

INDIRA GANDHI NATIONAL OPEN UNIVERSITY
SCHOOL OF SOCIAL SCIENCES

**THE ROLE OF WOMEN ON SUSTAINABLE RURAL WATER
SUPPLY AND SANITATION SERVICES IN EAST SHOA ZONE ,
OROMIA REGIONAL STATE, ETHIOPIA**

A THESIS

**SUBMITTED TO INDIRA GANDHI NATIONAL OPEN UNIVERSITY IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE MASTER'S
OF ARTS DEGREE IN RURAL DEVELOPMENT (MARD)**

BY HAJI METAISSA KEBIRO

ADVISOR: Dr. WONDIMAGEGNE CHEKOL (PhD)

MAY, 2013

DECLARATION

I hereby declare that the Dissertation entitled “THE ROLE OF WOMEN ON SUSTAINABLE RURAL WATER SUPPLY AND SANITATION SERVICES in East Shoa Zone Oromia Regional State, Ethiopia” submitted by me for the partial fulfillment of the MA in Rural Development to Indira Gandhi National Open University (IGNOU), New Delhi is my own original work and has not been submitted earlier either to IGNOU or to any other institution for the fulfillment of the requirement for any course of study. I also declare that no chapter of this manuscript in whole or in part is lifted and incorporated in this report from any earlier work done by me or others.

Place: Addis Ababa, Ethiopia

Signature_____

Date: 17/05/2013

Enrollment No **099108525**

Name: Haji Metaissa Kebiro

Address :AddisAbaba,Ethiopia,

e-mail: hajimetysa@yahoo.com

CERTIFICATE

This to certify that Mr. Haji Metaissa Kebiro, student of M.A (RD) from Indira Gandhi National Open University, New Delhi was working under my supervision and guidance for his Project Work for the Course MRDP-001. His Project Work Entitled “THE ROLE OF WOMEN ON SUSTAINABLE RURAL WATER SUPPLY AND SANITATION SERVICES which he is submitting is his genuine and original work.

Place: Addis Ababa, Ethiopia

Signature



Date: 05, May, 2013

Name: Dr .Wondimagegne Chekol (Ph.D)

Address of Supervisor: St.Mary's University College,

Addis Ababa, Ethiopia

ACKNOWLEDGEMENT

First of all, I would like thank, 'Almighty Allah' who made it possible, to begin and finish this task successfully.

I would also like to extend my deepest gratitude to my advisor Dr.Wondimagegne Chekol without his support, the works of this study would not be come true. His benevolent guide, advice and relentless work helped me to complete the task under busy schedule. Once again, I am really thankful for his all rounded assistance.

I do not have adequate words to express my heartfelt gratitude to my wife, Adde Afraha Esma'el for her unreserved contributions during my post graduate study and research work through moral and psychological support she gave me. Her support was indeed instrumental for my success.

The other person whom I am very much indebted to is my brother Tulu Metaissa who has been cause for me to be at this stage. His advice gave me strength and inspiration during my research field work and write up

I am also grateful to my friends who have been encouraging me to undertake this research and complete it on time.

Table of Contents	Page
DECLARATION.....	I
CERTIFICATE.....	II
ACKNOWLEDGEMENT	III
TABLE OF CONTENTS.....	IV
LIST OF TABLES	VIII
LIST OF ACCRONYMS.....	IIX
GLOSSARY OF TERMS	XI
DEFINITION OF KEY TERMS USED IN THE PAPER.....	XII
ABSTRACT.....	XVII
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 Background.....	1
1.2 Statement of the problem.....	4
1.3 Objectives of the study	6
1.3.1 General objective	6
1.3.2 Specific Oobjectives	7
1.4 Chapterization.....	7
CHAPTER TWO	8
2. LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK	8
2.1. The state of the theory	8
2.1.1The Emergence of Women Participation in International Forum on Water Supply and Sanitation	8

2.1.2. The Transformation of women’s role from Passive water Carrier and grateful beneficiary to active manger.....	12
2.1.3. Women in rural water supply and sanitation projects	13
2.1.4 Barriers to women's participations in rural water supply and sanitation projects	15
2.1.4.1 Women's work burden	15
2.1.4.2. Women's social status and lower level decision making position	17
2.1.5. The Need to consider women involvement in water supply and sanitation services	18
2.1.6. Impact of Inadequate Water Supply and Sanitation on Women Lives.....	20
2.2. The state of the research	21
2.2.1 Women and sustainability of rural water supply and sanitation services.....	21
2.2.2 The Participation of women in rural water supply and sanitation projects	21
2.2.3 Token involvement of women in community water supply and sanitation projects:	23
2.3 A Conceptual framework.....	25
CHAPTER THREE	28
3. METHODOLOGY	28
3.1. Background of the study area	28
3.1.1. Location and Administrative Division.....	28
3.1.2. Physical Condition.....	30
3.1.3. Livelihoods of the Population.....	31
3.1.4. Population and Basic Social Services.....	32
3.1.5. Rural community organizations.....	34
3.2. Methodology.....	35
3.2.1. Secondary Data.....	36

3.2.2 Primary data.....	37
3.2.2.1. Site selection and data collection procedures	37
3.2.2.2. Survey Research	39
3.2.2.3. Field research method.....	41
3.2.2.4. Focus group discussion.....	42
3.3. Data analysis.....	44
3.4. Limitations of the study	45
CHAPTER FOUR.....	46
4. PRESENTATION AND ANALYSIS OF FINDINGS OF THE STUDY ...	46
4.1. Demographic characteristics of the surveyed households	46
4.2. The predicament of women before implementation of current water supply projects	48
4.3. Water supply and sanitation projects in Elka, Kamo, Suro and Galo zones	49
4.4. The role of women in sustainable rural water supply and sanitation services.....	50
4.4.1.The Contribution of Women in the Course of the Various Water Supply and Sanitation Projects	50
4.4.2 The Role of Women in Water Supply and Sanitation management Committees.....	55
4.4.3 The Extent of Women representation in Water Supply and Sanitation Committees	56
4.4.4. Training of Women Water Committee Members.....	60
4.4.5 The Role of women in village level operation and maintenance.....	61
4.4.6. The role of women in water supply and sanitation services	62
4.5. Women and intra household aspects of water supply and sanitation	63
4.5.1. Women's role in water collection	63
4.5.2 Daily water consumption and use.....	65

4.5.3. Management of water in the household.....	67
4.5.4. Women and household hygiene practices and environmental sanitation	69
4.6 Women's perception on existing water supply and sanitation services	73
4.6.1 Design, structure and type of technology	73
4.6.2. Site of water points, distance and queuing time	76
4.6.3. Benefits gained by women from improved water supply and sanitation services.....	77
4.7. Structural factors exacerbating inequality between women's and men's.....	79
Participation in Water Supply and Sanitation Projects.....	79
4.7.1. Socio-Cultural Factors	79
4.7.2. Local Leadership	80
4.7.3 Economic Factors	81
4.8.Enabling environment for Women empowerment and gender mainstreaming at institutional level.....	82
CHAPTER FIVE.....	87
CONCLUSIONS & RECOMMENDATIONS	87
5.1 Conclusion	87
5.2. Recommendation	90
REFERENCES.....	94
ATTACHEMENT	97

LIST OF TABLES

Table-1. Distribution of Respondents by Wereda, Kbele and zone	40
Table-2. Triangulated Data Sources of the respondents	43
Table-3. Population Size and Educational Profile of Respondents by Woreda and Zone	46
Table-4. Frequency and Percentage Distribution of Women and Men Respondents by their Participation in the different activities of Water Supply and Sanitation Project Cycles.....	54
Table-5. Respondents by their Evaluation of the Performances of Water Committees.....	56
Table-6. Division of Responsibilities among Women and Men Water Committee Members.....	57
Table-7. Respondents Evaluation on Female Committee Members' Performance.....	58
Table-8. Women Respondents on their time Consumption for Fetching Water from Developed Sources.....	64
Table-9. Cleaning of Water Containers by Women Respondents.....	68
Table-10. Cleaning of Water Storage by Women Respondents.....	68
Table-11. Availability of Latrine in Surveyed Households.....	69
Table-12. Percentage Distribution of Respondents on Use of Latrine.....	70
Table-13. Hand Washing Practice of Respondents before Eating.....	72
Table-14. Hand Washing Practice of Respondents after Defecation.....	72
Table-15. Perception of Women Respondents on the Technical Structures of Water Supply and Sanitation Services.....	75
Table- 16. Distance Traveled to Fetch Water from Improved Sources.....	77
Table-17. Frequency and Percentage Distribution on Benefits Gained from Improved Water Supply and Sanitation Services.....	78

LIST OF ACCRONYMS

OCSI	Oromia Credit & Saving Institution
ONRS	Oromia National Regional States
ORWMDB	Oromia Region Water and Mine Resources Development Bureau
ORWAO	Oromia Region Women’s Affairs Office
BoFED	Bureau of Finance and Economic Development
DRA	Demand Responsive Approach
FGDs	Focus group Discussions
FWRMP	Federal Water Resources Management Policy
GAD	Gender and Development
GOs	Governmental Organizations
MOWR	Ministry of Water Resources
NGOs	Non Governmental Organizations
O&M	Operation and Maintenance
ORDO	Organization for Rehabilitation and Development of Oromia
RWSEP	Rural Water Supply and Environment Program
RWSS	Rural Water Supply and Sanitation Services
VHCs	Village Health Communicators
VLOM	Village Level Operation and Maintenance
WAD	Women’s Affairs Department
WAO	Women’s Affairs Office
WATSANco	Water Supply and Sanitation Committees

WAE	Water Aid Ethiopia
WID	Women in Development
WSDP	Water Sector Development Program
WSDS	Water Sector Development Strategy.

GLOSSARY OF TERMS

Woreda: is an Amharic which is equivalent to the term district. In terms of administrative structure, it is located below the region. Woreda in rural settings consists of towns and many rural kebeles.

Kebele: is a local administrative unit below woreda. It consists of three and more than three and zones. For the case of this study, all households located in the kebele are not users of improved water supply services.

Zone : is a group of communities and households located under kebele or sub-kebele according to current administrative structure of Oromia Regional state. Households that are located at zone level are users of water supply services if they are participated in labor, money and material contributions.

Gan: is big sized clay made pot. It is used to store water in the home by rural households. On average a gan can store three pots of water.

Insra: is clay made pot. It is used to fetch water by rural women and girls. One Insra contains on average 15-20 liters of water.

Kill: is a small sized plant made for water container. It is used as a means of water fetching by boys and girls in rural communities. Kill contain on average 7 liters of water.

Tella /Arake : Both are locally made drinks (similar to Beer) used for human drinking purpose

Mahiber : Association of peoples /Community living in adjacent areas/kebele for various social issues

Iddir : The term iddir is grouping of people for organized to support each other during death of a member of that community

DEFINITION OF KEY TERMS USED IN THE PAPER

Sustainability

In this study , the term sustainability is used to mean ability to continue over a period of time ; or causing little or no damage to the environment and therefore able to continue for a long time. In the document, sustainability was used for water supply and sanitation services. Factors such as policy context, institutional arrangements, financial and economic issues, community and social aspects, technology and the natural environment, Spare parts supply, maintenance systems; and monitoring have been found to be critical to achieving sustainability of rural water supply and sanitation services. Insufficient water facilities, poor physical structures, low reliability of the service and facility designs, distance and time needed to collect water and low awareness about their uses are some of the factors that affect the continued service of rural water supply and sanitation systems. In addition to these inappropriate technologies use is also one of the factors. Involvement of the communities in all stages of water supply and sanitation services is very crucial for the sustainability of rural water supply and sanitation systems. Sustainability rate of rural water supply and sanitation systems increases as a result of communities 'owning and managing their schemes, existence of management organization at the village level, protection of the water point, communities cost recovery for operation and maintenance, technology type and availability of spare parts. Active participation and involvement of women is crucial for sustainability of rural Water supply and Sanitation services.

Water Supply and Sanitation Services

Water Supply and Sanitation Services is used in the document to mean those infrastructures and facilities which are source of water for consumption of human being and those used for sanitation

purposes respectively. Water Supply services which the study focuses on include Hand Pumps and developed springs. On the other hand, sanitation services or facilities covered in this study include household simple pit latrine and Ventilated Improved latrines. Here in this study, focus is given to those sanitation facilities used in rural communities either at household, family or communal latrines

Water Supply, Sanitation and Hygiene Committees (WATSANco)

In the study the term Water Supply, Sanitation and Hygiene promotion Committees is used to mean a group of persons elected by water users to govern and manage water supply and sanitation facilities. These committees are believed to improve sustainability of Water Supply and Sanitation services or facilities through better O&M and higher willingness-to-sustain the system. For many projects the creation of a these committees is a prerequisite for receiving project assistance. The purpose of a water committee in most cases is to manage and oversee the system's operation which may include conducting preventive maintenance, collecting tariffs or payments for repairs, keeping records of financial transactions, manuals and blueprints, and sanctioning people for non-payment.

Sanitation

In this study, the term sanitation is used to mean interventions to reduce people's exposure to diseases by providing a clean environment in which to live; with measures to break the cycle of disease. This usually includes disposing of or hygienic management of human and animal excreta, refuse and wastewater, the control of disease vectors and the provision of washing facilities for personal and domestic hygiene. Sanitation involves both behaviors and facilities which work together to form a hygienic environment.

Water Supply

For the purpose of this study, water supply implies human uses of water such as drinking water, food preparation, and water for hygiene and sanitation uses.

Community Management

In this study, community management is used in the 'community management of water supply and sanitation systems'. It refers to the capabilities and willingness of the beneficiaries to take charge and determine the nature of development affecting them. In water and sanitation services, community management means that the community exercises responsibility for decision making and control over the subsequent execution of these decisions during project development. Community management of water supply and sanitation include a range of management tasks related to maintaining (tasks include, setting tariffs and collecting payment, carrying out routine maintenance), and making decisions about system extension. It is concerned with all issues pertaining to responsibility (ownership), decision making, authority and control of water supply and sanitation services. For communities, greater control means that services can be developed which more fully meet local needs.

Household

In this study, the term household is to mean a group of persons who live in the same housing unit or in connected premises and have common arrangements for cooking and eating food

Water points

In this study, the term water point is used to mean distribution centers of developed water sources from which communities fetch water.

Gender

For the purpose of this study, Gender denotes a holistic approach of the socially constructed being (femininity and masculinity), playing socially accepted doing (roles and responsibilities) in a given setting and time frame, where by the being and doing affected and influenced by the structural factors.

Patriarchy

In this study, the term patriarchy referred to a hierarchical social system and way of thinking where ‘fathers’ or ‘patriarchs’ rule which has become a major form of domination and subordination. The term ‘patriarchal’ refers to power relation in which women’s interests are subordinated to the interest of men.

Developed water source

For the purpose of this study, the terms developed water source is used to represent a water source purposefully created through investment and renders protected and safe water to community members.

Water Supply scheme/system

In this study, the term water supply scheme /system is to mean the type of technology that makes possible the delivery of the water service. This includes developed spring and hand pump systems. In this study, the term scheme and system interchangeably used referring to developed spring (taped) and hand pump.

Strategic gender needs

In this paper the term refers to the necessity to improve women’s social position in a community by increasing their awareness of their situation and their capacity to take decision and influence change. This includes their position in sustainable rural water supply and sanitation management committees.

Practical gender needs

In this paper the term is used to mean the necessity to improve women’s condition through the provision of their immediate needs such as water supply and sanitation facilities near to their house.

Gender Equity

In this paper the term is used to mean the process of being fair to women and men. To ensure fairness, measures must often be available to compensate for historical and social disadvantages that prevent women and men from otherwise operating on a level playing field. Equity leads to Equality.

Gender Equality

In this paper the term is used to mean women and men enjoy the same status. It means that women and men have equal conditions for realizing their full human rights and potential to contribute to national, political, economic, social and cultural development, and to benefit from the results.

ABSTRACT

The sustainability of rural water supply and sanitation services depends on many interrelated factors such as the policy environment, institutional management, financial and economic issues, spare- part supply and maintenance, monitoring systems, and environmental related issues.

However, despite all of these factors, the true participation and ownership of users, especially the role of women are the most essential ones. The objective of this research is to assess the role of women on sustainable rural water supply and sanitation services and to identify the structural factors that exacerbate women's and men's unequal participation in the management of rural water supply and sanitation projects. To this end, the study was undertaken in four rural water supply and sanitation projects among rural communities of Adami Tulu Jido Kombolcha communities of Oromia National Regional State, Ethiopia by applying both qualitative and quantitative methods.

The findings of the study reveal that, women plays significant roles in sustaining rural water supply and sanitation services. Both women and men in the research area have equally participated in the various phases of the projects, from inception to implementation. Though the role of women in project implementation was remarkable; their role in management of the schemes was found to be very low. The participation of women both in decision-making and their numerical representation in water committees were lower than that of men due to impeding structural factors. The study also discloses that the power relation between female and male water supply and sanitation committee members is unbalanced. Though women play an important role in taking care of their water supply and sanitation services, their contributions are little appreciated by the member of their communities. The research result concludes that women representation in water supply and sanitation management committees is only for the sake of the fulfillment of the requirement set by support agencies.

CHAPTER ONE

INTRODUCTION

1.1 Background

Sustainability of rural water supply and sanitation services is a complex issue that depends upon many interrelated factors. Policy context, institutional arrangements, financial and economic issues, availability of spare-parts, communities cost recovery for operation and maintenance and technology type are among the factors that are crucial for ensuring the sustainability of Rural Water Supply and Sanitation (RWSS) services. In addition, sustainability of RWSS services is also affected by natural and environmental factors such as recurrent drought coupled with erratic rainfall, and depletion of ground water sources. Social factors such as inappropriate use and conflicting interests among communities also come into play (Harvey and Reed, 2004). Among all factors that affect sustainability of rural water supply and sanitation, the true participation and ownership of the user community especially that of women is the most essential. A number of studies have noted that the primary factor behind sustainable community RWSS services is the role that is played by women (Wijk, 1998; Wendy, 1995; Harvey and Reed, 2004; Schouten and Moriarty, 2003). Women who are mostly excluded should be involved in planning, designing, maintaining and managing RWSS projects to ensure proper functioning and utilization of project outcome.

The importance of involving both women and men in the management of water and sanitation has been recognized at the global level, starting from the 1977 United Nations Water Conference at Mardel Plata, the International Drinking Water and Sanitation Decade (1981-90) and the

International Conference on Water and the Environment in Dublin (January 1992), which explicitly recognizes the central role of women in the provision, management and safeguarding of water. Reference is also made to the involvement of women in water management in Agenda 21 (paragraph 18.70f), and the Johannesburg Plan of Implementation (paragraph 25). Moreover, the resolution that established the International Decade for Action, 'Water for Life' (2005-2015), calls for women's participation and involvement in water-related development efforts. A study by the International Water and Sanitation Centre (IRC: 2006) of community water and sanitation projects in 88 communities in 15 countries found that projects designed and run with the full participation of women are more sustainable and effective than those that do not. This supports an earlier World Bank study that found that women's participation was strongly associated with water and sanitation project effectiveness. At a local level in many societies, women play a central role in providing water supply and sanitation services. They have primary responsibility for the management of household water supply, sanitation and health (UN Water, 2006). When women are involved in meaningful ways in water management decisions, solutions that are appropriate and sustainable for the community are found. Women often collect, use and manage water in the household as well as farm land for irrigated and rain fed crops. Because of these, they have considerable knowledge on management of water resources; their active participation and involvement in sustainable water supply and sanitation is said to enhance the efficiency of water use. Furthermore, when appropriate technologies are chosen for both men and women, the sustainability of the structure is increased.

Above all, women are the caretakers of children, the guardians of family health and well being, and frequently the managers of household resources. In the developing world including Ethiopia, where millions of families still lack clean water and adequate sanitation, women invariably have

to ensure that the family has water. Yet, despite their numbers and their roles and responsibilities, women often have had no voice and so no choice in decisions about the kinds of water supply and sanitation services that are provided to protect their family's wellbeing. Efforts geared towards improving the management water resources and extending access to safe drinking water and adequate sanitation often overlook the central role of women in water management" (UN Water, 2006:1)

In the district, where the study conducted, there are many rural water and sanitation projects financed and constructed by government, Non-Governmental Organization, and other development agencies. Most of these rural water supply and sanitation systems are supposed to be governed and managed by community elected Water supply and Sanitation Committees (WATSANco). The primary function and responsibility of WATSANco is to govern and manage rural water supply and sanitation projects and take lead in community mobilization on sanitation and hygiene promotion activities. Rural Water supply and Sanitation committees constitute women and men members elected by community. WATSANco members do have roles and responsibly to manage rural water supply and sanitation systems in sustainable manner. In addition to these roles as water managers, women are also involved as primary users and providers of water resources. Women use water for household purpose as well as for livestock rearing and aquaculture. However, social or economic status limits their access to water for such purposes (UN Water, 2006:5). Because women's needs are often not clearly incorporated into water planning and management, they endure hardships in decision making. Though women are shouldered with the primary responsibility for water transport and management for household use in rural areas in many developing countries including Ethiopia, women have to walk long distances to collect water, their land and water rights are not recognized, and water points if they

are built they are not built to meet the needs of women, With all these responsibilities women needs and concerns are not often incorporated into planning and management of water supply and sanitation service programs.

The study is, therefore designed to assess the role of women on sustainable rural water supply and sanitation services and examine the existing structural factors that are perpetuating inequality between women and men in the management of RWSS services in East Shoa Zone, Oromia Regional State, Ethiopia.

1.2 Statement of the problem

Water supply and Sanitation in rural area of Oromia National Regional State is characterized by low coverage (49.3%). In order to improve the existing water supply coverage, the Oromia National Regional States has embarked various measures; rural water supply schemes, rural water supply Operation and Maintenance Strategy, Water Sector Development Program, the five year Strategic Plan of water supply and sanitation, and the Annual Plan of Actions. With the support of donors, new water supply projects have been constructed at the regional state level since the past five years. The Regional and Federal Governments have also made available huge financial resources to subsidize maintenance costs. Despite all these efforts by the Federal and Regional governments as well as donor communities, the coverage of rural water supply has remained 49.3 % which is below the requirements of the people in the region (Ministry of Water Resources, Water Sector Development, 2002).

The realities at the local level reveal that large number of rural water supply schemes have failed to achieve a satisfactory level of sustainability. The current practices in rural water supply projects and programs also show that there is too much focus on the goal of increasing service

coverage through the implementation of new water system whilst little attention is paid to gender and social issues in water supply that are critical in ensuring sustainability (Harvey and Reed, 2004: 8).

The existing experiences and practices in the water sector also suggests that a lot of emphasis is put on technical issues, while the social aspects particularly the gender issue on water supply sustainability is ignored. Water supply has traditionally regarded as part of the discipline of engineering and consequently has seen from the engineering mindset of design and build. However, long-term sustainability requires a great regard for the numerous non-technological aspects of providing water and sanitation services. At the policy level, the importance of gender aspects in rural water supply is often emphasized, yet its implementation has become elusive. Policy makers and technical staffs do not yet properly perceive its potential contribution to sustainable water supplies. There is also wrong perception among technical professionals that the involvements of women in rural water supply committees do not need to go beyond mere membership.

However, the dynamics of power relations between women and men committee members, women's involvement in real decision making and the structural factors that perpetuate the subordinate position of women in community affairs are given little attention. In addition, the participation and involvement of women and men in most community committees are not based on equality. The information obtained from related literature reveals that men dominate water supply and sanitation committees. They also own key decisions making positions such as chairpersonship and office of treasurer, while women are almost always kept as ordinary members with no defined tasks.

The current guideline in NGOs and the regional WMRDB (Water, Mineral and Energy Resources Development Bureau) clearly indicates that rural water supply committee should have female members. However, the presence of women often was a requirement of the implementing agencies rather than a community initiative and as a result their involvement becomes “tokenistic” (Harvey and Reed, 2004: 88). Little effort has been made in changing the attitude of beneficiaries and top-down approach imposed on communities to involve women in decision making in creeping stage. The role of women in sustainable water supply and sanitation services, the perception and benefits of women and men regarding the existing service provisions; their level of participation and involvement in water management committees; and their contribution to the operation and maintenance of the services have not been adequately studied. The study is, therefore designed to assess the role of women on sustainable rural water supply and sanitation services and examine the existing structural factors that are perpetuating inequality between women and men in the management of RWSS services in East Shoa Zone, Oromia National Regional state, Ethiopia.

1.3 Objectives of the study

1.3.1 General objective

The main objective of the research is to assess the role of women on sustainable rural water supply and sanitation services and examine the existing structural factors that are perpetuating inequality between women and men in the management of RWSS services.

1.3.2 Specific Objectives

The specific objectives of this study consist of the following:

- To assess the role of women on sustainable rural water supply and sanitation services ;
- To examine the underlying causes of women's inadequate representation in the Water supply and Sanitation committees ;
- To investigate the current approaches and enabling conditions that are facilitating the incorporation of gender issues in the research area ; and
- To examine the views of women and men on the structural design of water point, their location, distance, appropriateness of the technology, tariff level, ability and willingness to pay, quality and quantity of water supply and sanitation services.

1.4 Chapterization

The final document of this study is to be presented as per the below described chapterization format. The First chapter of this study shall focus on introductory part, background information, statement of the problem, and objectives of the study. The Second chapter of the study pays due attention to review of related literature. The Third chapter deals with the research design and methodology of data collection and analysis tools. The detail data and presentation of the findings of the study will be presented under chapter four. The Fifth chapter mainly encompasses the Conclusion and Recommendations of the study.

CHAPTER TWO

2. LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1. The state of the theory

2.1.1 The Emergence of Women Participation in International Forum on Water Supply and Sanitation

The community involvement paradigm was officially adopted in the water sector by the international community during the 1977 World Water conference in Mar del Plata, Argentina. As Schouten and Moriarty noted the slogan of the conference was “water and sanitation for all” (2003: 3). In New Delhi in 1990, where results and follow-up of the international drinking water supply and sanitation decade (1981-1990) were discussed, water resources were one of the subject areas which emerged as essential for the next generation. The importance of preserving and protecting fresh water resources were given emphasis. The conference also underlined that water supply and sanitation should not be reserved for few, but all people have the right to fulfill the basic needs (Schouten and Moriarty, 2003).

Provision of adequate and clean water for all was underlined by Mar del Plata Conference, while the New Delhi document stated women's participation in relations to their roles in managing domestic water collection and use. This has created a favorable condition for the recognition of their involvement as a critical element in reaching the water decades targets of ‘water for all’. New programs called Women in Development (WID) were launched by the UN system and bilateral organizations that targeted women sought to broaden their involvement in the planning and implementation of water supply and services (Wijk, 1998). As results of this, women were

trained as hand pump caretakers and artisans; their participation in water committees also gained due attention. To this effect, a considerable number of projects started involving them in trench digging system, maintenance and water committees in many rural areas of developing countries. Following the New Delhi, the Dublin (1992) and Rio de Janeiro global water conferences (1992) bring up the central role of women in the provision, management and safeguard of water. As depicted by Wijk, these conferences “calls for the pivotal role of women as providers and users of water and guardians of the living environment to be reflected in institutional arrangement for the development of water resources” (1998: 13). Like the above mentioned conferences the Earth Summit in Rio de Janeiro (June 1992) in its Agenda 21 (strategy to provide universal coverage of sustainable water supply) explains the role of women in the same way “women should be involved in water management and training” (Wijk, 1998: 14).

As Wijk noted, it is during the Noordwijk conference (March, 1994) which followed the Dublin and Rio conferences on water and water resources management that the issue of women involvement was also repeatedly mentioned. The Noordwijk conference endorsed equitable involvement of women in decision making, management bodies and training. The Noordwijk action plan stressed that water and sanitation programs need to be based on partnership and involvement of all stakeholders especially women, community associations, local, regional and central government, public and private sector agencies and nongovernmental organizations (1998: 14 -16).

From the experience of these conferences, a set of principles emerged that brought about dramatic changes to water supply and sanitation development (UN water: 2006) in many countries of the world. The economic value of water started to being recognized that calls for water has value and users need to pay. At the same time, the water sector was learning that

services should respond to demand in order to promote users willingness to pay. As stressed by Wijik, the Noodwijk conference gave insights into women involvement by stating “the requirement of gender disaggregated data that facilitate the involvement of women and men in the management of water resources” (1998: 17). The conference also recognized that the convergence of gender approach with demand responsive approach helps to promote the new idea of water as an economic good and users need to pay for it.

The benefits of women's participation and involvement in project planning and implementation of rural water supplies and sanitation have long been argued. Perhaps the most important aspect in relation to sustainability is that women are often concerned about the operation of their water supply and are motivated to do something about it because it directly affects them. A Field research in Zambia which involved informal discussions with women in many communities, many of whom demonstrated a great interest in water supply issues and a high awareness of associated health implications (Harvey & Skinner, 2002). Some communities also reported that women made more successful treasurers than men, because they were trusted more by those contributing to the maintenance fund (Harvey & Skinner, 2002).

The central role played by women in the provision, management and husbandry of water, primarily in the domestic and household context, has gained widespread recognition in recent years; especially since the UN Decade for Women (European Commission, 1998, 47). One of the main reasons for this is that it is usually women who are the main collectors and user of water. The way to find out women and decision-making in water related matters might be to simply ask how, by custom, women do contribute to community matters. Even though the division of labor between men and women shows both cross-cultural (or cross-country) as well as cross- regional variations (within a country), it is a widely accepted fact that women, in most cultures, take the

responsibility of collecting water from various sources and managing it at home. In fact, there exists a wealth of evidences that show the existence of a tight and close relationship between women and water. Nane Annan, wife of previous UN Secretary General, Kofi Annan (2002), powerfully spelled out the importance of water to women and girls in Johannesburg at the world summit on sustainable development. In her speech, she argues that women bear the brunt of the burden of lack of safe water, and their involvement is key to achieving the aims of the Water, Sanitation and Hygiene for all (WASH). To put her words;

'We all know about our own need for water, we know our anguish for the few hours may be without it. So it should not take too much imagination to understand the plight of those whose daily lives are determined by the absence of sanitation or easily accessible water.....As a woman, I know we are much more vulnerable' (quoted in source, 2002:4-5, ellipses mine).

The results of a gender desegregated data, collected during most pre-feasibility studies of development projects also revealed that women mostly select water as their first development priority need than men usually do. One of the outcomes of a one year participatory assessment study on the linkages between participation, gender, and demand responsiveness done in east Africa in 1998 showed that women in Malawi and Kenya generally contribute more than men to water programmes (IRC, 2002). Similarly, extension staff members in Wollo, Ethiopia, who spent at each of 12 water sources observing the gender and age of water collectors found out that, in their project area, on average, women undertook 90 percent of all water collection trips; children 8 percent and men only 2 percent (Davis and Groggy, 1993). Thus, in view of women's greater interest and influences on family decision regarding water, projects should evidently treat women as 'valued customers'. In spite of this, in most African countries, absence of women from decision-making in water resource management and service delivery is both inequitable, and severely hinders the possibility of realizing sustainability. When involvement of women in all

components of a given project is realized, it makes projects and their endeavors so close to their goals of bearing fruit and there by benefit the community sustainability.

2.1.2. The Transformation of women's role from Passive water Carrier and grateful beneficiary to active manger

As argued by Wijik during 1950s and 1960s, women were regarded as water carriers and provided with water in order to address their practical needs. In domestic water supply programs, women were initially seen simply as carriers of water. Their important roles in maintenance and management were not recognized. Therefore, women were not involved as actors but rather as passive beneficiaries. While women often benefited through access to water at a closer location, they were excluded from the involvement of water development project cycles (Wijik, 1998). Women in development (WID) approach that come into use in the early 1960s had influenced the water sector development planners and policy makers to view women as the mere beneficiaries of the improvements. Rogers has explained the impact of WID approach on development planners in the following way:

"The assumptions of development planners made about women in society are based on thought of natural that a woman's place is in the home and she has a very specific set of tasks which are thought to be universal because they are based on the biological imperatives of sex. The most important role for women, defining their entire life, is portrayed as the bearing and bringing up of children. A man on the other hand, is seen as the natural head of the family, representative in the outside world and therefore the person with whom planners will deal (1980: 12)".

Under the rubric of WID, women were often treated as a homogeneous group, class, ethnicity and intra-household gender differences were not taken into account. Women's situations were analyzed exclusively, and activities were developed accordingly for them.

Men were seldom involved in these activities in order to understand the needs of women. As argued by Young (1993: 134), it was after the introduction of Gender and Development Approach (GAD) in 1980s that, women began to be recognized as actors and managers of water in their own right, and it was demonstrated that involving women in planning, construction and management, brought benefits for general development for projects, households and for women themselves. Bourne writes that: "Women are recognized as local water managers in a culturally prescribed manner" (1984: 45). This transformation from passive water carrier and grateful beneficiary to active manager and necessary participants was the product of GAD approach.

2.1.3. Women in rural water supply and sanitation projects

In many villages in developing countries, there are abandoned hand pumps installed by well-intentioned government authorities that were constructed without any consultation and participation of user communities. When these systems broke down, no one in the village repair them since people felt no sense of ownership. Such water supply schemes are also viewed as government property (Bourne, 1984: 15).

Such undesired results are the outcome of improper understanding of what community is and what characteristics it has. The definition of what is meant by community must be carefully examined. Community is not simply collection of people living in certain shared geographical boundaries. However, communities are active and has a lot of dynamics and also not passive. Communities are neither homogeneous nor static entities (Bourne, 1984: 16).

The past experience in the water sector shows that water engineers have brought technical solutions to communities. However, a number of rural water systems failed due to inadequate understanding of community dynamics. Harvey and Reed said: “communities are made up of people with different gender; families/clans; ethnic groups; religious groups; socio-economic groups; profession; and literacy and education levels” (2004: 65).

Similarly, Schouten and Moriarty also show us that the communities are “melting pots of continuous negotiations, discussions and conflicts” (2003: 35). According to them, communities are dynamic and change constantly in their power balances, wealth, size, water availability and so on. Communities are also diversified that consists of rich and poor people with different status, women and men, old and young, powerful and powerless

From these various descriptions of the characteristics of community, we can thus deduce that community though its members are close to each other; do not necessarily have the same levels of power and control, same interest with similar obligations. Women and men have different levels of responsibility and different tasks, different attitudes to the value of water source close to home, have different degree of influence over decisions, and have competing interest in water use for home, cattle and crops. For instance, women and men need water to drink; however, domestic water is almost invariably seen as women’s affairs while water for irrigation is often largely the responsibility of men. Thus, as Young put it: “being men and women are differently located within the socioeconomic structure, they tend to have different set of interests and needs” (1993: 186).

Women and water are linked in several ways, an important linkage being their role in water management. Traditionally, and almost universally, regarded as domestic water managers, women’s role is neither limited nor static. It is known that women also play a substantial role in

food production, although it varies regionally and from country to country. In Africa, women produce over 70% of the food, while in Asia, the figure stands at 60% (Aureli and Brelet, 2004). This makes women the primary water users and managers in agricultural and industrial sectors (Brismar, 1997; van-Wijk, 1985). Over the last few decades, there has been an overwhelming emphasis on enhancing women's involvement in the water sector from mere 'users' (beneficiaries) to 'managers' (actors), with increased choice and voice in the water resources management processes.

2.1.4 Barriers to women's participations in rural water supply and sanitation projects

2.1.4.1 Women's work burden

As discussed in previous section, development planners, especially technical personnel in the water sector do not recognize and consider the triple roles of women and its implication in the participation of rural water supply and sanitation project activities. The total workload of women in rural areas is very high, however, the works done by women are not considered as valuable, while the works done by men is used as a standard and given high value. The traditional belief of men as breadwinner still predominates even though it does not hold in practical value. The workload of women and its implications in any forms, participation can be seen by analyzing their triple roles. Oakley depicts women generally perform "triple roles" (quoted in Biseswar, 2005:9) as follows:

Reproductive: Reproductive works of women are those works which are done for maintenance and sustenance of the family on a day to day basis. Women's reproductive role include among

others things, Child bearing, rearing, and reproduction tasks such as household chores, cooking, washing, cleaning, and etc. Thus includes not only biological reproduction, which is a minor aspect of it, but also the care and maintenance (husband, children and elderly). Women's reproductive work is invisible, because it is seen as natural work.

Productive work: Productive works comprises income generating activities done by both women and men for production with cash or kind and includes both market production with an exchange value and subsistence home production with an actual use value and potential value. In many societies, women have contributed immensely to the survival of their families by engaging in many types and forms of productive work.

Community managing work: Comprises activities undertaken primarily by women at the community level as an extension of their reproductive roles. This is to ensure the provision and maintenance of scarce resources such as water, fuel, health care, and education. It is voluntary unpaid work undertaken in the free time of women. Men who are usually paid either in wages or increases in status often undertake community roles. Women's community roles may vary from caring for sick community members in the form of doing household chores and assisting in service work for the community such as road construction. These all are considered to be performed by women for free since they are assumed to have plenty of energy. When men are engaged in any type of community work, for instance, in water committee, they are paid in the form of prestige. They tend to be moreover involved in positions of direct authority. As asserted by Young, women's reproductive works are considered as “natural or biological and do not involve in the market, thus not valued” (1993: 111).

Adequate understanding of women’s triple roles helps to collect accurate data on women's activities and not to underestimate their productive works. Collection of data on women's

activities will also help the development planners to challenge the existing stereotype on women's work. Wijik has stated, "Careful examination of women's work has a positive outcome to examine women's work load and to design appropriate schedule to ensure their participation in rural water supply projects" (1998: 17). It is also used as an entry point for project preparation and to know who is doing what in certain community and to plan for community participation activities.

2.1.4.2. Women's social status and lower level decision making position

Social norms and values provide the framework within which status and positions are ascribed. Women in most places are generally disadvantageous comparing to men in terms of status and rights. It is also widely recognized that women and men particularly in developing countries do not have equitable division in rights, domestic and public roles. In almost all cultures and economies the "pervasive ideology of male superiority" is prevalent (Young, 1993: 134) that hinder the participation of women in public arena. Such cultures and norms shape women's view of themselves and forced them to accept their inferiority.

Another social factor that hampers the involvement of women in any planned development activities is the control and upper hand of men over political, economic, social resources and distribution of power. For instance, in rural communities women are intimidated to speak in public meetings, especially in the presence of their husbands. The power relations between women and men within the family, community and society level is generally hierarchical and women are usually found at subordinate position than men.

As argued by Young (1993), our identities as man and woman are socially constructed, not fixed biologically. Oakley in Young noted:

“It is not easy to change and violate the masculinity and femininity characteristics of men and women, which are acquired through long term socialization started almost at birth and continue well into adulthood” (1993: 135).

Women are intensively socialized to acquire feminine characteristics such as being attractive, passive, caring, submissive, dependent, shy, quite, innocence and entitle; whereas men are socialized to acquire masculine characteristics like self-reliant, competitive, aggressive, strong body and successful.

Gender relations which are the product of masculine and feminine characteristics are socially constituted relations between women and men. Violations of these relations are sanctioned by norms and values held by members of a given community (Young,1993:138). She further elaborated the gender relations at the community or wider society levels are characterized by order of dominance, i.e. male tends to be the superior than women in society.

2.1.5. The Need to consider women involvement in water supply and sanitation services

Many government and External Support Agency (ESA) strategies emphasize the importance of adopting a demand responsive approach to the delivery of water supply and sanitation services.

The Demand Responsive Approach (DRA) has emerged as an innovative strategy for assisting willingness of communities to improve their water supply services. It recognizes the existing capacity of communities to take responsibility for identifying and solving their water supply and sanitation problems. Under a supply-based approach, services are provided according to the rules and procedures of the ESA or financing agency.

As explained by Wijk (1998), it is after Noordwijk conference that water is recognized as an economic good, anyone who uses it should pay for the services. Yet, water is also a fundamental need and has to remain affordable for everyone. Cognizant of this, Ethiopian Water Resources Management Policy recognizes the establishment of 'social tariff' in order to enable poor communities to cover operation and maintenance costs.

Current thinking in the water sector states that management systems must be user oriented. Among users, one of the largest visible groups can be identified by gender. As it is known needs and demands are not the same thing. Those with the most urgent needs may be into position to make demands. Women frequently find themselves in this situation. Wijk (1998) asserted that men and women in different socio-economic classes and societies have different demands for different water uses and also have different levels of decision making. Within the households, men may want to spend resources on other services than women. With exception of few cultures, men are in a better position to decide on household income. On the other hand, those who have no benefits will have a low demand and will not easily contribute (Wijk, 1998).

Within the household, it is common that mostly male heads of household are consulted in demand assessment and consultations. Without women involvement and participation, only men, especially those with wealth can often influence and decide on the location of water points.

When consulted, the demands and experiences of women play an important role in site selections, quality of source, contribution in cash and labor. Male knowledge and concern differ from those of female. For instance, men may prefer sites where they can control the women. Men and women would differ in location and use of water for livestock versus domestic use and the construction of clothes and washing facilities (Wijk, 1998).

2.1.6. Impact of Inadequate Water Supply and Sanitation on Women Lives

Roark in Bourne writes: “the majority of people living in poverty survive with less than ten liters of water per day per person compared to modern western style consumption of 350 liters per day per person” (1984: 50).

Similarly the majority of rural poor in Ethiopia suffer from inadequate provision of water supply and sanitation services. Rural peoples in many parts of the country do not have tap water. It is also a daily routine task of most of women who are living in rural areas to rise early for fetching water mostly from unsafe sources. Water carrying, a task which falls mainly on the shoulder of rural women and their children is arduous, time consuming and can affect the health of women. For instance, the study conducted in rural Kenya has revealed that carrying water with heavy load coupled with long distance walk can seriously affect the health of pregnant women and their fetus. Women who carry water on their backs had cranial problem (Cutis ,Val : 2011:19)

In addition, accidents which are a result of load carrying are frequent in poor communities; like, broken backs could occur due to slippery that affect the health of women. Women are also exposed to health risks especially when they haul water from traditional sources to contact diseases like malaria; hook worm and other parasites that are spreading in swamp or downstream environments.

2.2. The state of the research

2.2.1 Women and sustainability of rural water supply and sanitation services

Harvey and Reed (2004) in their field research in Ghana, Kenya, South Africa, Uganda and Zambia have identified eight factors that are crucial in achieving the sustainability of rural water supply and sanitation services. These are policy context; institutional arrangements; community and social aspects; technology and the natural environment; spare-part supply; maintenance system; and monitoring. Zelalem Getachew (2005) in his master's thesis paper entitled "Determinants of Sustainable Rural Water Supply System in Ethiopia" has indicated that the sustainability of rural drinking water supply system is determined by community participation and involvement; women's participation and involvement; cost sharing and cost recovery; community awareness raising and education; water resources and base-line survey; repair and maintenance service; water users management body and structure; technology; and institutional support.

2.2.2 The Participation of women in rural water supply and sanitation projects

Current practices:

A number of studies conducted in rural villages have tried to identify the relationship of women issues with RWSS. For example the research conducted in Ha Tinh and Nam Dinh provinces of Vietnam reveals that women had different perceptions and interest towards improved water supply provisions. They were found to believe that they stand to benefit from improved water supply because it gives them opportunities for washing and showering at any time, whereas the men in the villages could take a bath in the river after the day's work in the field. Because of their

need for privacy, women had to wait until dusk before they could wash and shower. The new water facilities helped women in the villages to improve their personal hygiene (Berghef Charlotte, 2002). In Ethiopia also women and men need clean water for daily life, but for women the need is more urgent and differs than men.

Another finding in Ha Tinh and Nam Dinh rural communities (Berghef Charlotte, 2002), men normally made the final decisions related to water supply and sanitation. Due to traditional customs men made major decisions related to the location of tap-stands, selection of caretakers, maintenance, and skilled workers. The study also indicates that the participation of women in village level community meetings were very low due to women's workload in the home and women's own wrong perception that men had better knowledge on the topics discussed on the meetings.

One of the most conclusive findings of this study is in Nam Dinh and Ha Tinh , Community Water supply and sanitation steering committees consisted mainly of men. The selection criteria used for community steering committee, i.e. having a leadership position within the community made it difficult to have a gender-balanced representation on the committees. Since women have a very limited access to community's leadership positions, they are unlikely represented in community committees. This situation has similarities among rural communities of Oromia Region. For instance, the study made by Women's Affairs Department (WAD) of MOWR reveals similar information. Women's representation in water committee decision-making position was so low. The literacy level of women WATSAN committee members was generally lower than that of their male counter parts. In certain cases women, especially wives had a tendency to retreat from WATSAN committee membership due to cultural barriers. Women WATSAN

committee member played only passive role being hindered by their husbands from participation in training held far from their residential areas.

However, some puzzles of structural factors were not assessed and analyzed. For instance, the role of women in hygiene and education was not investigated. In addition trends and practices at the institutional levels were not covered, and the attitudes and perceptions of actors were not assessed.

2.2.3 Token involvement of women in community water supply and sanitation projects:

Now a day, there is a tendency among agencies engaged in installing water supplies in rural areas to claim that the drinking water projects can deliver sustainable benefits if it considers gender issues. The study conducted in Nepal (Regmi S.C. BN Fawcett, 2001) however shows different results. This research report has identified that only men were involved during the various project activities of RWSS. Women were excluded because the agencies wrongly assumed that women did not have time for public participation and the project works would not be completed on time if women were involved. The study has also found that in Hile village of east Nepal, the two women at the local water committee had not known for months that they had been selected by the local men to serve as Water supply and sanitation committee. Because the male committee members had been instructed by the project officials to include two women in the committee, they had put the women's name forward as a token, in order to activate the implementation of the water project.

Improved water supply services do not necessarily bring positive impact on women's lives. Despite the claim of some of the projects to improve the lives of women by reducing their work

burden, it was found by this research that women's workload had increased due to greater use of water by family members in a majority of households. The research findings show that after water was supplied nearer their homes, they fetched water 10-15 times due to the greater use of water by family members (200-300) liters of water a day. Such kinds of different experiences were tested and confirmed by this research work.

The other important finding of the study was the distorted perception of project staffs towards women's ability in operation & maintenance activities. Men were considered as more capable than women in doing labor-intensive work and more suited than women to technical tasks. Men were recruited as paid workers and women mainly as volunteers. It is also expected that in rural areas of Oromia National Regional State, Ethiopia, men are widely accepted by the community and project implementers as effective village level operation & maintenance workers than women.

Similar study conducted by **NEK** International Consultancy in 2000 in Oromia and South , Nations, Nationalities and peoples' region indicates the literacy level of women WATSAN committee members was generally lower than male and this affected women's involvement in WATSAN committee. In certain cases, married women had a tendency to retreat from WATSAN committee membership due to cultural barriers and work load. Women WATSAN committee members were not allowed by their husbands to participate in training held far from their residential areas. Due to these reasons, women members of WATSAN committee played passive roles.

An attempt was made by NEK to identify the above-mentioned constraints regarding women's participation in the management of rural water supply services; however, the reasons behind such obstacles were left unanalyzed.

2.3 A Conceptual framework

There are two widely known development approaches that aim to improve the living conditions of women. The first one is women in development (WID) that was initially used by the Women's Committee of the Washington D.C and articulated by American liberal feminists who advocated legal and administrative changes to ensure the integration of women into economic systems (Rathgeber, 1990). However, this approach never challenged gender hierarchies and has the following limitations. As asserted by Rathgeber (1990) and Young (1993), WID focused exclusively on the production aspects of women's work. It does not challenge the basic social relations of gender. WID approach often treats women as a homogenous group. Class, race, ethnicity and intra household gender differences are not taken into account.

Development activities were planned only for women; whereas men were seldom involved. This has created a misconception and resistance among men of why specific group was the only beneficiary of projects. Through this approach as noted by Parker "women's disadvantaged position was seen mainly as a consequence of the exclusion of women from development activities" (cited in Biseswar 2005: 14). This approach concentrates on the development of income generating activities for women without taking into account their time burdens.

Gender and Development (GAD) approach on the other hand emerged in the 1980 as an alternative to the earlier WID focus. As asserted by Rathgeber (1990), it finds its theoretical roots in socialist feminism and has bridged the gap left by the modernization theorists by linking the relations of production and taking into account all aspects of women's lives. She further noted that socialist feminists have identified the social constructions, production and reproduction as the basis of women's oppression and have focused attention on the social

relations of gender, questioning the validity of roles that have been ascribed to both women and men in different societies.

Young (1993) has identified some of the key aspects of the GAD approach. GAD approach according to her, “starts from a holistic perspective, looking at the totality of social organization, economic and political life in order to understand the shaping of particular aspects of society” (1993: 1340). GAD is not concerned with women *per se* but with the social construction of gender, and the assignment of specific roles, responsibility and expectations to women and men. In contrast to the emphasis on exclusively female solidarity that is highly prized by radical feminists, the GAD approach welcomes the potential contributions of men who share a concern for issues of equity and social justice. The GAD approach does not focus singularly on productive or reproductive aspects of women’s (and men’s) lives to the exclusion of the other. This conceptual framework provides a set of analytical tools useful for describing and analyzing women’s roles both in home, outside the household, and rejects the public/private dichotomy that commonly has been used as a mechanism of undervalue family and household maintenance of reproductive work performed by women. This conceptual framework sees women as agents of change rather than as passive recipients of development assistance. It recognizes the importance of women and men solidarities, but it argues that the ideology of patriarchy operates to oppress women.

The GAD approach goes further than WID and provides a framework for investigating and analyzing the underlying assumptions of current social, economic and political (structural factors). It does not lead only to the design of intervention and affirmative action strategies to ensure that women are better integrated into ongoing development effort. It leads inevitably to a fundamental re-examination of social structures and institutional transformation. The GAD

approach does not easily lend itself to integration of women into ongoing development strategies and programs. It demands a degree of commitment to structural change and power shifts.

Therefore, the conceptual framework of GAD is central to this work since the subject of researcher's study is the role of women in sustainable rural water supply and sanitation projects.

This conceptual framework well suited to guiding investigations of the research particularly in the spheres of women's roles and responsibilities in water supply and sanitation projects. The structural factors that determine hierarchies of women's positions in water supply and sanitation management committees; the difference between women and men's interests in water supply and sanitation design structures; and the enabling environments at the institutional levels that promote the integration of gender issues in activities and mandate areas are analyzed using this conceptual framework.

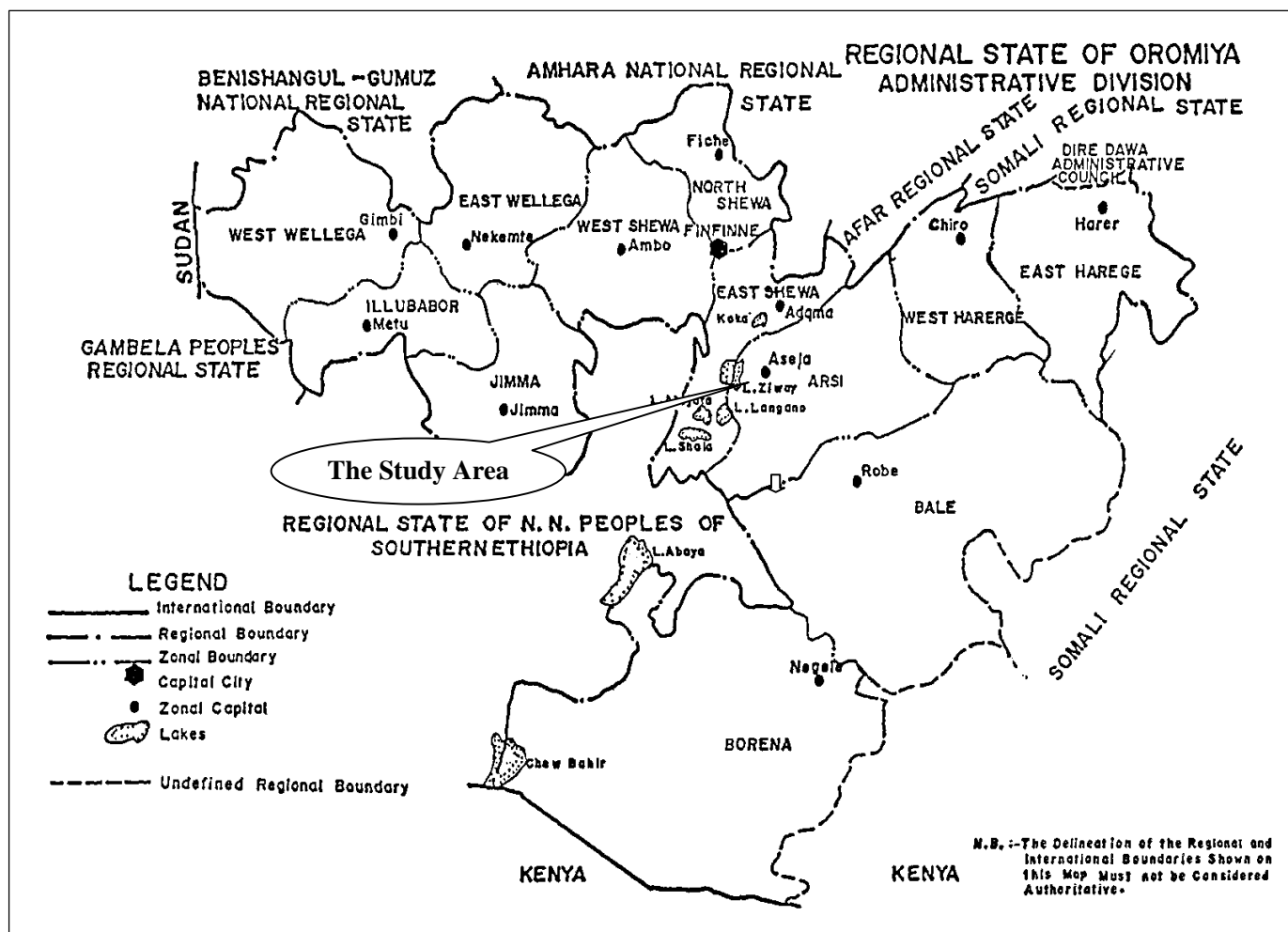
CHAPTER THREE

3. METHODOLOGY

3.1. Background of the study area

3.1.1. Location and Administrative Division

Adami-Tullu Jiddo Kombolcha is one of the 10 districts in East Shoa Zone of Oromia National Regional State. Zeway, the capital of the district is located at a distance of 160 kilo meters away from Addis Ababa in the southern direction. The district is found along the main high way that radiate from Addis Ababa to Moyale Kenya. The relative boundary of the district indicate that the district is bounded in the east by Arsi Zone, in the south by West Arsi-zone, in the north by Dugda district and in the west by Southern Nation and Nationalities People's Regional State (SNNPRS). The study area is found in the Central part of great Ethiopian Rift Valley that crosses the country from north to south. Regarding the total land area, the district covers 140,324.66 kilometers square, where part of the district is covered by medium sized lakes called Ziway, Abijata, and Langano. According to current administrative division, the district is sub-divided into 43 rural kebeles and 4 urban units namely Ziway , Bulbula, Tullu and Jiddo. Except Jiddo, which is located away from the major road, the rest are found along the main asphalt road and serving local community as market center on weekly bases.



3.1.2. Physical Condition

The ecological conditions of the district, 90% lies in the categories of lowland and the remaining 10% fall under the division of midland. In terms of elevation above sea level, the district is found at an altitude range of 1600-1800 meters, which indicates that it is extremely low land and lies in the Great Rift Valley of Ethiopia. With regards to climatic condition, the district receives 600-800 mm of rain fall annually which exhibits that it is one of moisture stressed district where agricultural practice mainly crop production is challenged. Regarding the nature of rain fall in the area, the district receives a bi-modal rainfall type i.e. the shorter rainy season locally known as “Arfasa” (April to May) while the longer rainy season locally called “Ganna¹” (June and September). However, recent years' experiences shown that both rains are increasingly unreliable (untimely on-set and early cessation for successful crop harvest). The annual evapo-transpiration rate is 2000 mm making the moisture index of the area is 3.3 According to the information obtained from woreda Agricultural and rural development office; the average minimum and maximum daily temperature of the district is 12.7^oc and 32.2^oc respectively. Information obtained from district Land and Environmental Protection Office, reveals that the area was once under dense forest cover, which is almost all destroyed except some scattered Acacia trees due to continuous clearing that have been increasing the pace of soil erosion in the area. Among the complex mosaics of natural tree species, there are only few remnants as *Acacia albida*, *Acacia totilis*, *Ficus vasta*, *Mytenus senegalensis*. These tree species are highly scattered and usually

¹ **Arfasa** rains are short rains, also called Belg rains in Amharic. **Ganna** rains are long rains, also called Meher rains in Amharic

found on the side of farmland and river basin. Deforestation (mainly owing to charcoal making and selling), improper cultivation, and overgrazing have all stripped off the soil base.

3.1.3. Livelihoods of the Population

Few decades ago, the majorities of the population of the district were pastoralist and were solely depending on livestock rearing as a means of livelihood. However, the productivity of those livestock has been poor due to inadequate management and poor breeds. In the area, traditionally, people prefer many cattle which signify quantity over quality. Even, crop production is a recent phenomenon in the area. Accordingly, agriculture that involves mainly crop production is main stay of the economy for majority of the population while livestock husbandry is the next main means of livelihood. The major crops produced are maize (49%), haricot bean (29.38%), wheat (12.6%) and teff (8.9%). The production and size of livestock is an indicator of the way of life. In addition, off - farm activities like petty trade, fishing, daily wages and Commercial farms are supplementary means of income generation for few of the community members. However, both crop and livestock production and productivity have been found to be extremely low mainly because of the low genetic potential, backward agricultural practices and moisture stress. The pastoralist life style is eventually changing to sedentary and agro pastoral life style due to recurrent drought that depleted the livestock asset, population pressure and shrinkage of the grazing land. Currently, according to the data obtained from district Agriculture and Rural Development Office, about 80% of the population is practicing mixed agriculture while the remaining 20% are still leading pastoralist way of life. Due to the community's heavy reliance on rain fed agriculture within the environment of variable and unreliable rainfall pattern,

and lack of livelihoods diversification activities are the main cause for their vulnerability to successive food shortage.

According to seasonal food availability analysis obtained from district Agriculture and Rural development Office, January is the month when food is relatively available in the market while June- September is the period at which food is most scarce in the area. During this period, many people resort to tree cutting for charcoal making and fire wood collection as one of the survival strategies. Food availability tends to decline from February towards June-September. In addition to its low rainfall and high temperature, the area is characterized by recurrent rainfall shortage and or absence that have made drought a cyclical phenomenon. As a result, the rural life during the last decades has been marked by repeated crop failure and hence household food insecurity. The situation has, among other things, resulted in the ever-increasing rate of adoption of fuel wood and charcoal-based business as a forefront means of income for food purchase, thereby causing massive deforestation to the area. In response to the recurrent food insecurity condition in the area that affect most of the population of the district, the government is providing relief food and engaging affected households in the Productive Safety-Net Program where people undertake different community works and earn money at the end of the month. With this regard, there are various government initiatives to support the food un secured households such as devising alternative income generation schemes mainly for women and youth groups.

3.1.4. Population and Basic Social Services

Based on the 2007 National population and Housing Census, the total population of the district is 153,846 (76,172 are female and the remaining 77,674 are male). Out of the total population

131, 320 are living in rural area and the remaining 22,526 are urban residents living in four small towns. The average family size in the rural areas of the district is about 5.18 and 7.42 in the urban as compared to 6 people/family of the project area per this survey. The average land holding size is about 1.5 hectare/household, crop and livestock production the main occupation the population

In terms of religious distribution, the populations of the district are the followers of Islam and Christian that account for 80 and 20 percent respectively. Oromo is the most predominant ethnic group in the study area, followed by other nationalities which include Amhara, Walaita, Gamo, Guraghe and Hadiya communities. The societal composition of the sampled kebeles could be understood as an average of the district level composition.

According to the information collected from district Education Office, there are 67 primary schools and 1 secondary school serving 37,633 (17,242 female and 20,391 male) students in the 2011/2012 academic year. On the other hand, the district has 3 health institutions (3 health center, and 38 health post) that provide service to the entire district population.

With regard to infrastructural development, the district is better served by all weather asphalted and rural gravel road that connects villages to the urban units found in the district. In addition, the district is also well serviced by telecommunication network where 38 rural kebeles and five urban units do have rural telecommunication service while four (4) urban units and five (5) rural kebeles are getting 24 hours electricity service.

Regarding the gender relations, women are the most disadvantaged community groups having limited access to resources control as well as decision-making power despite their restless involvement in almost every activity of the family. The economic status of women at the household level is at lower stage due to limited access and control over resources and decision

making power both at household and public level. This implies that women are economically subordinate to men. As a matter of fact, they have very limited or no access to income generating activities that resulted in dependence on men. In addition, harmful traditional practices like abduction (rarely), home based harassment; polygamy, female genital mutilation in rural areas, incidence of rape, widow inheritance; exchange marriage and divorce due to polygamy are widely practiced in the woreda. These Harmful traditional practices (HTPs) are challenging the life of women mainly through physical and sexual abuse and punishment or culturally 'justified' assaults. Other than these, there are also long time socio cultural practices and perceptions that degrade women's societal role. In the society, women are mainly responsible for domestic works, child bearing, cooking and providing food for households, participate in farming and provide domestic labor. Women in the district do not have access to the means of production on an equal basis with men, no equal access to land, labor, and credit, training and marketing facilities. On the other hand, the literacy level among adult women is one of the highest in the district particularly in the rural kebeles. There is no adult functional literacy program in the target area that supports women to actively involved in socio-economic development process that affect their life. This particularly limits women's participation in the decision making process and efforts to control over resources. On the other hand, the local community awareness on gender equity and equality is very low where the majority of the people do not have enough knowledge and understanding about women right issues.

3.1.5. Rural community organizations

Rural community organizations are playing a significant role in maintaining social coexistence, harmony, security and supporting the weaker members. In explaining the worthiness of rural

organization, Yigremew (1999) notes that, rural organizations play important in food production, sustainable use of natural resources, by facilitating resource mobilization information exchange, service provision and promoting self and mutual social support at times of problems (Yigremew,1999:297)

Though disparities could be observed among communities, rural organizations in Ethiopia are categorized in indigenous/community based organizations, peasant associations and farmers' cooperatives (Yigremew, 1999). In the study area, too, these rural organizations are operational. More specifically, community based organization such as "Afosha" established usually by men and women separately for social support system. Other major community organization in the area include, women association, youth associations, women self help groups, women saving and credit groups, small scale irrigation cooperatives, various sand producer cooperative groups, vegetable and horticulture producer cooperatives and unions

3.2. Methodology

This research has mainly relied on qualitative methods (focus group discussion, observation, and in-depth interview) in order to bring out women's daily experience in rural water supply and sanitation activities, to understand the role of women in sustaining rural water supply and sanitation projects, to explore women's perception regarding the structural design of water supply and sanitation activities, and to examine the structural factors that perpetuate inequalities in management of Water supply and sanitation projects. In addition, quantitative research method, namely, Household small-scale survey was employed in order to generate data on the demographic characteristics, water consumption level, quantity and quality of water, water

coverage and distance to water points, and household sanitary conditions. In order to attain the objectives of this study, both secondary and primary data were collected and analyzed.

3.2.1. Secondary Data

In order to have background information about Adami-Tullu Jiddo Kombolcha woreda (related to the location, altitude, population, economy, etc) relevant reports, studies conducted by NGOs, GOs and other archival materials were reviewed. In the course of this study, key documents and literatures were identified and reviewed. An assessment of existing strategy, guidelines, principles, WATSAN committee by-laws and verbals were reviewed.

Relevant documents that were reviewed and made use of in order to understand the role of women in RWSS services include reports by Rural Water Supply and Environment Support Program (RWSSP) entitled Socio-economic Survey of Adami Tulu Jido Kombolcha woreda (1995), Organization for Rehabilitation and Development of Oromia Region (ORDO) entitled "Rural Household Socio-economic Survey conducted by Water Aid Ethiopia (2004) and study on Rural Water Supply Inventory and Database Management conducted by Oromia Region Water, Energy and Mines Resources Development Bureau (2005) are major ones. Woreda level Gender roles analysis study carried out by NEK International consultancy (2000) and Oromia Region Women's Affairs Office (1997) were also reviewed.

The study conducted by Oromia National Regional State Women Affairs Office (1997) has provided some information about the structural factors exacerbating inequality between women and men. Since there is limited literature on women and rural water supply and sanitation projects, the available related studies about the role of women were assessed in the literature review. Most importantly, the works of Bourne (1994), Schouten and Moriarty (2003), Harvey

and Reed (2004), and Wijik (1998) provided the researcher a comprehensive picture about the role of women on sustainability of RWSS projects. Wijik's (1998) analysis concerning 'Gender Issues in Water Resources Management' that describes the role of women and men in the sector is central to the analysis of the research findings.

3.2.2 Primary data

The methods that were employed for the collection of primary data were survey research, field research, and focus group discussions.

3.2.2.1. Site selection and data collection procedures

Adami-Tullu Jiddo Kombolcha wereda is selected by the researcher due to the following outlined reasons :

- The study is intended to examine the role of women in sustainable of RWSS projects and to assess the impact of structural factors that obscure the equal participation of women and men in the management of RWSS services. Therefore, the researcher found it relevant to work in the project areas of NGOs (WAE and RWSSEP) that operate on provision of Water supply and Sanitation Services in the selected study areas to address the research objectives of the thesis;
- The researcher's familiarity with the culture and language of the study area and the wereda also made entry easy.

In the study area, Water Supply and Sanitation Services have been financed and constructed both by government and Non Governmental organizations. Among Nongovernmental organizations, Water Aid Ethiopia and Organization for Rehabilitation and Development of Oromia National

Regional State are major ones. This particular study focuses on Water Supply Services financed and constructed by WAE.

Water Aid Ethiopia (WAE) operates in six (6) kebeles of Adami-Tullu Jiddo Kombolcha woreda namely, Andola, Kormet, Gabiba, Eddo, Arba, and Bulbula. In these six (6) kebeles, there are 16 hand dug wells and eight (8) springs. These water supply systems were constructed by WAE and Organization for Rehabilitation and Development in Oromia (ORDO). On the other hand, there are 340 rural water supply services (15 springs and 325 hand pumps) constructed by RWSSEP.

In order to identify the exact research sites from the woreda, the researcher used a multistage sampling design. Four kebeles where Water Aid Ethiopia operates namely Andola, Kormet Gabiba, and Eddo have been identified for the study. According to woreda Agriculture and rural development office, the total population of these four kebeles is 16,712 (8524 male, 8188 female). A total population of 12,230 (7167 male and 5063 female) uses the above mentioned Sixteen (16) hand dug wells and eight (8) springs constructed by Organization for Rehabilitation and Development in Oromia (ORDO) and WAE in these four kebeles. The study sites have been purposefully selected in three stages at three levels (woreda, kebele, and sub-kebele) by taking into account three criteria, namely presence and life span of rural water supply and sanitation services; types of water supply schemes (hand pump and spring); and accessibility of the kebeles (not too far and not too close to town and main road). On the basis of these criteria, Elka zone from Andola kebele, Kamo zone from Kormet kebele , Suro zone from Gabiba kebele and Galo zone from Eddo kebele of the woreda have been selected for the study. In above cases using multistage sampling procedure and the above-described criteria four zones have been identified for the study. With regard to data collection procedures, the researcher used community leaders, local government officials, and NGO representatives to understand the settings. Then, the

researcher in collaboration with one experienced female research assistant accomplished the data collection process. The assistants were given orientation on how to proceed with the study. Additional two enumerators were employed and training was given in order to fill out the questionnaire of the household survey. All research participants were informed about the objective and implication of the study, being asked for their willingness to participate in the research. Interview and FGDs guides were translated and prepared into the local language to make communication effective between the researcher and the participants. Observations on the water supply schemes and informal discussions with beneficiaries were done before the actual interviews to build smooth relation. An appointment for date and time of interview was made by the choices of the participants themselves. This was done after conducting the observation. Women and men focus group participants were interviewed in separate places. The researcher has chosen locations that were comfortable and easily accessible for the participants.

3.2.2.2. Survey Research

Small-scale surveys were undertaken in the woreda in order to collect quantitative information on such matters as households socio-economic characteristics, amount of water uses from the improved water sources, quality and quantity of the water provision, distance and location of water points, appropriateness of technology, the participation levels of women in various phases of the project from the inception to the implementation and monitoring and evaluation of RWSS projects.

(A) Sampling of the Respondent

After the selection of the zones, the user communities of the various water supply schemes were identified and their lists secured from the documents of water supply and sanitation committees.

Then the samples of respondents were drawn from the beneficiary household following a stratified sampling procedure. Marital statuses of the household head have been used as the stratifying factor, and systematic sampling was used as the final method of selecting sample population in the following manner.

First, the lists of married households from each zone and users of particular water supply system were gathered from the documents of water supply and sanitation committee.

After obtaining the lists of married households from each zone, the list was disaggregated by sex of households leading to one list for married females and another for married males in each zone respectively. The sampling intervals were obtained by dividing the total number of married households by the sample size of each zone. Then, having established the starting number at

Random 15 married women and 10 married men respondents were selected from the lists for inclusion into the sample beginning with the starting number and following the sampling interval.

The following Table presents the sampled survey respondents.

Table 1: Distribution of Respondents by Woreda, Kebele and Zone

Woreda	Kebeles		Number of Sampled respondents		Total
			Women	Men	
<i>Adami-Tullu</i>	Andola	Elka	15	10	25
<i>Jiddo</i>	Kormet	Kamo	15	10	25
<i>Kombolcha woreda</i>	Gabiba	Suro	15	10	25
	Eddo	Galo	15	10	25
	Total		60	40	100

As indicated in the above table, the total sample size is 100 from four kebeles that is 25 respondents (15 married women and 10 married men respectively) from each zone. In order to bring women's voices and to address the objectives of this research, the quantitative aspect of the study was made to focus on female respondents. In line with this, 60% of the sample was made to be married women.

(B) The Survey Instrument

A structured questionnaire for the purpose of collecting data from sampled households was developed and tested prior to the survey. Most of the questions were close-ended and therefore pre-coded (see Annexes).

3.2.2.3. Field research method

The researcher employed observation and in-depth interview for field research in order to enrich and maintain the quality of data and ensure the accuracy of the research findings in the following manner.

(A) Observation

This method was used to gather qualitative data on for instance, structural design of the water points (in order to understand their user friendliness); reliability of water use; level of quality of services; adequacy and level of operation time; operators of water points, household sanitary conditions; responsibility of water fetching; women and men social relationships, interaction levels of women and men; fencing and drainage of water points; and other information. Through unobtrusive observation, data were collected on budget allocated for women empowerment related activities, report formatting, monitoring and evaluation indicators at the project office

level and various documents of water committees etc. Observation checklists were developed and used to generate information on the above mentioned points.

(B) In-Depth Interview

Extensive conversations and discussion was made with eight key informants (four women and four men) in order to explore their insights, views, and perceptions towards the structural factors that are perpetuating inequalities between women and men in water supply and sanitation management committees (WATSANcos), the participation levels of women in RWSS project cycles, and on the role of women in ensuring the sustainability of the water services. The criteria for the selection of in-depth interview were participants' knowledge of the area, and length of stay in the area and being user of water supply systems in the area. Key informants who are observant, reflective, and knowledgeable of the research areas were also selected by checking their roles and status in the community.

3.2.2.4. Focus group discussion

Focus group discussions (FGDs) were also conducted with selected community members. The participants of FGDs were women and men WATSAN committee members and men and women community members. Eight separate FGDs with women and men water committee members from four water points and additional eight FGDs with ordinary community members were undertaken in the four zones selected for the survey. The rationale for the FGDs was to gain valuable insights into people's attitudes, understandings and perceptions regarding the role of women in sustainability of water supply and sanitation services in their community and to gain a variety of views and perception that were stimulated through interaction; group discussions and reflections. An interview guide was developed to direct the gathering of information from the

point of view of role women in water supply and sanitation projects. Each focus groups had six (6) to eight (8) members. The members were homogenous by sex and their social status. The discussion with community members focused on ten questions. The FGDs were accompanied by supplementary probing questions. Men’s focus group discussions were facilitated by the researcher; whereas women's FGDs were conducted by woman facilitator, while the researcher was taking notes. As a result, empowering the participants through critical dialogue and reciprocally educative processes was made possible. In addition, by taking each FGD as an entity, the information generated from each FGD were analyzed in contrasting and comparative manner. In sum, the primary data collection through methodological triangulation employed is summarized by the following Table.

Table 2: Triangulated Data Sources of the respondents

Unit of Analysis	Data source	Method of Data Collection & Analysis
Project Level	1. Relevant Government offices	1. Observation & document review
	2. WAE project office	2. Observation & Document review
	3. RWSEP project office	3. Observation & Document review
	4. Officials and Project Staffs	4. Informants in depth interview
Community Level	1. Women and Men community members	1. Focus group discussion
	2 Key Informants	2. In-depth interview
	3. WATSAN Committee members	3. Observation and focus group discussion
	4. Water Sources and water supply Schemes	4. Observation
Household Level	1.. Sampled households 2. Key informants	1. Survey and observation 2. In-depth interviews

Source: Based on “Methods of Social Research, Module 4, Triangulated Data Sources and Data Analysis”,

Yeraswork Admassie, Department of Sociology and Social Anthropology.A.A.U

3.3. Data analysis

The qualitative data collection and analysis focused on understanding women within their social context and using their own language based on feminist research guiding principles and standpoint. For effective data management, the researcher used multiple analyses from the selection of the problem to final stages of writing. The approach used for data management and methods of analysis include the following techniques:

1. Data interpretations were made on the basis of feminist research guiding principles and by using Gender and Development as a conceptual framework of analysis;
2. Triangulating information was used in data analysis in order to reach at generalizations by overcoming the limitations of one method through the strength of another;
3. Information from various sources/methods was used to check and enrich one another;
4. Information gathered through the observations and in-depth interviews making up the qualitative research were analyzed mainly in the course of the field work. However, the qualitative material were further organized and processed, and interpreted in conjunction with information acquired through the other methods;
5. Data that were collected from the sampled households through the survey questionnaire were processed (the responses for the open-ended questions being post-coded) and entered into the computer. They were thus analyzed with the help of Statistical Program for Social Sciences (SPSS) using lower level quantitative analysis, namely, univariate analysis, tables, and percentages.

3.4. Limitations of the study

- Due to financial and time constraints the researcher was not able to see the participation of women and men in government financed water supply projects.
- Although the researcher had planned to include motorized schemes in the research setting, It was not possible to do that due to absence of such schemes in selected zones of the woreda ;
- There was no adequate research materials conducted on women and water in Ethiopian case. For instance, the existing research papers found in Ministry of Water Resources mentioned general statements on gender usually no more than a paragraph and are often recycled from one document to another and much emphasis placed to technical issues.

CHAPTER FOUR

4. PRESENTATION AND ANALYSIS OF FINDINGS OF THE STUDY

4.1. Demographic characteristics of the surveyed households

In this part, demographic characteristics of surveyed households will be presented. The variables that are relevant for the study such as family size, educational status, and number of children under five years and elderly above the age of sixty are analyzed. The following table presents the demographic characteristics of the respondent households.

Table 3: Population Size and Education Profile of Respondents by zone

Demographic Characteristics	Zone				Total
	Elka	Kamo	Suro	Galo	
Sex of Household Members					
Female	83 (47.2%)	50(44.6%)	81 (47.6%)	56 (45.5%)	270 (46.4%)
Male	93 (52.8%)	62(55.4%)	89 (52.4%)	67 (54.5%)	311(53.5%)
Total	176 (100%)	112(100%)	170 (100%)	123 (100%)	581 (100%)
Age					
Female children 5-15 years	31 (17.6%)	15 (13.4)	38 (23.4%)	29 (23.6%)	113 (19.4%)
Male children 5-15 years	29 (16.4%)	15(13.4%)	34 (20.0)	32 (26.0%)	110 (19.0%)
Total	60 (34.0%)	30(26.8%)	72 (42.4)	61 (49.6%)	223 (38.4%)
Children under 5 years	20 (11.4%)	11(10.0%)	29 (17.1)	46 (37.4%)	106 (18.2%)
HH members above the age of 65 years	9 (5.1%)	4 (3.6%)	4 (3.6%)	5 (4.1%)	24 (4.1%)
Education					
Literate members of HH	75 (42.6%)	37(33.0%)	60 (35.3%)	44 (35.8%)	216 (37.2%)
Literate male members of household	47 (62.7%)	20 (54.1%)	37 (61.7%)	31 (70.5%)	135 (62.5%)
Literate female members of household	28 (37.3%)	17 (45.9%)	23 (38.3%)	13 (29.5%)	81 (37.5%)
Illiterate members of HH	101(57.4%)	75 (66.9%)	110(64.7%)	79 (64.2%)	365 (62.8%)

As depicted by the above table, from the total population of surveyed households, 46.4% were female. Children under five years were 18.2% and elderly constituted 4.1%. This has an implication on the reproductive roles and workloads of women in the households.

Women in addition to their onerous tasks, they are required to take care of their children who are under five years of age. In the research, girls who are found at the age of 5-15 support their mothers and boys of the same age herd cattle and participate in agricultural activities.

Women and girls need to spend a considerable amount of their time in taking care of children and elderly and in fulfilling the water consumption of the household members. The above table also shows that the majority of the respondents (62.8%) were illiterate that might have an implication on the sanitary habits of the surveyed households. This is due to the fact that inadequate use of latrine; unsafe water storage and use in the household; less personal hygiene practice; and poor environmental sanitation are commonly found among uneducated communities. Rural communities for various factors prefer to educate boys to girls. Girls in many parts of rural communities are expected to share the domestic tasks of their mothers. Educational status of surveyed households shows that out of 216 literate members of the household, those women that were literate found to be only 81; whereas men constituted 62.5%. The outcome of this survey shows the average household family size was 5.8 people per household that is fairly similar with the findings of CSA (2010) census result.

4.2. The predicament of women before implementation of current water supply projects

Before the construction of the existing water supply and sanitation services, **Elka, Kamo, Suro** and **Galo** women were collecting water for drinking, washing and bathing from traditional sources, unprotected springs, ponds, hand-dug shallow wells and rivers. However, most of these traditional water sources were not reliable during dry season and far away from their dwellings. On the other hand water could be found closer to family compound during the wet season.

Due to high temperature and high evaporation rate shortly after the rainy season, surface water dries quite rapidly. It was during this time women particularly in **Elka** and **Kamo** zone who have no spring source suffered a lot. For instance, women focus group participants in **Elka** zone remembered their difficult situation and explained that they used to fetch water from a distant river that took almost two hours for one way and suffered not only walking long distance by carrying Jeri cans, but many dangerous and frightening situations. Similar stories were heard in almost all communities. According to a 65 year old woman member of the Gabiba community, before the implementation of the current water project, the surrounding women were used to fetch water from Tulu River, five Kilometer away from their home.

Similarly, women focus group participants in Galo zone, Eddo kebele, explained that women used to spend half day to collect water from the surrounding undeveloped spring sources. They also added that in each day it is not only people, who need water, so do the cows, goats, sheep and chickens. All these animals need to drink water at some point during a day. It was therefore women's responsibility to provide all these water needs by hauling it from any available sources.

As mentioned by focus group discussion participants at Elka zone, pregnant women had a hard time to lift and carry their jericans that contain an average of 20 liters.

Men also appreciate the predicament of women due to inadequate water supply provision. Men focus group members from Elka zone mentioned that when women fetched water from undeveloped springs, they were stung by leeches found in swampy and blocked water and their family health was seriously threatened due to water born diseases. They also added that, from inadequate water supply, it was not only women suffered from walking long distances by carrying heavy loads on their backs, but also domestic animals. For instance, cows used to travel up to 5km to get water from the river and by the time they reach home they again become thirsted and did not give enough milk. The rural dwellers in the project areas had suffered not only from lack of safe water, but also from inadequate sanitation facilities. In a discussion about possible contamination of spring water which was main sources for domestic use, women in Kamo zone pointed out that drinking water is always collected early in the morning, before pollution activities, such as bathing and washing clothes took place.

4.3. Water supply and sanitation projects in Elka, Kamo, Suro and Galo zones

Current Situation

Water supply schemes in Galo and Elka zones are spring sources distributed by gravity. Elka spring was constructed in 2006; whereas that of Galo in 2005 by ORDA/WAE and RWSEP respectively. The water supply systems from both spring sources have spring boxes, collection chamber, reservoirs, junction boxes and pipes; whereas the water facilities include water points with four faucets, three washing basins, cattle trough and two separate rooms of public showers for women and men. The reservoirs ranging from 150 to 200 meter cube are rectangular in shape

and have been constructed from reinforced concrete structures. Elka's reservoir has a capacity to reserve 4500 liters of water. On the other hand, Suro and Kamo zone are using hand dug well water sources that are fitted with hand pump technology type (Indian Mark II hand pump). There are 2,168 beneficiaries from these water supply schemes. The water schemes at Elka and Suro also serve the town population and the surrounding school communities during dry season. Regarding livestock watering about 1,239 cattle were provided with water in Galo and Elka zones. In Suro and Kamo zones the hand pump schemes will not serve livestock.

4.4. The role of women in sustainable rural water supply and sanitation services

4.4.1. The Contribution of Women in the Course of the Various Water Supply and Sanitation Projects

Current approach in drinking water supply and sanitation emphasizes that community participation at planning stages of the project is important. The reason led to this approach arises from previous years experience in the water sector that shows that for projects to be useful and sustainable; users must perceive its benefits. Women and men should work together, choose and plan, as they are able, what type and level of service they need (IRC 2000: 9).

Women and men informants during the focus group discussions were asked how their WSS services were implemented and the levels of women and men participation in the course of the various water supply and sanitation project cycles. The discussions have brought the following information. Interviewed women and men group in Galo and Suro zones explained that the RWSSEP project coordinator of the Woreda Water Desk established their WSS projects;

whereas the project officer of ORDA/WAE mentioned that WSS projects in Elka and Qamo Zone were established by the project officer of ORDA/WAE. Informants mentioned these individuals because they were their first contact persons during sensitization and organization of the target population. One of the female WATSANco members from Suro Zone added that before the construction of their WSS project, the community has elected water committee members in order to organize cash, local materials and labor contributions from the beneficiaries.

Explaining how their project was initiated, one of the officials in Andola Kebele administration office has explained that the need for improved water source was first discussed in the community. The leaders of the communities through discussions and consensus of the entire villagers have decided that coordinated efforts were necessary.

Leaders of the kebele (mainly men) approached ORDA/WAE office to discuss on water problems. During this discussion, only men leaders of the village attended the meeting with the project offices. The leaders of the village provided information concerning water needs of the community. In addition to this financial, labor, and local materials contributions by the community was discussed.

Women focus group informants in Galo and Elka Zones were asked the participation of women during the project preparation and they explained that they have participated at the time of project planning by providing baseline information such as their day to day practice on water fetching, the time they spent for hauling water from unsafe sources, the amount of water used at households, and on the sanitation and hygiene practice of family members. On the other hand, men were involved in actual baseline data collection and organization of the community for meetings and discussions with the project staffs. They also added that women and men have

participated during the assessment of villagers' enthusiasm for projects and willingness to pay for it.

For the question who was first contacted by the project staffs during the project initiation, Elka and Suro Zone women group informants explained that community and religious leaders were first contacted. The information obtained from men focus group participants of the same villages also confirmed that project initiatives were first discussed with kebele leaders and the respected community members who were men, but women were informed later.

During the project implementation stage, the participation of women was remarkable. As explained by Suro Zone, women have been excavating the soil while men were digging a ten meters deep well by their hands. On the other hand, As explained by WATSAN committee members in Galo Zone local materials especially rocks and gravels that were needed for the construction of the spring, reservoir and spring cape were not available. Women traveled to long distance as far as the neighboring village and have brought the rocks by carrying on their shoulders. The challenge was not only carrying the rocks, but the neighboring communities were refusing to give rocks freely and such competitive interest on scarce resources has led to cause conflict between the two villagers. As explained in sections below, Galo Zone is not accessible for vehicle during rainy season. At the time of their WSS project implementation, women have facilitated the construction processes by transporting sand that was piled three kilometers away from the construction site of their water project. They also contributed labor during trench excavation that was 27 meters from the spring source to the water point.

Women's contributions during the implementation of WSS projects were not only limited to labor, but also they have provided food and locally made drink (*tella*) for brick layers and construction workers. Some women informants in Elka zone stated that, hired men did most of

the heaviest work such as digging and carrying cement, iron pipes and blocks; whereas women were involved in mixing sand and cement with water in addition to provision of food and drink. Women also played roles during the inauguration of newly constructed WSS services through cooking foods and brewing local drinks that are required for the festivals.

Focus group participants in each zone were asked to rate the level of women participation in cash contribution. Two groups in Suro zone reported that women and men household heads had equal cash contribution. The other two groups in Galo pointed out that the cash contribution of women household heads was less by half than men household heads. The remaining four groups in Elka and Kamo reported in the same way as Suro zone. Regarding site and technology choice, the informants in all zones similarly explained that, communities were not consulted at all. Moreover, women and men group informants explained their limited involvement during the design Work of WSS projects. The information obtained from respondents regarding their participation in various project stages of WSS services also showed similar results and the findings are presented in Table 4 below.

Table 4: Frequency and Percentage Distribution of Women and Men Respondents by their Participation in the Different Activities of the Water Supply and Sanitation Project Cycle

Types of Total Participation	Responses	Gotte								Total	
		Elka		Kamo		Suro		Galo			
		Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Knowledge of commencement of the water supply project	Yes	10(66.6%)	8(80%)	13(86.6%)	9(90%)	14(93.3%)	9(90%)	11(73.3%)	8(80%)	48(80%)	34(85%)
	No	5(33.3%)	2(20%)	2(13.3%)	1(10%)	1(6.7%)	1(10%)	4(26.6%)	2(20%)	12(20%)	6(15%)
	Total	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	60(100%)	40(100%)
Consultation during preparation	Yes	9(60%)	9(90%)	10(66.6%)	8(80%)	9(60%)	8(80%)	8(53.3%)	9(90%)	36(60%)	34(85%)
	No	6(20%)	1(10%)	5(33.4%)	2(20%)	6(40%)	2(20%)	7(46.7%)	1(10%)	24(40%)	6(15%)
	Total	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	60(100%)	40(100%)
Consultation during site selection	Yes	3(20%)	4(40%)	4(26.6%)	2(20%)	5(33.3%)	5(50%)	2(13.3%)	4(40%)	14(23.3%)	15(37.5%)
	No	12(80%)	6(60%)	11(73.3%)	8(80%)	10(66.7%)	5(50%)	13(86.7%)	6(60%)	46(76.6%)	25(62.5%)
	Total	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	60(100%)	40(100%)
Consultation during selection of technology	Yes	3(20%)	4(40%)	4(26.6%)	2(20%)	5(33.3%)	5(50%)	2(13.3%)	4(40%)	14(23.3%)	15(37.5%)
	No	12(80%)	6(60%)	11(73.3%)	8(80%)	10(66.7%)	5(50%)	13(86.7%)	6(60%)	46(76.6%)	25(62.5%)
	Total	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	60(100%)	40(100%)
If labor contribution made	Yes	11(73.3%)	8(80%)	14(93.3%)	8(80%)	12(80%)	9(90%)	10(66.6%)	10(100%)	47(78.3%)	35(87.5%)
	No	4(26.6%)	2(20%)	1(6.6%)	2(20%)	3(20%)	1(10%)	5(33.4%)	-	13(21.6%)	5(12.5%)
	Total	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	60(100%)	40(100%)
If contribution in cash was made	Yes	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	60(100%)	40(100%)
	No	-	-	-	-	-	-	-	-	-	-
	Total	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	60(100%)	40(100%)
If local materials were contributed	Yes	11(73.3%)	8(80%)	13(86.6%)	10(100%)	12(80%)	9(90%)	9(60%)	7(70%)	45(75%)	34(85%)
	No	4(26.6%)	2(20%)	2(13.4%)	-	3(20%)	1(10%)	6(40%)	3(30%)	15(25%)	6(15%)
	Total	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	60(100%)	40(100%)

According to the above table, majority of female respondents (80%) have reported that they knew how their water supply system started. From 40 male respondents, only 15% of them did not know how the water supply scheme was started. This implies that men had better access to information. For the questions raised as to why they were not informed by the project staffs during the preparation phase of the project, 18.3% of women respondents replied that they were

not around when the water supply project started and 21.7% of them assumed that the presence of their husbands was sufficient.

4.4.2 The Role of Women in Water Supply and Sanitation management Committees

Water supply and sanitation committees are local institutions that have indispensable roles in ensuring effective operation and maintenance of the rural WSS schemes. The election of WATSANCO members in all zones *was* undertaken by their communities.

However, as the literature on token involvement of women in community water supply indicates, women committee members in Galo Zone were elected in the absence of women.

From the observation made on the archival documents of WATSANcos, it was learnt that WATSANcos in all zones have legal status and are accountable for the Kebele administration and their respective community. They were also guided by their own bylaw with clearly defined rules. Membership records were updated and management of finance was based on transparency and accountability. Moreover, minutes of meeting and important data such as beneficiary lists were kept well. As explained by women and men informants, WATSANCO members were volunteers in performing important roles such as representing their community to have contact with kebele, government officials, support agencies (RWSEP, ORDA/WAE), and private sectors. The committees also have a responsibility to mobilize and educate the community to promote clean water use, latrine construction and environmental hygiene. In addition, they hold and lead regular meetings, ensure equitable water use and distribution among members during dry season and organize effective operation and maintenance of the systems.

The activities of WATSANCOs were appreciated by the communities. The focus group informants in all zones reported that WATSANCO members were making great personal sacrifice to participate in committee work. When asked to evaluate the contribution of committee members, the information provided by respondents are presented in the following table.

Table 5: Respondents by their Evaluation of the Performance of Water Committees

<i>Adami-Tullu Jiddo Kombolch a wereda</i>	Zone	Evaluation of performance of water committee						Frequency
		Good		Fair		I do not Know		
		Frequency	Percent	Frequency	Percent	Frequency	Percent	
	Elka	21	32.8	3	18.8	1	5	25
	Kamo	11	17.2	8	50	6	30	25
	Suro	17	26.6	4	25	4	20	25
	Galo	15	23.4	1	16	9	20	25
Total		64	100	16	100	20	100	100

As it is shown in the above table, 64 respondents indicated that the activities of WATSANCO were good. Similarly, the discussions held with women and men committee members indicated WATSANCOs have a significant contribution in taking care of water supply systems.

4.4.3 The Extent of Women representation in Water Supply and Sanitation Committees

Though women are playing considerable roles in WATSANCOs, water supply and sanitation management committees in Suro, Galo, Elka and Kamo Zones their representation in the committee in terms of division of labor among members were found very low (table 6).

Table 6: Division of Responsibilities among Women and Men Water Committee Members

No	Position Held In committee	Zone								Total		Grand Total
		Suro		Galo		Elka		Qamo		Female	Male	
		Female	Male	Female	Male	Female	Male	Female	Male			
1	Chairperson	-	1	-	1	-	1	-	1	-	4	4
2	Secretary& accountant	1	-	-	1	1	-	-	1	2	2	4
3	Cashier	-	1	-	1	-	1	1		1	3	4
4	Storekeeper	-	1	1	-	-	1	-	-	1	2	3
5	Controller	1	-	1	-	1	-	1	1	4	1	5
Total		2	3	2	3	2	3	2	3	8	12	20

There are four WATSANcos in above four zones with total members of 20 individuals out of which women members are only eight (40%) in number. Though, women WATSANco members are not well represented in key decision making positions like men, the proportion of women and men WATSANCO members (8 to 12) can be taken as fair representation of women in WATSANco. In addition, only two women in Elka and Kamo zones held key positions like cashier and secretary. As to marital status of women members, the background information from WATSANcos group discussion revealed that all men and six women committee members were married.

In terms of educational background, three women committee members were illiterate; one member completed grade eleven; and the rest can able to read and write. On the other hand, all men water committee members were able to read and write and the highest grade completed was grade five. From this, it can be seen that in terms of education and marital status, there were no major differences among women and men committee members. The question is why women underrepresented in key positions ? Previous studies like NEK (2000) conducted in the woreda, indicated that the absence of women from committee leadership positions were the outcome of

their inadequate education. But, this study came up with different factors. The findings are discussed in the following section.

4.4.3.1 The Causes of Women Under-representation in WATSAN Committees

According to women WATSANco informants from the community of Suro, women and men WATSANco members work equally, but women were not in key decision making positions because the communities listens and respects only men. Due to their low social position, domestic work burden, and discouragement from their husbands, women committee members did not own leadership position. Galo zone women WATSANco members also said that, the power relations between women and men members are not equal and usually men manipulate women members.

Similarly, the respondents were asked to rate the performance of women and men water committee members and the information provided by them are presented in the following table.

Table 7: Respondents Evaluation of Female Committee Members' Performance

Awareness on the existence of Female committee members	Zone					Total Percent
	Responses	Elka	Qamo	Suro	Galo	
I know	18(72%)	21(84%)	20(80%)	15(60%)	74	
I do not know	7(28%)	4(16%)	5(20%)	10(40%)	26	
Total	25(100%)	25(100%)	25(100%)	25(100%)	100	
Comparative performance of female water committee members	Equal with men	7(28%)	5(20%)	2(8%)	9(36%)	23
	Less than men	15(60%)	17(68%)	19(76%)	10(40%)	61
	I do not know	3(12%)	3(12%)	4(16%)	6(24%)	16
	Total	25(100%)	25(100%)	25(100%)	25(100%)	100

From table 7 above, it can be seen that the majority of respondents (74%) in all villages reported that, they knew women committee members. However, only 23% believe that women perform their activities as men do. On the other hand, an expert of woreda Women's Affairs Office also noted that most of married women refused to accept the position of cashier due to fear of their husbands. Husbands were not in a position to support their wives to keep public money in their house due to fear of any loss that could happen. Women themselves were not comfortable to keep money at home since they did not believe that it is safe at home to keep money. The ORDA/WAE project facilitator of woreda added that in communities women regarded as less capable than men to cope up the challenges of the position like chairpersonship. This was mainly because; communities have little confidence on women's ability in organizing and leading the villagers. The discussion held with women WATSANco revealed that even women themselves were reluctant to accept such positions due to lack of confidence.

For the question raised on the relevance of including women in the WATSANco, women members from the Galo gotte pointed out that, though women committee members contribute their part, the existing women members were elected due to the instruction given from woreda Water Desk; otherwise the community would have elected all male members.

Moreover, the key informants from Kamo zone also reported that women would not able to resist all ups and downs like men if they were given key decision-making positions. A key informant in Elka zone added that due to their domestic burden and lower level social status in the community, women were not willing to accept key positions. A woman who stays out of her home and active in public affairs is considered as unmannerly. Especially, married women are not expected to be involved in such public activities. There is also pressure from their husbands.

Women's participation in water committee is affected by their responsibility of reproductive tasks.

4.4.4. Training of Women Water Committee Members

Training is usually meant to achieve better project results leading to sustainability of water supply systems. The meaningful involvement of both women and men also requires training of community members. This section describes the training given to women and men WATSANcos and its implications to the sustainability of water supply and sanitation services.

As indicated by women and men WATSANco members, in Suro, Galo, Elka and Kamo zones, training was given on different topics, such as how to organize and mobilize users; mechanisms of collecting money; keeping and updating records; reporting to community members; and operation and maintenance of the water schemes. In addition, through hygiene education sessions, women were trained in proper handling and use of water supply and sanitation facilities. Men have received the skill of latrine construction and hand washing facilities while women have been trained as caretakers of water points in Galo and Suro zones,

For the questions asked to know what obstacles of women trainees' face, the ORDA/WAE project officer pointed out that, married WATSANCO members were not encouraged by their husbands particularly when the training venue is outside their villages. Women committee members during focus group discussions also commented that, it was difficult for them to attend a weeklong training program by leaving their household responsibilities and children behind. The situation was more difficult for female household headed committee members. For instance, one of the female household heads WATSANco members in Suro Zone who sale *tella* (*house made beer*) and *arake* (*House Made Liquar*) as a means of survival had difficulties to take part in

the training. From this it can be concluded that women's traditional domestic roles pose problems when they leave home for meetings and training. As pointed out by the informant's committee works also entail a heavy demand on women's labor, time and sometimes in conflict with other domestic tasks.

4.4.5 The Role of women in village level operation and maintenance

As indicated in the literature by Harvey and Reed, (2004); key aspects of operation and maintenance are preventive and corrective measures that should be undertaken by WATSANcos. From the observation of existing rural water supply schemes in Galo, Suro, Elka and Kamo zones, it was possible to learn that, the practice of care taking by WATSANcos have been found to be relatively good; while, timely preventive maintenance undertaking found to be weak. Although WATSANcos in all zones have been trained during the project implementation, many of them did not perform either preventive or corrective maintenance as it was expected. As observed, communities are still dependent on support agencies from woreda water desk. For instance, some faucets and gate valves in Elka and Galo springs were out of service, while in Galo, the shower was non-functional and there was water flowing day and night due to damage of faucets.

ORDA/WAE and RWSEP, cognizant of WATSANco's inadequate capacity in undertaking corrective maintenance, have given trainings to artisans who were drawn from all project sites. According to the information obtained ORDA /WAE, there were 34 trained artisans out of these ten were women. ORDA /WAE Project officer also informed us that two artisans from each water point were trained and equipped with the required tool kits. The majority (70%) of trained

artisans were men. All trained artisans have a responsibility to undertake preventive and corrective maintenances; whereas WATSANCOs, perform the care taking activities.

4.4.6. The role of women in water supply and sanitation services

This section presents and discusses the findings of the study concerning how women work in protecting their water sources from pollution; practicing safe waste disposal including children excreta; enhancing the practice of hand washing; and promoting latrine use at the village and household levels.

Reviewed documents and interviewed project staffs at RWSEP and ORDA/WAE revealed, in both organizations promotion of sanitation and hygiene education was considered as their priority areas of intervention.

It was also learnt that villagers who received green flag were those who fulfilled two sanitary components; whereas white flag owners were those who had constructed their own private latrine, waste pit disposal system and improved household management. The main reason behind such initiative as reported by ORDA/WAE project staff members was to motivate the villagers, to create competition among them and recognize their efforts. ORDA/WAE trained 27 women and 21 men VHCs who educate and demonstrate their communities on how to construct latrine, hand-washing habits of households, and monitor water sources from pollution and promote environmental sanitation.

4.5. Women and intra household aspects of water supply and sanitation

This part describes the role of women in water fetching; daily water consumption and use; management of water and waste disposal; habit of latrine use and hand washing practices; means of water transportation; and cleanness of water storage in the house.

4.5.1. Women's role in water collection

Findings of household survey regarding the role of women in water fetching revealed that it is women's responsibility to fetch water in all villages, although men sometimes do so in few cases like at times when women get sick. Daughters, daughter-in laws or maids also fetch water for household consumption. Sometimes male children participate in water fetching.

The purpose of this discussion is not to describe the already known fact with regard to responsibility of water fetching among rural communities. However the analysis tried to explain the existing structural factors that perpetuate the traditional division of labor between women and men and to show the time consumed to fetch water by women that prevent them from participation of productive activities. As the literature on women's domestic work burden indicates, fetching water is quite time consuming and strenuous activity. In order to obtain women's perception regarding the time they spent to fetch water from the developed sources, they were asked to estimate their time consumption. Their reply presented on table 8..

Table 8: Women Respondents on their Time Consumption for Fetching Water from Improved Sources

Water source	Average time Required For round trip	Zone								Total
		Suro		Galo		Elka		Kamo		
		F	P	F	P	F	P	F	P	
Developed spring	<15minutes	0	-	4	26.7	2	13.3	0	-	6
	15-30 minutes	0	-	11	73.3	13	86.7	0	-	24
	Total	0	-	15	100	15	100			30
Hand Pump	< 15minutes	10	66.7	0	-	0	-	2	13.3	12
	15-30 minutes	5	33.3	0	-	0	-	13	86.7	18
	Total	15	100	0	-	0	-	15	100	30

As indicated in table 8 above , the time consumed by women in all zones reported that queuing time at water point during dry season is high; whereas low in rainy season.

It would seem that the traditional gender division of labor is perpetuating women’s subordination and inequality in the household. Gender roles are not static and subject to change however, like in other parts of rural areas, gender roles in traditional Oromia communities remained static. As reported by respondents, it is not normal for adult men to fetch water for their families. It is considered as a taboo by many rural adult men to fetch water . If they do so, it is considered as they are undermined not only by community members, but by their own wives.

Focus group informants from Elka,, Kamo and Galo Zones added that, women and men work equally in agricultural activities except ploughing, but it is not culturally accepted by community to expect adult men to bring water to home unless their wives are in difficult situations.

4.5.2 Daily water consumption and use

Suro, Galo, Elka and Kamo Zones are endowed with traditional water sources such as river, unprotected spring, and hand dug wells and ponds. However, the main source of potable water for Elka and Galo Zones is developed springs and hand pumps. The supply and quantity of water sources changes considerably from season to season. For this reason, communities' water consumption level and intensity of use from particular sources vary during dry and wet seasons. Women focus groups informants in Suro Zone reported that, during dry season they are allowed to fetch only two *Pots* of water from their hand pump and they buy additional water from privately owned hand dug wells at the cost of 0.25 cents per one pot.

During dry season, the majority of the respondents (72%) from Suro and Kamo Zones mentioned that hand pump is their first primary source of water for drinking, cooking and cleaning utensils as it is clean water. Hand dug well is cited as their second source because of short distance and adequate availability. On the other hand villagers in Elka and Galo reported that developed spring is their primary source of water for the above-mentioned purpose and for reason of best quality as well as availability.

River water is mentioned as the primary source for the purpose of washing clothes and livestock watering in Kamo and Suro Zones; whereas people of Elka and Galo use spring water for the same purpose. It was reported by the Galo group women informants that, villagers are not allowed to wash their clothes from the scheme on Monday and Saturday during dry season due to decrease of water yield.

Like in Suro Zone, villagers in Kamo are allowed to fetch only two *Pots* of water daily for drinking purpose during dry season. They use alternative sources for cleaning utensils such as hand dug wells and rivers for washing clothes and livestock watering. On the other hand, there is

no scarcity of water supply in Galo and Elka Zones and users were allowed to fetch water according to their needs.

With regard to gardening, Galo villagers mentioned that spring is the first primary source of water for the reason of its availability; the rest of the villagers indicate that hand dug well is their prior source for the reason that it is cheaper and easily available. In all cases developed sources were mentioned as the primary source of water during special occasions (marriage celebrations, holy days, community gatherings during some social occasions) and hand-dug well is mentioned as secondary. For washing body, 72% of Suro and 81% of Kamo respondents indicated that hand pump water as primary source and undeveloped spring as secondary source due to good quality and availability respectively. The rest of villagers in Elka and Galo reported that, developed spring as the primary source of water for washing their bodies due to its availability, adequacy and safe. Concerning income generating activities such as preparation of local alcohols like *tella* and *arake*, water from developed sources was indicated as the primary source because of its best quality in all villages.

During the rainy season, surface water is available in all zones and for this reason generally developed schemes were used for the purpose of drinking; cooking; cleaning utensils; washing bodies; and during special occasions. In addition, household respondents in all zones mentioned that, roof water collected from catchments and rain water as their primary source for washing clothes during rainy seasons. Hand-dug wells are also indicated as primary source of water by 20% of respondents for the purpose of cleaning utensils due to its availability and short distance. Hand pump users in Kamo and Suro Zones reported that they use unprotected spring as primary source for livestock consumption.

4.5.3. Management of water in the household

Women not only do most of the work in water collection, but also take most of the management decisions regarding water use at home. They decide which water source to use for various purposes, how much water to use, and how to transport and store.

The complexity of water use pattern was illustrated by the investigation carried out in two zones in Suro and Kamo. In-depth interviews on women's decision-making patterns on use of water revealed that water collected from hand pump is used for drinking since it is clean and has good taste. Children are not supposed to use this water for any other purpose. Water obtained from well is used only for washing clothes and kitchen purposes.

In Kamo and Suro Zones, women conserve the most clean water fetched from hand pumps for drinking, cooking, face washing, cleaning utensils and food preparation. Grey water is reserved for washing and rinsing clothes and for watering plants. Water used for washing utensils is given to poultry and cattle, and water used for clothes washing is reserved to clean dishes. In such a way women manage the domestic recycling use of water. Women also decide the economic use of water. Domestic water that is collected from developed sources also used for *tella (local beer)* and *arake (Local Liquor)* making. Women also use water drew from unprotected source for plastering walls and floors with cow dung.

Women in the households control hygienic use of water. They are responsible for water storage in safe places, extraction by clean cans and conservation of water. Table 9 and 10 show how and how often are water containers are cleaned.

Table 9: Cleaning of Water Containers by Women Respondents

Wereda	Zone	Manner of washing water containers						Grand Total
		With any water		With clean water		With clean water and Grawa		
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency
Adami	Suro	3	33.3	5	15.6	7	36.9	15
Tullu	Galo	1	11.1	11	34.4	3	15.7	15
Jiddo	Elka	3	33.3	8	25	4	21.1	15
Kombo lcha woreda	Kamo	2	22.3	8	25	5	26.3	15
Total		9	100	32	100	19	100	60

Before starting a journey to fetch water, most women clean the *Pot*, and ensure that all the necessary accessories such as can are used to cover the mouth of water container. Women respondents reported that, they wash their water containers with clean water and ‘grawa’, local plant whose leaves are normally used by women to wash *Pots*. This was reported by 32 and 19 of the respondents respectively. 15% of the respondents (Nine women out of 60) mentioned that they wash containers with any available water (Table 9)

Table 10: Cleaning of Water Storage by Women Respondents

Wereda	Zone	Manner of cleaning of water storage								Grand Total
		Daily		Every other day		Every week		As need arise		
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency
Adami- Tullu Jiddo Kombolcha woreda	Suro	5	29.4	1	10	2	66.3	7	23.3	15
	Galo	3	17.6	4	40	0	-	8	26.7	15
	Elka	4	23.5	3	30	0	-	8	26.7	15
	Qamo	5	29.5	2	20	1	33.3	7	23.3	15
Total		17	100	10	100	3	100	30	100	60

According to the above table (Table 10), half of women respondents (30) responded that they wash water containers as the need arises, meaning when it gets dirt; whereas 17 of them replied

they clean water containers on daily basis. Only three respondents said every week. Women group informants in all zones explained that the madigas are cleaned using water, often with some sand and ash mixture rubbing, and sometimes with *woira*/olive trees twigs are burned inside. Though the latter is said to be for “taste” of the water or especially if it is used for *tella*, it certainly has also positive hygiene impacts. They also added that the new plastic containers (*jerricans*) could not clean in the traditional way.

4.5.4. Women and household hygiene practices and environmental sanitation

The observation made in Suro households revealed that most of the residents were living in unhygienic conditions. Regarding sanitation, hygiene practices and waste disposal systems, major problems identified by interviewees in this zone were open defecation and smell. All systems of defecation were found at risk contaminating food, water sources, and hand and feet contamination (especially when used as fertilizer on vegetables which were usually inadequately washed) via animals and flies. Household respondents were asked the availability of latrine and the information obtained is presented in table 11 below

Table 11: Availability of Latrine in Surveyed Households

		Responses		Total		
Availability of latrine	Zone	Responses				Grand Total
		Yes		No		
		Frequency	Percent	Frequency	Percent	
	Suro	8	14.3	17	38.6	25
	Galo	18	32.1	7	16	25
	Elka	16	28.6	9	20.4	25
	Kamo	14	25	11	25	25
Total		56	100	44	100	100

Table 11 above shows that 44% households did not have latrines; whereas relatively a considerable number of households in Elka and Galo zones have their own latrines.

Latrine use was found in a better condition in Galo zone. Interviewed women in this village mentioned that the majority of households in their area use latrines constructed by households using their own labor on advice and encouragement from RWSEP promoters.

The community learning approaches followed by ORDA/WAE i.e. coffee ceremony (*Buna Inteat*) improved the use of latrine in Elka and Galo zones. For instance, women WATSANco informants in Galo zone explained that earlier women were not using latrines and defecated at their vegetable plot and suffered from bad smell while they were harvesting vegetables from their garden. Now a day's, latrines are constructed in many households and this ensured women's privacy. However, few households in Elka zone did not yet dig latrines because husbands would not use it. Women focus group participants in the same village also explained that, even if women are interested to have latrine, they cannot dig pit latrine unless the latrines are used by men.

As to personal hygiene, there was awareness on the importance of hand washing in all villages. However, observation made at the household level shows that villagers rarely wash their hands with soap or any other alternative material after using latrines. Soaps were not commonly found at the hand washing facilities. It was also observed that adult men and women washed their hands before eating, while children did not. When asked if they wash their hands before eating the information they have provided is presented in table 12.

Table 12: Hand Washing Practice of Respondents before Eating

If hands are washed before eating	Responses	Zone								Grand Total	
		Suro		Galo		Elka		Kamo		Female	Male
		Female	Male	Female	Male	Female	Male	Female	Male		
Yes	10(66.7%)	7(70%)	11(73.3%)	7(70%)	10(66.7%)	60(6%)	12(80%)	7(70%)	71.7%	67.5%	
No	5(33.3%)	3(30%)	4(26.7%)	3(30%)	5(33.3%)	4(40%)	3(30%)	3(30%)	28.3%	32.5%	
Total		15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	100	100

As indicated in the table 12, 71.7% of women and 67.5% of men respondents mentioned that, they wash their hands before eating. Though efforts were being made by zone health workers in Elka and Kamo by the contact women in others to promote hygienic use of water at household level, water use in most household have been found to be unhygienic. A common practice shows that there is a habit to keep single cup/can on top of the *Pot* and every time someone wants a cup of water, the entire cup and hand are dipped into the *Pot* .Such unhygienic use of water can easily contaminate the entire water. Findings of the study shows that in all zones, stools of breast fed children are not regarded as polluting and the stools of young children are seen as less polluting than that of adults. This affects mothers' attitude towards safe disposal of stools.

For the question what benefit women have gained from having a latrine, privacy and comfort were the main responses. The respondents were also asked to indicate the practice of hand washing after defecations (table 13).

Table 13: Hand Washing Practice of Respondents after Defecation

If hands are washed after defecation	Response	Zone								Total
		Suro		Galo		Elka		Kamo		
		Male	Female	Male	Female	Male	Female	Male	Female	
Yes	8(80%)	12(80%)	7(70%)	15(100%)	9(90%)	13(86.7%)	7(70%)	14(93.3%)	85	
No	2(20%)	3(20%)	3(30%)	-	1(10%)	2(13.3%)	3(30%)	1(6.7%)	15	
Total		10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	10(100%)	15(100%)	100

As it can be seen in the above table, 85 respondents mentioned they wash hands after defecation.

The survey result also shows that, women's practice of hand washing was 54%. In order to confirm the discussion made in section 4.2.6, respondents were asked whether they had received hygiene and sanitation education. The responses for this question is shown on table 14.

Table 14: Respondents Received Training on Sanitation and Hygiene Education

Woreda	Zone	If sanitation and hygiene education are received				Grand Total
		Yes		No		
		Female	Male	Female	Male	
<i>Adami-Tullu Jiddo Kombolcha</i>	Suro	10(26.3%)	8(26.7%)	5(22.7%)	2(20%)	25
	Galo	8(20.1%)	7(23.3%)	7(32%)	3(30%)	25
	Elka	11(29%)	6(20%)	4(18.2%)	4(40%)	25
	Kamo	9(23.7%)	9(30%)	6(27.3%)	1(10%)	25
Total		38(100%)	30(100%)	22(100%)	10(100%)	100

38% of women and the majority of men (30%) respondents indicated that, they have received training from RWSEP and ORDA/WAE offices on hygiene and sanitation. The remaining (32%) of women and men respondents claimed that they did not attend such kind of awareness program.

4.6 Women's perception on existing water supply and sanitation services

Researches on gender and water supply and sanitation services show that, consideration of the link between hardware and software components of RWSS contributed a great deal in adjusting the service design to users demand and to address women's needs such as washing and bathing locations. Such consideration also helps to promote community's sense of ownership. In the following discussion attempt was made to describe and explain the relationship to this theoretical review with actual women's perception regarding the design of water structures; appropriateness of technology; site of water points; distance; quality and quantity, tariff level; ability and willingness to pay for the services, and benefits gained from the improved water supply and sanitation services (Schouten and Moriarty, 2003).

4.6.1 Design, structure and type of technology

The construction of washing basin, cattle trough and other supplementary structures should take into account the supply level of water points and the size of user population. However, poor washing basin and cattle trough has been observed in Suro Zone.

These structures, as reported by interviewed women and men group informants, were constructed without assessing the population size and water yield level. As a result, the facilities remained unused. The existing circular washbasin is not enough for the entire zones. The size of cattle trough was too small and cannot accommodate all the cattle. Similarly, communal laundry and public shower facilities in Galo and Elka Zones were built on the same compound of water distribution points. These were intended to save women's time and relieve them from walking long distance to the rivers or springs.

However focus group discussions carried out with women from zones of Galo and Elka have brought unexpected result. Majority women in these zones (65%) especially those of married/wives do not take bath at these facilities. When asked for the reasons they did not bath at these public facilities, they responded that the shower is constructed with corrugated iron sheet and women's and men's rooms partitioned with iron sheet which is not convenient for privacy. I also embarrassed to take bath in the presence of men.”

The laundry basins which are rectangular sinks at adult waist height in Galo and Elka Zones were appreciated by men and women focus group informants. However, women informants in Elka Zone claimed that traditionally women in the rural areas wash clothes in a squatting position. The new wash basins required that women stand instead of squat to do their chores. As a result, they have to tight their dresses between their legs until they complete the chores. In the contrary, women group in Galo Zone reported no problem with their laundry basins. Regarding fencing, it was observed that all water points were properly fenced to protect from some community members who are not eligible to use the scheme and damage of the water points. There are also guards that are hired in all water points of which one guard is female and the rest are males. The guards have a responsibility to operate the water points as per the schedule given from the WATSANco. In all cases, the communities do not like to fence water points by stones because stones are believed to be breeding grounds for rats and snakes. Concerning the environmental sanitation of water points, the observation made together with WATSANco members in Elka revealed that the spring source was not properly kept from both animal and human defecation. The drainage was found also poor in this spring system. No water supply scheme can be considered as safe if the area it serves is poorly drained. On the contrary, the spring source in Galo Zone is well protected that assure good quality of water supply services.

The water source in Galo spring is not easily reached by livestock and hence, less likely for pollution. Suro Zone water point has no risk of contamination because it is located far from upstream dwellers and similarly, Kamo water source is located at upstream and is not likely for contamination.

As to the structural set up of hand pumps and developed schemes, women respondents were requested to indicate their view. Their response are summarized in table 15

Table 15. Perception of Women Respondents on the Technical Structures of WSS Service

Technical Structures	Zone									Total
	responses	Suro		Galo		Elka		Kamo		
		Freq	%	Freq	%	F	P	F	P	F
If platforms are convenient for sitting of pot	Yes	14	93.3	15	100	4	26.7	4	26.7	44
	No	1	6.7	0	-	11	73.3	11	73.3	16
	Total	15	100	15	100	15	100	15	100	60
If platforms are convenient to load on back with out assistance	Yes	14	93.3	13	86.7	3	20	5	33.3	35
	No	1	6.7	2	13.3	12	80	10	66.7	25
	Total	15	100	15	100	15	100	15	100	60
If platforms are convenient for sitting of jerican	Yes	11	73.3	13	86.7	14	93.3	13	86.7	51
	No	4	26.7	2	13.3	1	6.7	2	13.3	9
	Total	15	100	15	100	15	100	15	100	60
If platforms are convenient to operation	Yes	11	73.3	0	-	0	-	12	80	23
	No	4	26.7	0	-	0	-	2	20	7
	Total	15	100	0	0	0	-	15	100	30
If the faucets are convenient	Yes	0	-	15	100	15	100	0	-	30
	No	0	-	0	-	0	-	0	-	-
	Total	0	-	15	100	15	100	0	-	30
If the height of the faucets is appropriate	Yes	14	93.3	11	73.3	3	20	7	46.7	35
	No	1	6.7	4	26.7	12	80	8	53.3	25
	Total	15	100	14	100	15	100	15	100	60

From table 15 above, it can be seen that a considerable number of women respondents in Kamo and Elka (73.3%) from each Zone claimed that their water supply scheme was not convenient for

sitting of *pot* though convenient for *jerrican*. The height of stand posts were inconvenient as reported by 80% from Elka and 66.7 % of Kamo Zone women respondents that show their difficulties in lifting their pot without assistance. As a result of this in Elka Zone *most* women use *jerican* and *kill* (a material made of trees used as water container) to fetch water. Hand pump users in Suro (26.7%) and Kamo (20%) reported that the handles of their pump are not suitable. Women group informants in Suro Zone also claimed that pregnant women, small children and elderly people couldn't easily operate the handle. It is also observed in Elka water supply scheme that the height between faucets and sitting of water fetching materials is too short that forced women to sit and lift their *jerican*, otherwise if they use *Pot* , they have to wait until somebody comes and assist them to carry.

4.6.2. Site of water points, distance and queuing time

Communities in all villages have contradictory responses regarding the location of their water supply schemes. Those who live near to the water points have positive replies; where as those who are settled far from the schemes complain the existing locations. In any case as explained by group informants and surveyed households, site selection of hand pumps and developed springs were decided by RWSEP and ORDA/WAE project staffs. In order to obtain users perception regarding the distance of their water supply points, respondents were asked how long it takes them to fetch water from improved sources. Their reply is presented in Table 16 below .

Table 16: Distance Traveled to Fetch Water from Improved Sources

Average distance traveled to fetch water from improved sources	Zone								Total
	Suro		Galo		Elka		Kamo		
	F	P	F	P	F	P	F	P	F
<100 meter	4	16	8	32	12	48	9	36	33
100-500 meter	13	52	10	40	7	28	11	44	41
500-1000 meter	8	32	7	28	6	24	5	20	26
Total	25	100	25	100	25	100	25	100	100

As on table 16 shown, 33% of households mentioned they can collect water at a distant less than 100 meters; where as 41% of them mentioned they need to travel up to 500m.

For the question raised on the queuing time at the water points, the response of women focus group informants in Suro and Kamo Zones revealed that during dry seasons there is a long queue; where as in wet season there is no queue. Villagers in Galo did not report on the problem of queue for all season; whereas informants in Elka reported there is queue during dry season because of influx of water users from neighboring place called Andola town. Surveyed household respondents in Suro and Kamo Zones reported that they have to stay between nearly an hour at the water point during dry season.

4.6.3. Benefits gained by women from improved water supply and sanitation services

Women and men key informants and interviewed group members were asked to indicate what benefits they gained as a result of improved water supply and sanitation services. All informants replied prior to the construction of existing water supply services, women were forced to spend four to six hours a day fetching and carrying water from unsafe sources. The relationships

between time saved due to improved water sources and the social or economic impacts on their lives explained by informants.

Women group informants reported that they have got time to take care of themselves and increased nurturing of their families. Women group informants in Galo Zone reported that water supply and sanitation facilities were required services to the community and the current water supply scheme helped them to engage in productive activities as a result of saved time. Clean and adequate drinking water that can be drawn from existing supply per day, help them in controlling water borne diseases. Men focus group informants in Galo, Kamo and Elka Zones informants explained that, health of villagers was seriously threatened by water born diseases and inadequate latrine use; whereas currently the situation has improved.

In addition, respondents of households asked the benefits they have gained as a result of their improved WSS services. Their responses are summarized on table 17.

Table 17: Frequency and Percentage Distribution on Benefits Gained from Improved Water Supply & Sanitation Services

Benefits gained	Responses	zone								Total
		Suro		Galo		Elka		Kamo		
		F	P	F	P	F	P	F	P	F
Time Saved	Yes	19	76	18	72	20	80	19	76	76
	No	6	24	7	28	5	20	6	24	24
	Total	25	100	25	100	25	100	25	100	100
Health improved	Yes	23	92	25	100	25	100	21	84	94
	No	2	8	0	-	0	-	4	16	6
	Total	25	100	0	-	-	-	25	100	100
Water for livestock available	Yes	0	-	25	100	25	100	-	-	50
	No	25	100	0	-	0	-	25	25	50
	Total	25	100	0	-	0	-	25	100	100
Water for gardening available	Yes	0	-	25	100	25	100	0	-	50
	No	25	100	0	-	0	-	25	100	50
	Total	25	100	25	-	25	100	25	100	100

As indicated on the table 17 above, the majority of household respondents mentioned that, they have got considerable benefits in terms of saving time and improving health (76% and 94% respectively). In addition, developed spring users of Elka and Galo zones also added that, livestock watering as additional benefits obtained from improved water supply system. Respondents were also requested to indicate their perception of the level of support from organizations in charge of providing water and 69% of them reported that the level of support is good; whereas the rest replied not satisfactory.

4.7. Structural factors exacerbating inequality between women's and men's

Participation in Water Supply and Sanitation Projects

In this section, attempt is made to describe and explain the structural factors (political, economic, and socio-cultural), that have materially excluded women from participation in water supply and sanitation projects. However, it is not within the scope of this paper to provide an in depth description of the structural factors that exacerbate inequality between women and men in the study areas. An attempt was made to understand those issues in relation to WSS projects.

4.7.1. Socio-Cultural Factors

As it is known, gender has two parts social and psychological. The social aspect of gender is external, the doing, drama, action and as Simone De Bevoir noted it is “stylized repetition of acts not a choice nor imposed” (quoted in Biseswar, 2005: 15); whereas psychological part of gender is internal, it is being/identity/ i.e., masculinity and femininity. Gender identities (masculinity and femininity) are acquired through socialization. An individual develops gender identity and learn gender norms, then internalize these norms that are specifying gender

inequality and gender division of labor. This traditionally prescribed identities perpetuate women's domestication; whereas encourage men's involvement in public activities including water supply and sanitation project (quoted in Biseswar, 2005: 15)

Culture has many impediments to women's involvement in the management of RWSS projects. Within the family, cultural factors influence the division of labor in water collection work. Girls become involved in this activity at an early stage, depending on the work load of their mothers. Men do not collect water because their masculine identities do not allow them to do so.

The most prevalent forms of cultural factors that obscure the participation of women in RWSS projects are gender stereotypes. The other cultural factor that limits the participation of women in relation to WSS activities is attending public meetings. While some added that most of the time divorced and widowed women attend the public meeting than married once, though they do not speak any thing and public meetings are always chaired by men.

Men focus group participants on the same issue from Elka zone also mentioned women rarely attend public meeting due to lack of confidence and education. Those who attended usually sat at the back or rear place and most of them do not even hear what has been said. Moreover, at public meetings, women usually listen when men talk and they did not express their ideas. Men heads of household represent the family and it was assumed that women were informed and influenced by their husbands.

4.7.2. Local Leadership

Domestication of women and the onerous tasks curtail women's scope for participation in political life. Women are rarely represented in formal as well as informal political structures. For instance, in all areas kebele administrations are chaired by men. Men also head local social

organizations. Community Elders are normally represented by men and women rarely accepted by villages even by women themselves. *Shengos* in rural communities who discuss and decide on community affairs are the territory of men. Women are not accepted in *Shengo* activities. As described in previous sections, when the development agents first arrived to particular communities their initial contact is always with men local and religious leaders or zone representatives, then women are informed latter on. As explained by 60% of respondents above , women were not asked during the preparation of their WSS projects; where as 90% of men were informed. *Mahibers* are one of the traditional institutions where women have little chance to exercise local leadership roles.

Women and men have their own *Mahibers*, however, since the majority of *Mahibers* are named after ‘saints’ the chairpersons are mostly men. Men also predominantly head zone leaders; and women have a chance to lead their own *Idirs* that are rarely found in rural areas.

4.7.3 Economic Factors

The data obtained from Oromia Region WAO revealed that women in rural communities have limited access to control over major resources. As a result of this, men were identified as the principal cash contributors for water supply projects. As the finding of the household survey indicated, the majority of households store their water using gan. No respondent has reported barrel as a means of water storage in the home that implies people cannot afford to buy it. This intern forced women to allocate much of their time for water collection. Had it been they had barrel container, they would have fetched water after two or three times per week instead of each day.

The daily activity profile of women and men in the study area revealed that women's work burden at household level is higher than men. Women's compulsory activities such as cooking, water fetching, and cleaning take up to seven hours a day. Grinding is reported to take three hours a day. The productive activities such as, weeding, harvesting and trashing take up to three hours. In the rainy season the workload of women is quite intensified. It demands them up to nine hours in the field for weeding. In this case the daily working time reaches 15 hours. All these time consuming tasks mitigate the participation of women in public activities and confined them at home.

4.8. Enabling environment for Women empowerment and gender mainstreaming at institutional level

This section aims to provide the existing enabling environments women empowerment and integration of gender approach into programs, projects and entire activities of the RWSEP and ORDA/WAE.

The section first explains the existing gender mainstreaming and women empowerment strategies; gender budgeting and accountability; guidelines and manuals; and gender sensitive M&E indicators, then goes on to look at how they are synergized and implemented at the grassroots/project level.

Many organizations aim to mainstream gender, but few track how effective they are in doing so with monitoring and evaluation (M&E). RWSEP is one of these few organizations committed to integrate gender perspective in the functioning of its institution and in its project implementation at the grassroots level. Its gender mainstreaming strategy identifies key steps required for gender considerations. These comprises institutional set up; capacity building; planning; gender

sensitive water supply and sanitation construction; setting quota for women artisans; involving women and not only in WATSAN but also in O&M. However, in this search, no gender mainstreaming policies were found both in WAE and RWSEP cases whereas the strategy documents were formulated.

The gender mainstreaming and women empowerment strategy in RWSEP's current activities focuses on awareness creation and capacity building at the community level. The strategy document gives also emphasis on the incorporation of gender issues in water supply and sanitation project cycles and capacity building and empowerment of women groups . These documents have revealed that RWSEP has good reputation on gender mainstreaming. The existing RWSEP'S institutional set up illustrates its commitment in promoting gender issues and creating awareness among all stakeholders. The following is the brief summary of the institutional set up of RWSEP. At the region level, all RWSEP activities are coordinated by Women's Affairs Office (WAO) through the focal person nominated to the RWSEP regional focal persons committee. At woreda level, RWSEP gender activities are coordinated by the women's desk through its focal person nominated for the woreda focal persons committee. At kebele level, kebele gender groups and gender sanitization groups do the supervision of gender related activities. Such institutional arrangement ensures the synergy of gender in all programs and in projects at the grass root level. It also contributes to establish gender-mainstreaming network that ultimately ensure the sustainability of projects.

RWSEP's gender mainstreaming and women empowerment strategy document also revealed that planning process is gender sensitive. For instance, prior to planning process at zone level, community development plans are prepared with the involvement of women and men and three days gender sensitization workshops organized, then gender sensitization groups will be

formulated out of the trainees in order to involve women in the upcoming planning process. The zone community established sub-zone gender group, which will promote gender awareness in the sub-zone. The establishment of sub-zone women groups ensures the sustainability and continuation of gender sensitization and to bring attitudinal change at sub-zone level.

As learned from the above institutional arrangement, RWSEP is systematically incorporated gender issues & women empowerment at all levels and in the entire activities and placed it at the center of gravity. For instance RWSEP requires the representation of at least two women out of five WATSANco members, otherwise application of financial assistance from the community is not accepted. According to the information obtained from the RWSEP official, the gender strategy and women empowerment is formulated by involving all stakeholders that implies the right path was followed. The strategy development process followed appropriate stages (agenda setting, strategy formulation, decision making, strategy implementation and evaluation). Regarding RWSEP's organizational values and principles, gender is given a higher priority. The gender strategy document of RWSEP implemented at all levels with the required level of transparency and accountability.

Review was made during the course of the study on RWSEP's monitoring and evaluation systems. RWSEP promotes participatory monitoring that facilitates the involvement of all stakeholders. Preparation of community plans enables M&E to be undertaken by communities. During the planning process, indicators were developed through qualitative information collected on the basis of analysis of strength, weakness, limitation and opportunities (SWOL). Data gathered in disaggregated manner and collected through qualitative and quantitative research. Both women and men target groups were involved in identification of who monitors, what to monitor and why monitors. The approach of participatory M&E by RWSEP has given a

genuine in put in developing gender sensitive indicators to monitor and measure changes. RWSEP has clear, explicit, and feasible and realistically timed gender objectives and these objectives are closely related to indicators.

According to WAE Gender Audit Report (2005), it is only in recent years that gender has begun to be integrated into its work. The document also shows WAE is a committed international organization to mainstreaming gender issues. Though WAE has no gender policy, its gender strategy has been formulated recently through the participation of all actors including internal and external stakeholders. According to the information obtained from gender strategy document, WAE has followed the right path in developing this strategy. Another enabling condition that has created by WAE is its gender mainstreaming guideline for water supply and sanitation projects. ORDA is WAE's partner organization in Oromia Region. It implements RWSS project in *Adami-Tullu Jiddo Kombolcha wereda*. Gender is one of the eight core approaches of WAE in implementing RWSS projects.

WAE works to promote the participation of women in WATSANCO up to 40%. It also emphasizes and recognizes the leading role need to be played by women in water, sanitation and hygiene activities.

At the project level, ORDA/ WAE staff members have limited understanding of gender issues, women empowerment concepts and analyses. Gender is often equated with women and the gender relations between women and men are not understood. The discussion held with ORDA/WAE project office indicates that, there is no gender sensitive and women empowerment indicator for monitoring and evaluation. The mechanisms used to monitor and evaluate projects have so far been largely gender blind. However, the differential impacts of development initiatives on women and men can only be identified if monitoring and evaluation mechanisms

are sensitive to gender. The existing M&E indicators that are used by Adami-Tullu Jiddo Kombolcha woreda ORDA/WAE give emphasis to hardware and technical issues. For instance, M&E on hygiene and sanitation trainings is limited to common topics while incorporation of other issues such as menstruation is relegated. All these M&E indicators could inform the practical needs of women, but say very little on their strategic needs. The current M&E indicators are not systematically designed to assess the level of women empowerment (the participation level of women in community meetings, the number of women committee chairpersonship, and the power relations between women and men WATSANco, women's decision making role) and transformation of gender issues

Regarding the practice of gender budgeting, the document obtained from Adami-Tullu Jiddo Kombolcha woreda ORDA/WAE revealed that, there was no separate budget for gender work.

CHAPTER FIVE

CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusion

This study has tried to describe and explain the role of women on sustainable rural water supply and sanitation services and examine the existing structural factors that are perpetuating inequality between women and men in the management of Rural Water Supply and Sanitation services in East Shoa zone, Oromia regional state, Ethiopia.

The study has found that women play an important role in promoting the sustainability of rural water supply and sanitation projects.

Experiences of RWSEP and ORDA/WAE revealed that gender has taken as an important component for the promotion of sustainability of rural WSS projects. This has created enabling conditions for the promotion of the participation and involvement of women from the inception till the implementation and monitoring of their WSS project cycles. The participation of women during the construction of water supply and sanitation projects were remarkable; where as it was lower than men during the planning stage.

The study has also identified that there was an inadequate link between the technical and social aspects of WSS services. Women had limited sayings on site selection, technology choice and WATSANco selection for their water supply services. They had also limited involvement during the design work of their WSS projects. As a result of these limitations, stand posts in Elka and Kamo zones were not convenient to lift water containers, especially when the women fetch water in pot. In addition, public showers in Galo and Elka zones were not convenient for women users.

RWSEP has disseminated the issues of gender and women empowerment in its intervention areas. The project beneficiaries of RWSEP have the overall recognition on women's participation. This is as a result of its institutional arrangement and various community sensitization programs. The community learning programs initiated by WAE also promote why there is a need to promote the participation and involvement of women in the management of WSS projects. Regardless of all such efforts, the existing experiences at the grass-root level show that communities elect women to WATSAN committees mainly to get financial and technical support and to meet the criteria set out by external support agencies. On the basis of the findings of the study, it is possible to conclude that majority of WSS project beneficiaries, especially male community members did not have appropriate perception on the role of women in promoting the sustainability of their water supply and sanitation services and on the relevance of including women in WATSAN committees. For instance, women's contributions in WATSAN committees were often not recognized by the members of their communities; and only 23% of the surveyed households believed that women WATSAN committee members can perform their activities at an equal level as men.

The members of the communities in the study areas and project staff members both in ORDA/WAE and RWSEP have little confidence on women's WATSANco members' ability to handle key decision positions such as chairpersonship. Men generally dominated water supply and sanitation management committees in Suro, Kamo, Galo, and Elka zones , but well represented numerically in RWSEP and WAE project intervention areas as compared to other government financed projects. The divisions of work among WATSANco members have shown that, most married female committee members were not willing to keep the public money in their houses due to the fear that their husbands might take it. Husbands did not want their wives to

keep public money in their house due to fear of any losses that could happen. In addition, married WATSAN committee members were less encouraged by their husbands to participate in training programs, especially when the venue was outside their villages.

It is generally accepted that gender roles are not static and subject to change, however the traditional division of labor between women and men in the study areas still perpetuates inequality between the two sexes and confines women to the private sphere. Though women help out work in agriculture that is traditionally assigned to men, men do not involve in water fetching.

It is possible to conclude on the basis of the findings of the study that the community members' awareness regarding sanitation has generally improved, the stools of breast fed children were not regarded as polluting and the stools of young children were seen as less polluting than that of adults. This attitude affects mothers' behavior in the disposal of stools.

No water supply scheme can be considered safe if its surrounding is poorly drained. The spring source at Elka was found to be liable to pollution as it was poorly drained. On the contrary, the spring source at Galo Zone *was* well protected assuring good quality of the water.

The task of recovering operation and maintenance cost for water supply in Suro, Galo, Elka and Kamo was found to be very difficult, if not impossible. As stipulated in the country's Water Resource Management Policy, rural communities are expected to cover the operation and maintenance cost of their system. But, in all communities except Suro Zone, members use their water for free, putting the sustainability of the schemes at risk. In sum, RWSEP and ORDA/WAE have formulated gender strategies, women empowerment, and committed NGOs to mainstream gender in their activities, but their strategy documents need to show the mechanisms that could influence the social relations of gender or did not attempt to create conditions for

structural change. Their approach is by far better than those WAOs in GOs who still follow the WID approach and suffer from institutional incapacity a result of small staff allocation, little budget, limited mandate and few allies in the technical areas. However, the common gender and women empowerment strategy of RWSEP and ORDA/WAE emphasized the provision of women and men with water supply and sanitation services that are near to their homes and that aim at saving their time and energy by minimizing women's burden in order to enable them better carry out their productive and reproductive responsibilities. Such approach has an important impact on the lives of individual women, but it does little to breakdown existing stereotypes, male-oriented cultural patterns and the structural factors that are perpetuating unbalanced power relations between women and men and secluded women from the participating in management of water supply and sanitation projects.

5.2. Recommendation

Based on the identified gaps by the study, the following practical recommendations are forwarded to assist those responsible to improve and increase role of women in sustainable rural water supply and sanitation services and reduce factors that exacerbate inequality between women and men in the management of RWSS services.

- Men WATSANcos in Elka and Kamo zones do not have positive attitude towards the women WATSANco members and some of them accepted women members just for the sake of obeying the instruction given from the support agencies and fulfillment of pre conditions for securing funds. And in all places men owned key decision positions. The power relations between women and men WATSANco members was not based on equality. Men dominate and manipulated women members. For example, in Galo the committee did not report to users regarding the

financial matters. Therefore, RWSEP should work more to raise the awareness of men on the significance of including women in WATSANcos and the woreda water desk should audit their financial status ;

- Both RWSEP and WAE have done a lot in addressing the practical needs of women whilst they overlooked to address the strategic gender needs of women. If RWSEP and WAE continue in addressing the practical needs of women *per se* the existing unbalanced power relations between women and men will be perpetuated and women will remain as disadvantageous groups. It is also impossible to bring women in key decision-making positions in WATSANcos. Thus, the two NGOs are recommended to strength their focus on Gender equity and diversity and women empowerment approaches. This can be achieved by encouraging women WATSANco members representation in decision making positions and enhancing capacity of women WATSAN members.
- Project staffs at the woreda and project level do not have adequate knowledge on gender and women empowerment issues. They normally equate gender with only women's issue that seriously affects the attitudes of men at the community level. Inadequate approach of gender and women empowerment at the community level could create resistance among men. Therefore, building the capacity of project implementers on gender mainstreaming, equity and diversity as well as women empowerment issues need to be given due attention. Building gender mainstreaming and women empowerment capacity of project staffs is not enough. There should be a continuous supervision and monitoring on their women empowerment and gender mainstreaming performances. The WAE and RWSEP head offices should include women empowerment and gender mainstreaming strategies as one of indicators of performance evaluation of their staffs both at program and field level;

- Public showers at Elka and Galo zones are not widely used particularly by women, because they are embarrassed to use the facility in the presence of men. Therefore, the support agencies (RWSEP and WAE) should construct separate shower rooms for women or search for other options that allow women to use the facility. This can be done by detaching the existing common iron sheet wall and by fencing women's shower room from men. This can be done within the same compound without incurring additional cost ;
- The sitting of pots in Elka zone is too short and not convenient to lift the pots without assistance. That is why most women use jerrycans for water fetching. Therefore, the technical personnel should consult and involve women, not only men, during the design of heights between stand posts and sittings ;
- They were only hardware indicators during construction and designing of water supply and sanitation services in all four zones. Attempts should be made by ORDA/WAE to sensitize and synergize its women empowerment and gender mainstreaming strategies at the grass root level. Some women empowerment and gender indicators could be level of women involvement and participation in decision making during planning, implementation and management of water supply and sanitation services ; cash contribution earned from men and women, the type of local material contributions done by women and men, the division of labor among women and men committee members, marital status and educational levels of women and men WATSANco members, training given to WATSANco members disaggregated by sex, the attitude and perception of communities towards women and men committee members, and other software indicators could be considered ;
- Responsibility of enhancing and increasing women's capacity and participation in managing WSS services should not be left only for a few agencies like ORDA/WAE. Community management

is not meant that, following the installation of a system, outside agencies drive off into the sunset and every one lives happy then after. Therefore, institutional support should be arranged to keep the system working after handing over especially for WSS projects implemented by ORDA/WAE

- Contact women who were established at each water point by RWSEEP were found weak and almost stopped their activities; however this does not reflect the other project areas where RWSEEP works. The main reason behind for the weak performances of contact women in Suro and Galo zones was a missing link between the Kebele Program Coordinators and contact women. Contact women were not well supported and encouraged by the Kebele Program Coordinators because such duties and responsibilities were not included in the job description of Kebele Program Coordinators. Therefore, RWSEEP should revise its institutional arrangement at the grass root levels. In addition, refresher training, persistent follow-up, and some kind of rewards should be designed to motivate the contact women who are doing the actual works that are required for the promotion of sanitation and raising the gender awareness of the communities. Praising and rewarding their good efforts during kebele meetings and by giving them some kind of awards could do this ; and
- The participation and involvement of women in WATSANcos should be encouraged in Elka scheme. This can be done for instance by paying the salary to Elka's scheme operator and guard person.

REFERENCES

Alem Habtu. (2003): Gender Gap in Ethiopian Education (1974-2002), in BERCHI: The Annual Journal of Ethiopian Lawyers Association, Issue 4. Addis Ababa, Ethiopia.

Baden, Sally. (1993) : “Practical Strategies for Involving Women as well as Men in Water Supply and Sanitation Activities.” Report prepared for gender office (Sida) .No.11.

Berghof, Charlotne. (2002): "Men and Women in Rural Water Supply and Sanitation in Vietnam." Electronic Version, accessed at <http://www.eng4dev.ston.ac.uk/research.htm>

Biseswar, Indra. (2005): “Gender Basics.” A hand out given in the Course of Gender Issues in Ethiopia, Institute of Gender Studies, Addis Ababa University, August 2005.

Boserup, Ester. (1970): *Women’s Role in Economic Development*. Earth Scan Publications Limited, London.

Bourne, Peter. (1984) : *Water and Sanitation Economic and Sociological Perspectives*. Academic Press Inc. Orlando, Florida.

Central Statistical Authority. (1994): *Population and Housing Census*. Federal Democratic Republic of Ethiopia, Addis Ababa.

Curtis Val. (2011): “Women and the Transport of Water, Intermediate Technology.” Publisher, 9 king Street, London WCLE 8HW, U.K.

De Beauvoir, Simone. (1992): *The second sex*. Alfred A.Knopf, Inc. New York.

Flint an, Fiona. (2005): “Gender and Water Audit.” Water Aid Ethiopia, Addis Ababa.

Glover, Jonathan and Nussbaum Martha (eds.). (1995) : *Women, Culture and*

- Development. A study of Human Capabilities.* Clarendon Press. Oxford.
- Harvey, Peter and Reed Bob. (2004): *Rural Water Supply in Africa: Building Blocks for Hand pump Sustainability.* WEDC, Loughborug University, UK.
- Indira Gandhi National Open University, School of Continuing Education:
Field work and Dissertation in Rural Development, New Delhi 2005.
- Indira Gandhi National Open University, School of Continuing Education:
MRDE 101 Rural Social Development, Development of Rural women,
re-printed December 2007, New Delhi 2005.
- IRC. (2002) : “Participatory Learning and Action Initiative.” Delft, the Netherlands.
Electronic Version, accessed at <http://www.Irc.n/project.htm/>
- IRC. (1996): *Women, Water, Sanitation Annual Abstract journal no. 6.* IRC International
Water and Sanitation Center. The Hague, the Netherlands.
- Ministry of Water Resources. (2002): *Water Sector Development Program.* Federal
Democratic Republic of Ethiopia Addis Ababa, Ethiopia.
- Ministry of Water Resources. (2002): *Ethiopian Water Resources Management
Policy.* Federal Democratic Republic of Ethiopia Addis Ababa,
Ethiopia.
- NEK- Internal Consultancy. (2000): “A Review and Assessment of the Status of Women
in Rural Water Development Project.” Addis Ababa, Ethiopia.
- Rathgeber, Eva M. (1998) : “WID, WAD, GAD: Trends in Research and Practice.” A
paper presented at the meetings of the Canadian Research Institute for
the Advancement of women held in Quebec City, Canada.
- Regmi, S.C. and BN Fawcett. (2001): "Men's Roles, Gender Relations and Sustainability

in Water Supplies.” Some lessons from Nepal. Electronic Version,
accessed at "<<http://www.eng4dev.ston.ac.uk/research.htm>>at 06-24-
2006.

Rogers, Barbara. (1980): *The Domestication of Women: Discrimination in Developing Societies*. London: Kogan.

Schouten, Ton and Moriarty Patrick. (2003): *Community Water, Community Management from System to Service in Rural Areas*. Published by ITDG, UK.

Suominen, Arto. (2004): “Gender Balancing in Planning Water Resources Development.”
Paper presented for National Water Forum, Addis Ababa, Ethiopia.

UN Water. (2006): Gender, Water and Sanitation: A Policy Brief. accessed at:
<http://www.unwater.org/downloads/unwpolbrief230606.pdf>

Wakeman, Wendy. (1995) : *Gender Issues Sourcebook for Water and Sanitation Projects*.
UNDP- World Bank Water and Sanitation Program. Washington DC,
USA.

Water Aid Ethiopia. (2005): “Achefer *wereda* Socio-Economic Survey.” Addis Ababa,
Ethiopia.

Wijk- Sijbesma, Christine Van. (1998): *Gender in Water Resources Management, Water Supply and Sanitation*. International Water and Sanitation Center. The
Hague, the Netherlands.

Yemarsket Yemane. (2003) : “Amahara Region Water Supply and Sanitation, Rural
Implementation Plan.” Addis Ababa, Ethiopia.

Yeraswork Admassie (2004) : “Methods of Social Research.” Department of
Sociology and Social Anthropology, Addis Ababa University.

Young, Kate. (1993): *Planning Development with Women: Making a World Difference*.

Published in the USA.

Zelalem Getachew. (2005): "Determinants of Sustainable Rural Water Supply System in Ethiopia." M.A. Thesis, Regional and Local development Studies, Addis Ababa University.

ATTACHEMENT

PROFORMA FOR SUBMISSION OF M.A. (RD) PROPOSAL FOR APPROVAL



SIGNATURE

NAME &

Dr .WONDIMAGEGNE CHEKOL

ADDRESS OF GUIDE

ST. MARY'S UNIVERSITY COLLEGE,

ADDIS ABABA, ETHIOPIA, e-mail ,wondichekol@yahoo.com

NAME &

HAJ I METAISSA KEBIRO

ADDRESS OF STUDENT

ADDIS ABABA, ETHIOPIA, e-mail : hajimetysa@yahoo.com

ENROLMENT NO

099108525

DATE OF SUBMISSION

17 FEBRUARY 2013

NAME OF STUDY CENTRE: ST. MARY'S UNIVERSITY COLLEGE

TITLE OF THE PROJECT THE ROLE OF WOMEN ON SUSTAINABLE RURAL

WATER SUPPLY AND SANITATION SERVICES IN EAST

SHOA ZONE, OROMIA REGIONAL STATE, ETHIOPIA

SIGNATURE OF STUDENT

APPROVED /NOT APPROVED

DATE : 29 APRIL 2013

1. Introduction

Sustainability of rural water supply and sanitation services is a complex issue that depends upon many interrelated factors. Policy context, institutional arrangements, financial and economic issues, availability of spare-parts, communities cost recovery for operation and maintenance and technology type are among the factors that are crucial for ensuring the sustainability of RWSS (Rural Water Supply and Sanitation) services. In addition to this, sustainability of RWSS services is also affected by natural and environmental factors such as recurrent drought coupled with erratic rainfall, and depletion of ground water sources. Social factors such as inappropriate use and conflicting interests among communities also come into play a considerable role on sustainability of rural water supply and sanitation (Harvey and Reed, 2004). Among all the above mentioned factors that affect sustainability of rural water supply and sanitation, the true participation and ownership of the user community especially that of women is the most essential factor that contributes on sustainability of community based rural water supply and sanitation services. A number of studies have noted that the primary factor behind sustainable community RWSS services is the role that is played by women (Wijk, 1998; Wendy, 1995; Harvey and Reed, 2004; Schouten and Moriarty, 2003). Women who are mostly excluded should be involved in planning, designing, maintaining and managing RWSS projects to ensure proper functioning and utilization of project outcome.

The importance of involving both women and men in the management of water and sanitation has been recognized at the global level, starting from the 1977 United Nations Water Conference at Mardel Plata, the International Drinking Water and Sanitation Decade (1981-90) and the International Conference on Water and the Environment in Dublin (January 1992), which explicitly recognizes the central role of women in the provision, management and safeguarding of water. Reference is also made to the involvement of women in water management in Agenda 21 (paragraph 18.70f), and the Johannesburg Plan of Implementation (paragraph 25). Moreover, the resolution establishing the International Decade for Action,

‘Water for Life’ (2005-2015), calls for women’s participation and involvement in water-related development efforts. A study by the International Water and Sanitation Centre (IRC: 2006) on community water and sanitation projects in 88 communities of 15 countries found that projects designed and run with the full participation of women are more sustainable and effective than those which do not involve women. This supports an earlier World Bank study that found that women’s participation was strongly associated with water and sanitation project effectiveness. At a local level in many societies; women play a central role in providing water supply and sanitation. They have primary responsibility for the management of household water supply, sanitation and health (UN Water, 2006). Women often collect, use and manage water in the household as well as farm land for irrigated crops. Because of these, they have considerable knowledge on management of water resources. Their active participation and involvement in sustainable water supply and sanitation is recognized as enhancing the efficiency of water use in community (UN Water, 2006).

Above all, women are the caretakers of children, the guardians of family health and well being, and the managers of household resources. In the developing world including Ethiopia, where millions of families still lack clean water and adequate sanitation, women invariably have to ensure that the family has water. Yet, despite their numbers and their roles and responsibilities, women often have had no voice and so no choice in decisions about the kinds of water supply and sanitation services that are provided to protect their family’s well being. Efforts geared towards improving the management water resources and extending access to safe drinking water and adequate sanitation often overlook the central role of women in water management” (UN Water, 2006:1)

In the district, where the study is going to be conducted, there are many rural water and sanitation projects financed and constructed by government, Non Governmental Organizations, and other development agencies. Most of these rural water supply and sanitation systems are supposed to be governed and managed by community elected Water supply and Sanitation Committees (WATSANco). Rural Water supply and Sanitation committees constitute women and men members elected by community.

The primary function and responsibility of WATSANco is to govern and manage rural water supply and sanitation projects and take lead in community mobilization on sanitation and

hygiene promotion activities. Water Supply and Sanitation Committee members do have the roles and responsibilities in managing rural water supply and sanitation systems to be sustainable. In addition to these roles as water managers, women are also involved as primary users and providers of water resources. Women are also shouldered with the primary responsibility for water transport and management in households in rural areas in developing countries, but their needs and concerns are often not incorporated into planning and management of water systems. Women use water for production purposes like agriculture, livestock rearing, or aquaculture, but social or economic status limits their access to water for such purposes (UN Water, 2006:5). Because women's needs are often not incorporated into water planning and management, they endure hardships. Women have to walk long distances to collect water, care for those stricken by water-related illnesses, pregnant women and mothers need clean water to raise healthy children, women's land and water rights are not recognized, and water systems are not built to meet the needs of women.

The study is, therefore designed to assess the role of women on sustainable rural water supply and sanitation services and the existing structural factors that are perpetuating inequality between women and men in the management of RWSS services in East Shoa zone, Oromia regional state, Ethiopia.

2. Statement of the Problem

Water supply and sanitation in Oromia region is characterized by low coverage especially in rural (49.3%) communities. Like water supply, the sanitation coverage is also low. In order to improve the existing water supply coverage, the Oromia Regional States has embarked on various measures. In recent times the Rural Water Supply, Operation and Maintenance Strategy, the Sector Development Program, the Strategic Plan, and the Annual Plan of Actions have been formulated. With the support of donors , new water supply projects have been constructed and the Regional and Federal Governments have also made available huge financial resources to subsidize maintenance costs. Despite all these efforts by the Federal and Regional governments as well as donor communities, the coverage of rural water supply has remained 49.3 % which is below the requirements of the people in the region (Ministry of Water Resources, Water Sector Development, 2002).

The realities at the local level reveal that large number of rural water supply schemes have failed to achieve a satisfactory level of sustainability. The current practices in rural water supply projects and programs also show that there is too much focus on the goal of increasing service coverage through the implementation of new water system whilst little attention is paid to gender and social issues in water supply that are critical in ensuring sustainability (Harvey and Reed, 2004: 8).

The existing experiences and practices in the water sector also suggests that a lot of emphasis is put on technical issues, on the other hand the social issues particularly gender aspects of water are ignored. Water supply has traditionally regarded as part of the discipline of engineering and consequently has seen from the engineering mindset of design and build. However, long-term sustainability requires a great regard for the numerous non-technological aspects of providing water and sanitation services. At the policy level, the importance of gender aspects in rural water supply is often emphasized, yet its implementation has become elusive. Policy makers and technical staffs do not yet properly perceive its potential contribution to sustainable water supplies. There is also wrong perception among technical professionals that the involvements of women in rural water supply committees do not need to go beyond mere membership.

However, the dynamics of power relations between women and men committee members, women's involvement in real decision making and the structural factors that perpetuate the subordinate position of women in community affairs are given little attention. In addition, the participation and involvement of women and men in most community committees are not based on equality. The information obtained from related literature reveals that men dominate water supply and sanitation committees. They also own key decisions making positions such as chairpersonship and office of treasurer and, while women are almost always kept as ordinary members with no defined tasks. The current guidelines in NGOs and the regional WMRDB (Water, Mineral and Energy Resources Development Bureau) have shown that rural water supply should have female members in their community water and sanitation committees. However, the presence of women often was a requirement of the implementing agencies rather than a community initiative and as a result their involvement becomes "tokenistic" (Harvey and Reed, 2004: 88). Little effort has been made in changing the attitude of beneficiaries and simply laws are imposed on communities by following the usual way of top-down approach. The role of women in sustainable water supply and sanitation services,

the perception and benefits of women and men regarding the existing service provisions; their level of participation and involvement in water management committees; and their contribution to the operation and maintenance of the services have not been adequately studied.

3. Review of Research Literature

The benefits of women's participation and involvement in project planning and implementation of rural water supplies and sanitation have long been argued. Perhaps the most important aspect in relation to sustainability is that women are often concerned about the operation of their water supply and are motivated to do something about it because it directly affects them. Field research in Zambia involved informal discussions with women in many communities, many of whom demonstrated a great interest in water supply issues and a high awareness of associated health implications (Harvey & Skinner, 2002). Some communities also reported that women made more successful treasurers than men, because they were trusted more by those contributing to the maintenance fund. Women can be equipped to take on important roles through focused training by the implementing agency.

The central role played by women in the provision, management and husbandry of water, primarily in the domestic and household context, has gained widespread recognition in recent years; especially since the UN Decade (1980-1990) for Women (European Commission, 1998, 47). One of the main reasons for this is that it is usually women who are the main collectors and user of water. The way to find out women and decision-making in water related matters might be to simply ask how, by custom, women do contribute to community matters. Even though the division of labor between men and women shows both cross-cultural (or cross-country) as well as cross-regional variations (within a country), it is a widely accepted fact that women, in most cultures, take the responsibility of collecting water from various sources and managing it at home. In fact, there exists a wealth of evidences that show the existence of a tight and close relationship between women and water. Nane Annan, wife of UN Secretary General, Kofi Annan, powerfully spelled out the importance of water to women and girls in Johannesburg, at the world summit on sustainable development, 2002. In a speech she argues that women bear the brunt of the burden of lack of safe water, and their involvement is key to achieving the aims of the Water, Sanitation and Hygiene for all (WASH) campaign. To put her words;

' We all know about our own need for water, we know our anguish for the few hours may be without it. So it should not take too much imagination to understand the plight of those whose daily live are determined by the absence of sanitation or easily accessible water.....As a women, I know we are much more vulnerable' (quoted in source, 2002:4-5, ellipses mine).

The results of a gender desegregated data, collected during most pre-feasibility studies of development projects, also revealed that women, mostly select water as their first development priority need than men usually do. One of the outcomes of a one year participatory assessment study on the linkages between participation, gender, and demand responsiveness done in east Africa in 1998 showed that women in Malawi and Kenya generally contribute more than men to water programmers (IRC, 2002). Similarly, extension staff members in Wollo, Ethiopia, who spent at each of 12 water sources observing the gender and age of water collectors found out that, in their project area, on average, women undertook 90 percent of all water collection trips; children 8 percent and men only 2 per cent (Davis and Groggy, 1993). Thus, in view of women's greater interest and influences on family decision regarding water, projects should evidently treat women as ' valued customers'. In spite of this, in most African countries, absence of women from decision-making in water resource management and service delivery is both inequitable, and severally hinders the possibility of realizing sustainability. When involvement of women in all components of a given project is realized, it makes projects and their endeavors so close to their goals of bearing fruit and there by benefit the community sustainability.

Following the New Delhi, the Dublin (1992) and Rio de Janeiro global water conferences mentions the central role of women in the provision, management and safeguard of water. As depicted by Wijk these conferences “calls for the pivotal role of women as providers and users of water and guardians of the living environment to be reflected in institutional arrangement for the development of water resources” (1998: 13). Like the above mentioned conferences, the Earth Summit in Rio de Janeiro (June 1992) in its Agenda 21 (strategy to provide universal coverage of sustainable water supply) explains the role of women in the same way “women should be involved in water management and training” (Wijk, 1998:14). As Wijk noted it is during the Noordwijk conference (March, 1994) which was followed the Dublin and Rio conferences on water and water resources management the issue of women involvement was mentioned repeatedly. The Noordwijk conference endorsed equitable involvement of women in decision making, management bodies and training. The Noordwijk

action plan stressed that water and sanitation programs need to be based on partnership and involvement of all stakeholders, (especially women, community associations, local, regional and central government, public and private sector agencies and nongovernmental organizations (1998: 14 -16).

From the experience of these conferences, a set of principles emerged that brought about dramatic changes to water supply and sanitation development. The economic value of water started to being recognized that calls for water has value and users need to pay. At the same time the water sector was learning that services should respond to demand in order to promote users willingness to pay. As stressed by Wijik, the Noodwijik conference gave insights into gender by stating “the requirement of gender disaggregated data that facilitate the involvement of women in the management of water resources” (1998: 17). The conference also recognized that the convergence of gender approach with demand responsive approach helps to promote the new idea of water as an economic good and users need to pay for it.

From the above paragraphs it can be seen that, in international forum on water resources, increasing attention is being paid to increasing role and involvement of women in sustainable water supply and sanitation services .

Given this, a targeted effort will be needed to enable women to take a meaningful role in the consultation and decision- making process related to water and waste disposal (Jennifer McCracken, et,al 1996, 18). Genuine participation of women entails (more than anything) ensuring their economic, legal, and political empowerment.

4. Objectives of the study

4.1 General objective

The main objective of the research is to assess the role of women on sustainable rural water supply and sanitation services and the existing structural factors that are perpetuating inequality between women and men in the management of RWSS services.

4.2 Specific objectives:

The specific objectives of this study consist of the following :

- To investigate the current approaches and enabling conditions that are facilitating the incorporation of gender issues in the research area ;
- To examine the underlying causes of women’s inadequate representation in the Water and Sanitation management committees ;
- To examine the views of women and men on the structural design of water point, their location, distance, appropriateness of the technology, tariff level, ability and willingness to pay, quality and quantity of water supply and sanitation services; and
- To investigate the role of women on sustainable rural water supply and sanitation services

5. The study area

The study will be conducted in Oromia National Regional State, East Shoa Zone, Adami Tulu Jido Kombolcha district. Ziway, the capital of the district is found at a distance of 160 kilometers away from Addis Ababa, the capital of Ethiopia. Adami-Tullu Jiddo Kombolcha is one of the 10 (ten) districts in East Shoa Zone of Oromia National Regional State. The relative boundary of the district indicates that, the district is bounded in the east by Arsi Zone, in the south by West Arsi-zone, in the north by Dugda district and in the west by Southern Nation and Nationalities People’s Regional State (SNNPRS). The study area is found in the Central part of great Ethiopian Rift Valley that crosses the country from north to south. Regarding the total land area, the district covers 140,324.66 kilometers square, where part of the district is covered by medium sized lakes called Ziway, Abijata and Langano.

According to current administrative division, the district is sub-divided into 43 rural kebeles and 4 (four) urban units namely Ziway, Bulbula, Tullu and Jiddo. Except Jiddo, which is located away from the major road, the rest are found along the main asphalt road and serving local community as market center on weekly bases.

Based on the 2007 National population and Housing Census, the total population of the district is 153,846 (76,172 are female and the remaining 77,674 are male). Out of the total population, 131,320 peoples are living in rural area and the remaining 22, 526 peoples are urban residents living in four small towns. The average family size in the rural areas of the district is about 5.18 and 7.42 in the urban respectively. The average land holding size is about

1.5 hectare/household. Crop and livestock production are the main livelihoods for the majority population in the district.

In the district, there are about 340 rural water supply services (15 springs and 325 hand pumps) constructed by Rural water Supply and Sanitation Program, Water Aid Ethiopia (WAE), and Organization for Rehabilitation and Development of Oromia. These rural water supply services benefit about 50,145 (26,105 male, 24,040 female) peoples in the district.

To come up with full image of the study area under consideration, the entire district will be covered during data collection process based on appropriate sampling methods. This study area is selected based on the fact that it represents the zone in many aspects. It is also much easier to employ transportation and other facilities during the study process. On the other hand, it is the area where the researcher has better knowledge of the local context including cultural set-up, languages, norms and values. Thirdly, though real involvement of women on provision and management of water resources has been given due attention at Global level. It is the area where there is little study conducted on the same issue in the area. The study area again selected due to the recurrent drought condition in the area.

In order to identify the exact research sites from the woreda, the researcher uses a multistage sampling design. Four kebeles where Water Aid Ethiopia operates namely Andola, Kormet Gabiba, and Eddo will be selected for the study. According to woreda Agriculture and rural development office, the total population of these four kebeles is 16,712 (8524 male ,8188 female) peoples. There are 16 hand dug wells and 8 springs constructed by Organization for Rehabilitation and Development in Oromia (ORDO) and WAE which serve about 10,230 (6167 male, 4063 female) beneficiaries population in these four kebeles. The study sites will be purposefully selected in three stages at three levels (woreda, kebele, and sub-kebele) by taking into account three criteria, namely presence and life span of rural water supply and sanitation services; types of water supply schemes (hand pump and spring); and accessibility of the kebeles (not too far and not too close to town and main road). On the basis of these criteria, Elka sub kebele from Andola kebele, Qamo sub-kebele from Kormet kebele , Suroo sub-kebele from Gabiba kebele and Galoo sub-kebele from Eddo kebele of the woreda will be selected for the study. Hence, using multistage sampling procedures and the above-described criteria, four sub-kebeles will be identified for the study.

6. Sampling

Forty-three kebeles in the district will be identified and categorized by ecological zone. Accordingly four Kebeles from all ecological zones will be selected using random sampling technique. Among the selected four kebeles, five percent of both women and men respondents will be selected on random bases for interview from each sampled Kebeles . In the same manner, in order to get individual women respondent, sub villages will be identified randomly after which individual households again be selected randomly. Important information will be gathered from sampled rural women from all the nationality groups, who are married and above the age of eighteen (18) years.

7. Data Collection Tools, Procedures and Definition of Important Terms

7.1. Data Collection

Both Primary and secondary data sources will be collected and used to successfully conduct the research .

7.2 Primary data

7.2.1 Questionnaire

A structured questionnaire for the purpose of collecting data from sampled households will be developed and tested prior to the survey and copied to the required amount. Most of the questions are close-ended and therefore pre-coded.

7.2.2 Key Informant Interview

Extensive conversation with eight key informants (four women and four men) will be undertaken from the kebeles selected for the study purpose in order to explore their insights, views, and perceptions towards the structural factors that are perpetuating inequalities between men and women in Water supply and Sanitation management committees (WATSANco), the participation levels of women and men in the course of the RWSS project cycles, and on the role of women in ensuring the sustainability of the water services. The criteria for the selection of in depth interview of participants are their knowledge of the area

and length of stay in the area. Key informants who are observant, reflective, and knowledgeable of the research area will be selected by considering their roles and status in the community.

7.2.3 Focus Group discussion

Focus group discussions (FGDs) will be undertaken in the selected communities. The participants in FGDs are men and women WATSAN committee members and men and women community members. Eight separate FGDs with women and men water committee members and additional eight FGDs with ordinary community members will be undertaken in all Sub-Kebeles. The rationale for the FGDs is to gain valuable insights into people's attitudes, understandings and perceptions regarding the role of women and men in the provision and sustainability of water supply and sanitation services in their community, to gain a variety of views and perception that is stimulated through interaction; group discussions and reflections. An interview guide is developed to direct the gathering of information from the point of view of women and men in the community. Each focus group has six to eight members. The members are homogenous by gender and their social status. The discussion with community members focuses on questions which are not more than ten. Discussions are facilitated by the researcher; whereas women's FGDs would be conducted by woman facilitator, while the researcher takes notes. As a result, empowering the participants through critical dialogue and reciprocally educative processes is possible. In addition, by taking each FGD as an entity, the information generated from each FGD will be analyzed in contrasting and comparative manner.

7.2.4 Observation

This method is used to gather qualitative data on for instance, structural design of the water points ; reliability of water use; level of water quality services; adequacy and level of operation time; operator of water points, household sanitary conditions; responsibility of water fetching; interaction levels of women and men; fencing and drainage of water points; and other relevant information. Through unobtrusive observation, data is collected on budget allocated for gender related activities, report formatting, monitoring and evaluation indicators at the project office level and water committees documents etc. Observation checklists are formulated to generate information on the above mentioned points

7.3 Secondary data

In order to strengthen the data collected from primary sources, existing secondary data in the form of reports (published and unpublished materials) will also be collected from relevant institutions in the area, such as, District Agriculture and Rural development Office, woreda water mineral and energy office, woreda health office, and woreda Women and Children Affairs Office. In addition Journals, documents and electronic materials from various websites will be reviewed.

7. 4. Data analysis

The qualitative data collection and analysis focused on understanding women within their social context using feminist research guiding principles will be applied. For effective data management, the researcher uses multiple analyses from the selection of the problem to final stages of writing. The approach to be used for data management and methods of analysis includes the following techniques:

1. Data interpretations are made on the basis of feminist research guiding principles and by using Gender and Development as a conceptual framework of analysis ;
2. Triangulating information is used in data analysis in order to reach at generalizations by overcoming the limitations of one method through the strength of another.
3. Information from various sources/methods is used to check and enrich one another.
4. Information gathered through the observations and in-depth interviews making up the qualitative research will be analyzed mainly in the course of the fieldwork. However, the qualitative material are further organized and processed, and interpreted in conjunction with information acquired through the other methods.

7.5 Definition of Important Terms

Sustainability

In this study , the term sustainability is used to mean ability to continue over a period of time ; or causing little or no damage to the environment and therefore able to continue for a long

time. In the document, sustainability was used for water supply and sanitation services. Factors such as policy context, institutional arrangements, financial and economic issues, community and social aspects, technology and the natural environment, Spare parts supply, maintenance systems; and monitoring have been found to be critical to achieving sustainability of rural water supply and sanitation services. Insufficient water facilities, poor physical structures, low reliability of the service and facility designs, distance and time needed to collect water and low awareness about their uses are some of the factors that affect the continued service of rural water supply and sanitation systems. In addition to these inappropriate technologies use is also one of the factors. Involvement of the communities in all stages of water supply and sanitation services is very crucial for the sustainability of rural water supply and sanitation systems. Sustainability rate of rural water supply and sanitation systems increases as a result of communities 'owning and managing their schemes, existence of management organization at the village level, protection of the water point, communities cost recovery for operation and maintenance, technology type and availability of spare parts. Active participation and involvement of women is crucial for sustainability of rural Water supply and Sanitation services.

Water Supply and Sanitation Services

Water Supply and Sanitation Services is used in the document to mean those infrastructures and facilities which are source of water for consumption of human being and those used for sanitation purposes respectively. Water Supply services which the study focuses on include Hand Pumps, developed springs, undeveloped springs , Motorized deep wells , Upgraded hand dug wells e.t.c.On the other hand, sanitation services or facilities covered in this study include household simple pit latrine, Ventilated Improved latrines. Here in this study, focus is given to those sanitation facilities used in rural communities either at household , family or communal latrines

Water Supply , Sanitation and Hygiene Committees (WATSANco)

In the study the term Water Supply , Sanitation and Hygiene promotion Committees is used to mean a group of persons elected by water users to govern and manage water supply and sanitation facilities. These committees are believed to improve sustainability of Water Supply and Sanitation services or facilities through better O&M and higher willingness-to-sustain the system. For many projects the creation of a these committees is a prerequisite for receiving

project assistance. The purpose of a water committee in most cases is to manage and oversee the system's operation which may include conducting preventive maintenance, collecting tariffs or payments for repairs, keeping records of financial transactions, manuals and blueprints, and sanctioning people for non-payment.

Sanitation

In this study, the term sanitation is used to mean interventions to reduce people's exposure to diseases by providing a clean environment in which to live; with measures to break the cycle of disease. This usually includes disposing of or hygienic management of human and animal excreta, refuse and wastewater, the control of disease vectors and the provision of washing facilities for personal and domestic hygiene. Sanitation involves both behaviors and facilities which work together to form a hygienic environment.

Water Supply

For the purpose of this study, water supply implies human uses of water such as drinking water, food preparation, and water for hygiene and sanitation uses.

Community Management

In this study, community management is used in the 'community management of water supply and sanitation systems'. It refers to the capabilities and willingness of the beneficiaries to take charge and determine the nature of development affecting them. In water and sanitation services, community management means that the community exercises responsibility for decision making and control over the subsequent execution of these decisions during project development. Community management of water supply and sanitation include a range of management tasks related to maintaining (tasks include, setting tariffs and collecting payment, carrying out routine maintenance), and making decisions about system extension. It is concerned with all issues pertaining to responsibility (ownership), decision making, authority and control of water supply and sanitation services. For communities, greater control means that services can be developed which more fully meet local needs.

Household

In this study, the term household is to mean a group of persons who live in the same housing unit or in connected premises and have common arrangements for cooking and eating food

Water points

In this study, the term water point is to mean distribution centers of developed water sources from which communities fetch water.

Traditional water source

Traditional water source is used in the document to mean naturally available water sources such as a river and pond; and sources developed through indigenous means such as hand dug shallow wells and springs

Woreda

The term woreda in the document is to mean administrative structure it is located below the region. It is equivalent to the term district. Woreda in rural settings consists of towns and many rural kebeles

Kebele

The term kebele is used in the document to mean a local administrative unit below woreda. It consists of many sub-kebeles and gottes. For the case of this study, all households located in the kebele are not users of improved water supply services

8. Chapterization

The final document of this study is to be presented as per the below described chapterization format. The First chapter of this study shall focus on introductory part. The definition of important terms will be presented in this chapter. The Second chapter of the study pays due attention to the presentation of review of related literature on the same subject that conducted by various agencies, researchers and organizations. The Third chapter purely deals with the research design and methodology of data collection and analysis tools. The detail data and presentation of the findings of the study will be presented under chapter four of the document. The fifth chapter mainly encompasses the Conclusion and Recommendations of the study 9. Time Estimate

Time required to complete this research is described by the following table

Table 1. Time required for the research

Ser No.	Research Activity	Time Required
1	Identification of Problem	2 week
2	Review of Literature	1 month
3	Identification of Objectives	2 week
4	Selection of Research Design	1 week
5	Selection of Sample	1 month
6	Selection /Construction of Tools for data collection	1 month
7	Pre-testing of Tools for data collection	2 week
8	Data collection	2 month
9	Editing of Data	2 week
10	Preparation of code book	2 week
11	Processing of data	1 week
12	Statistical Analysis of Data	1 month
13	Writing The report	2 month
14	Presentation of the report (Tying , Binding)	2 month
	Total	13 Months

10. Budget Estimate

A total amount of birr 14,500.00 (Fourteen thousand Five Hundred) Ethiopian birr will be required to finalize the research. The source of the fund is savings from my income and support from my family. I will cover 6000.00 (Six thousand) while the remaining 8,600.00 (Eight thousand Fix Hundred) Birr will be covered by my family. My friends have also promised to cover computer typing papers, pens, pencils both during actual field work and report writing. The details of the budget required is described by the following table.

Table 2 Indicates Budget required to undertake the research

S. No	Research Activity	Unit	No of persons	No of days	Payment per day (ETB)	Total payment (ETB)
1	Data Collectors	Persons	4	10	200.00	8000.00
2	Data Collection Supervisors	Persons	2	10	200.00	4000.00
3	Data Editor	Person	1	10	250.00	2500.00
4	Typing and Binding	Person	1	10	Free	Free
5						Total 14,500