisations. By this, women and girls become better educated and more competent in participating and can thus take on more professional roles in water management. Policies have been implemented to protect women's rights and to force improved WATSAN facilities within the schools. However, further improvements are required to improve women's education and reduce illiteracy levels. Thus, there is a great need to encourage girls' education. This implies analysing and altering deeply rooted socio-economic and cultural barriers that obstruct girls' school attendance. There is also a need to approach women's low enrolment in professional education of science and technology. With women reaching higher education, more girls are likely to enter school and continue to higher levels as educated women tend to encourage all their children to

education, boys as well as girls. Thus, educating women will likely increase the processes of improving girls' education levels and further reduce illiteracy.

There are attempts to build capacity among water institutions and professionals to increase managers and other professionals' skills to handle issues of women's participation. However, there is yet a lack of understanding for what gender issues actually are and that they are socially constructed and thus may be altered. Consequently there are difficulties mainstreaming gender issues into the water management work. Thus, there is a need to develop approaches that provide training for water managers to raise the awareness of what gender means.

There are efforts made to build capacity and strengthen women's role within water management. This does not only imply capacity building regarding skills but moreover improves women's awareness about their roles and rights within the society. To support women's participation in water management and the public sphere in the wider society, women's confidence and status must be strengthened. This implies encouraging women to step outside their traditional roles and overcoming their fear to make their voices heard in public. As traditional roles and practices greatly limit women's participation, there is a need to increase a dialogue with all concerned stakeholders to raise awareness about women's situation and thus initiate a platform for change. Thus, capacity building alongside an enabling environment must be created where women feel comfortable to step forward in water supply management activities and actions. Without creating an enabling atmosphere where women are allowed to feel free to take the stage, they cannot and will not participate in water management.

7. Conclusions

- Women in Ghana experience great restrictions from participating, not only in the water management but also in the public sphere in the society at large.
- The practical implementation of measures to increase women participation in the water management is currently insufficient. This is mainly a result of cultural barriers alongside inadequate policy formulations, lack of legal enforcements, and inadequate financial and human resources.
- At local and community level, women's participation is commonly resisted by a strongly male dominated society where not only men but also women prevent themselves from taking part in the public sphere.
- There is a great need for improved legislation that actively enforces women's right to participate in the water management and in the society at large.
- The Government of Ghana ought to increase the support to Ministry of Women and Children Affairs. Specific areas that require further attention is to introduce sufficient budgeting and provide adequate human and material resources.
- The quota system needs further attention to guarantee women's active participation in the water management. This may be achieved through capacity building, strengthening women's role and building confidence.
- Further attention is required to encourage women's and girl's education and reduce illiteracy levels. This implies analysing and altering deeply rooted socio-economic and cultural barriers that obstruct girls' school attendance.
- The study showed that educated women tend to encourage all their children to education, boys as well as girls. Thus, increasingly improving education for women will likely accelerate the processes of improving girls' education levels and further reduce illiteracy.
- Water professionals lack a thorough understanding for gender issues. This generates difficulties to integrate gender in the water management. There is therefore a need to develop training and information to raise their awareness of the concept of gender.
- There is a need to create a dialogue between all stakeholders to raise awareness of gender issues and women's situation. Capacity building alongside an enabling environment must be created where women feel comfortable to step forward and express their opinion. This may create a platform for change.

8. Reference list

- Aagaard-Pedersen, C. 2006. *Water Reform and Access to Water for the Rural Poor*. Short country review of recent water reform. Undertaken by Aagaard Pedersen, C., DIIS in preparation of the Danida – DWF-Research – DIIS conference. September 2006. Eigtveds Pakhus. Copenhagen.
- Acheampong, I. K. 2008. *Gender Inequality in Education and Human Capital Development in Ghana*. In; *Gender Inequality in Developing Countries*. S. Sarkar & T Nganga. Arise Publishers & Distributors. Darya Ganj, New Delhi.
- Achouri, M. 2005. *Preparing the next generation of watershed management programmes*. In; *Proceedings of the African Regional Workshop*. In; Swallow et. al. Food and Agriculture Organisation of the United Nations. Rome.
- Bergstrom & Oréus. 2005. *Textens mening och makt – Metodbok i samhällsvetenskaplig text- och diskursanalys*. Studentlitteratur. Narayana Press, Denmark.
- Bonnal, J. 2005. *The sociological approach in watershed management: from participation to decentralization*. In; *Proceedings of the African Regional Workshop*. In; Swallow et. al. Food and Agriculture Organisation of the United Nations. Rome.
- Burrows D & Kendall S. 1997. Focus groups: What are they and how can they be used in nursing and health care research? *Social Sciences in Health* 3, 244–253.
- Buvinic, M. et.al. 2008. *Equality for women: where do we stand on Millennium Development Goal 3? The International Bank for Reconstruction and Development/The World Bank*. Washington DC.
- CAP-NET, GWA. 2006. *Why Gender Matters: a tutorial for water managers*. Multimedia CD and booklet. CAP-NET International network for Capacity Building in Integrated Water Resources Management, Delft.
- Costa, J. et.al. 2009. *Water Supply in Rural Ghana: DO Women Benefit?* International Policy Centre for Inclusive Growth. Poverty Practice Bureau for Development Policy, UNDP. One Pager no. 101. December 2009. Brazil
- Davila-Poblete, S. 2004. *Women's Participation in Lake Basin Management From a Gender Perspective*. Lake Basin Management Initiative. Thematic Paper. Cuernavaca, Morelos. Mexico.
- Dejene, Y. et.al. 2008. *Ghana Country Gender Profile*. African Development Fund. Human Development Department (OSHD).
- Duda, A. M. & El-Ashry, M. T. 2000. Addressing the global water and environment crises through integrated approaches to the management of land, water and ecological resources. *Water International Journal* 25 (1), 115-126.
- Dungumaro, E. W. & Madulu, N. F. 2003. *Public participation in integrated water resources management: the case of Tanzania*. *Physics and Chemistry of the Earth* 28, 1009–1014.
- Dzimbiri, L. B. & Pendame, M. 2008. *Women in Formal Employment and Politics: Analysis of Women in Decision Making Positions in Botswana*. In; *Gender and Development – an Afro-Indian Study*. S. Sarkar & J Mensah. 2008. Arise Publishers & Distributors. Darya Ganj, New Delhi.
- Eguavoen, I. 2007. *“Now you have a new pump, you have to manage it.” - Household water management, water rights and institutional change in Northern Ghana*. Centre for Development Research. University of Bonn.
- Goetz, A-M. 2009. *Who Answers to Women: Gender and Accountability*. United Nations Development Fund for Women.
- Gor, S. O. 2008. *Regional Distribution of Income in Kenya: An Intra-gender Analysis*. In; *Gender Inequality in Developing Countries*. S. Sarkar & T Nganga. Arise Publishers & Distributors. Darya Ganj, New Delhi.

- Grönmo, S. 2006. *Metoder i samhällsvetenskap*. Liber. Korotan Ljubljana, Slovenien.
- GWA. 2006. *Resource guide – Mainstreaming Gender in Water Governance*. Version 2.1. Gender and Water Alliance.
- GWP. 2000. *Integrated Water Resource Management – TAC Background Papers No 4*. Global Water Partnership. Denmark.
- Hamdy, A. et. al. 2004. *Mainstreaming Gender in Integrated Water Resources Management: Major Issues and Challenges*. In Hamdy A. (ed.), Sagardoy J.A. (ed.), Quagliariello R. (ed.), Trisorio Liuzzi G. (ed.) . *Integration of Gender Dimension in water management in the Mediterranean region : INGEDI Project* . Bari : CIHEAM-IAMB. 2004. p. 33-40 : 17 ref. (Options Méditerranéennes : Série A. Séminaires Méditerranéens ; n. 62). Workshop on INtegration of GENDER DIMension in Water Management in the Mediterranean Region, 2004/06/03-05, Bari (Italy)
- Hellspong, L. 2001. *Metoder för brukstextanalys*. Studentlitteratur. Lund.
- Hijab, N. & Zambrano, R. 2008. *Gender Responsive e-Governance: Exploring the Transformative Potential*. Primers in Gender and Democratic Governance. Automated Graphic Systems. United Nations Development Program. New York.
- Ivens, S. 2008. *Does Increased Water Access Empower Women?* Development, 2008, 51, (63–67)
- Krippendorff, K. 2004. *Content Analysis – An Introduction to its Methodology*. Sage Publication Inc. America.
- Lopez-Claros, A. & Zahidi, S. 2005. *Women's Empowerment: Measuring the Global Gender Gap*. World Economic Forum. Cologny/Geneva. Switzerland
- Minoia, G. 2007. *Gender Issue and Water Management in the Mediterranean Basin, Middle East and North Africa*. Fondazione Eni Enrico Mattei.
Available (2010-10-14) online at: <http://www.feem.it/Feem/Pub/Publications/WPapers/default.htm>
- MOWAC. 2004. *National Gender and Children Policy*. Ministry of Women and Children's Affairs. Government of Republic of Ghana.
- MWRHW. 2007. *Ghana National Water Policy*. Government of Ghana, Ministry of Water Resources, Works, and Housing. Government of the Republic of Ghana.
- Nana Ama Serwah Poku Sam. 2006. *Gender Mainstreaming and Integration of Women in Decision-Making: The Case of Water Management in Samari-Nkwanta, Ghana*. Wagadu Volume 3: Spring 2006.
- Opoku-Agyemang. 2005. *The role of the District Assemblies in the management of trans-district water basins in Ghana*. International workshop on 'African Water Laws: Plural Legislative Framework for Rural Water Management in Africa', 26-28 January 2005. Johannesburg, South Africa.
- Samwinga-Imasiku. 2008. *Status of women in Zambia: A case of Lusaka Urban*. In; *Gender Inequality in Developing Countries*. S. Sarkar & T Kiriti-Nganga. Arise Publishers & Distributors. Darya Ganj, New Delhi.
- Swallow et. al. 2005. *Proceedings of the African Regional Workshop*. Food and Agriculture Organisation of the United Nations. Rome.
- Tennyson, L C. 2005. *Review and assessment of watershed management strategies and approaches*. In; *Proceedings of the African Regional Workshop*. In; Swallow et. al. Food and Agriculture Organisation of the United Nations. Rome.
- UNESCO-WWAP. 2003. *Water for People, Water for Life - UN World Water Development Report (WWDR)*. Executive Summary. UNESCO Publishing, Paris. Co-published with Berghahn Books, UK.

UN. 2006. *Gender, water and sanitation – case studies on best practices*. Offices of the Special Adviser on Gender Issues and Advancement of Women. Department of Economic and Social Affairs. United Nations Headquarter. New York.

UN-Water. 2008. *Status Report on Integrated Water Resource Management and Water Efficiency Plans*. Prepared for the 16th session of the Commission on Sustainable Development – May 2008.

Wallace, T. & Coles, A. 2005. *Gender, water, and development*. Biddles Ltd. King's Lynn. UK

Were, I. 2008. *Gender and Natural Resource Management in Kenya*. In; *Gender Inequality in Developing Countries*. S. Sarkar & T Kiriti-Nganga. Arise Publishers & Distributors. Darya Ganj, New Delhi.

Whittington, D. et.al. 2009. How well is the demand-driven, community management model for rural water supply systems doing? Evidence from Bolivia, Peru and Ghana. *Water Policy* No 11, pp 696–718.

8.1.1.1. Electronic References

Fuest, V. et al. 2005. *Mapping the Water Sector of Ghana. An Inventory of Institutions and Actors*. Unpublished Research Report. Available online (2010-10-06)at:
<http://www.glowa-volta.de/publ_articles.html>

Ghana Statistical Service. 2010-09-20. *Ghana in Figures 2008*. Available online at:
<<http://www.statsghana.gov.gh/>>

GWA. 2010-09-15. Available online at:
<<http://www.genderandwater.org/page/5693>>

GWPa. 2010-08-02. Available online at:
<<http://www.gwp.org/en/About-GWP/>>

GWPb. 2010-08-02. Available online at:
<http://www.gwptoolbox.org/index.php?option=com_principle&id=5>

International Fund of Agriculture and Development. 2010-01-29. Available online at:
<<http://www.ifad.org/english/water/innowat/topic/gender.htm>>

MNRE. 2010-10-12. The Samoa Ministry of Natural Resources and Environment. *Our Environment Our Heritage – Women and Water*
Available online at: <<http://www.mnre.gov.ws/>>

Muylwijk, J. GWA. 2010-08-18. Available online at:
<<http://www.genderandwater.org/page/6025>>

Rathgeber, E. 1997. Gender analysis: What are we looking for? In: *Management of Water Demand in Africa and the Middle East – Current Practices and Future Needs*. Brooks, D.
2010-11-02. Available online at:
<http://www.idrc.ca/en/ev-9316-201-1-DO_TOPIC.html>

Rural Poverty Portal. 2010-09-21. Available online at:
<<http://www.ruralpovertyportal.org>>
(<http://www.ruralpovertyportal.org/web/guest/country/home/tags/ghana>)

Stamp. 2010-02-01. Available online at:
<http://www.idrc.ca/en/ev-9365-201-1-DO_TOPIC.html>

Siles, J. 2010-06-03. *Watershed Management*. Data Sheet. UICN - Community Conservation Coalition.
Available online at:
<<http://www.genderandenvironment.org/publications.php?i=587>>

TREND Group. 2010-09-16. Water, Sanitation and Service Delivery in Ghana - A Paper Prepared for the WELL Resource Centre Network for Water, Sanitation and Environmental Health (based on Scoping Studies Carried Out in Ghana)

Available online at:

<www.trend.watsan.net>

UNESCO. 2010-01-29. Available online at:

<http://www.unesco.org/water/ihp/women_and_water.shtml>

UN Habitat. 2006. Navigating Gender in African Cities - Synthesis Report of Rapid Gender and Pro-Poor Assessments in the 17 Cities of the Water for African Cities (WAC) II Programme. Water and Sanitation Infrastructure Branch. Water and Sanitation Trust Fund. UN HABITAT. Available online at:

<<http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=2067>>

WaterAid. 2005. *National water sector assessment – Ghana*. Available (2010-08-23) online at:

<www.wateraid.org>

WaterAid. 2006. *Ghana – Country Information*. Available (2010-08-23) online at:

<www.wateraid.org>

The World Bank. 2002. Ghana Strategic Country Gender Profile (Briefing Note for the Ghana Poverty Reduction Strategy). Available online at:

<<http://siteresources.worldbank.org/EXTAFRREGTOPGENDER/Resources/GhanaCGA-R.pdf>>

World Water Council. 2010-08-04. Available online at:

<<http://www.worldwatercouncil.org/index.php?id=25>>

9. Attachments

9.1. Coding Instructions

First, read the document in its entirety. Disregard front page, table of contents, acknowledgements, foreword/preface, list of acronyms, and definitions. Second, analyse the document paragraph by paragraph and consider whether any of the codes are applicable. Note all applicable codes in the document. Each paragraph may contain more than one code.

When coding, participation should also include following synonyms; *involvement*, *part taking* and variations thereof. Below follow coding instructions and code scheme for how to code for the various variables and codes.

A; Social Issues; This aspects indicates social issues identified as hindering factors to female participation. A1-A6 should only be noted every time each aspect is mentioned as an issue to be improved or as something negatively affecting female participation, thus not to be noted when mentioned has having been improved.

B; Economic Issues; This aspect indicates economic issues identified as hindering factors to female participation. B1-B6 should only be noted every time each aspect is mentioned as an issue to be improved or as something negatively affecting female participation, thus not to be noted when mentioned has having been improved.

C; Increase Female Participation; Specific Approaches; This indicates approaches and activities suggested and most likely to be used to increase female participation. C1-C8 represents the different approaches and should be noted every time each code is mentioned as an approach to improve women participation.

9.2. Code Scheme

A Social Issues

- A1 Education and illiteracy
- A2 Traditional norms and practices
- A3 Health
- A4 Motherhood
- A5 Power imbalances
- A6 Time allocation

B Economic Issues

- B1 Employment and productive activities
- B2 Income and credit
- B3 Water tariffs and poverty, ability and willingness to pay
- B4 Assets and resources (control and access)
- B5 Technology
- B6 Water tariffs and poverty

C Increase Female Participation; Specific Approaches

- C1 Laws/regulations
- C2 Quotas
- C3 Capacity building
- C4 Improve education campaigns
- C5 Alter traditional norms and practices
- C6 Information and Communication
- C7 Governmental support
- C8 Policies and programs

9.3. Interview Guide; Questions

Women's role

How would you describe women's role and responsibilities in the Ghanaian water management; at the household, community, regional, national level?

In your opinion, do women's experiences and perspectives on the water management differ from that of men? If yes, how?

Issues and Challenges

What challenges can you identify that hinder women's equal participation in the water management?

Underpinning cultural norms and beliefs

In Ghana, what cultural norms and beliefs do you think could impair or improve *gender issues* in general; at the household, community, regional, national level?

In Ghana, what culture norms and beliefs do you think could impair or improve *women's participation* in water management; at the household, community, regional, national level?

Acknowledging women and raising gender awareness

How and to what extent would you say that women are involved in decision making, developing and implementing policies, and monitoring the water management; at the household, community, regional, national level?

In your opinion, how are women's experiences and perspectives generally integrated in the Ghanaian water management?

Do you think that women are given the same opportunity to participate in water management practices as compared to men? If no, why not?

d. How do you think the Ghanaian water management would improve or deteriorate by increasing women participation and raising gender awareness?

Approaches

Do women and men have equal *access* and *control* over water management resources such as credit, property ownership, training opportunities, education, etc.? How does this influence gender issues and women participation in the water management?

What support is there from the local, regional and national government to facilitate women participation in the Ghanaian water management?

What laws may influence implementation of a gender perspective in the Ghanaian water management?

Are there any national or sub-national laws, regulation or policies that *hinder* or *enable* women to participate in the water management? At local, regional, or national level?

Improvements

What aspects do you think are the most important to address to increase women participation in the Ghanaian water management?

What factors do you think should be addressed to increase awareness of gender issues in the Ghanaian water management?