

**THE ROLE OF WOMEN IN PARTICIPATORY FOREST MANAGEMENT:
THE CASE OF BELETE-GERA REGIONAL FOREST PRIORITY AREA IN
SHEBE SOMBO WOREDADA, JIMMA ZONE**

BY:

Habtamu Fikadu Lemu

**A Thesis Submitted to the College of Social Sciences and Humanities,
Department of Sociology for Partial Fulfillments of the Requirements for
Master of Arts Degree in Sociology and Social Policy**

June, 2016

Jimma, Ethiopia

JIMMA UNIVERSITY
COLLEGE OF SOCIAL SCIENCES AND HUMANITIES
DEPARTMENT OF SOCIOLOGY

THE ROLE OF WOMEN IN PARTICIPATORY FOREST MANAGEMENT:
THE CASE OF BELETE-GERA REGIONAL FOREST PRIORITY AREA IN
SHEBE SOMBO WOREDA, JIMMA ZONE

BY:

Habtamu Fikadu Lemu

Principal Advisor: Disasa Merga (Assist. Professor)

Co-advisor: Gudina Abashula (PhD Candidate)

**A Thesis Submitted to the College of Social Sciences and Humanities,
Department of Sociology for Partial Fulfillments of the Requirements for
Master of Arts Degree in Sociology and Social Policy**

June, 2016

Jimma, Ethiopia

Declaration

I, the one who signed below, declare that this MA thesis entitled: **“The Role of Women in Participatory Forest Management: The Case of Belete-Gera Regional Forest Priority Area in Shebe Sombo Woreda, Jimma Zone”** submitted to Jimma University in partial fulfillment of the requirements for the degree of Master of Arts in Sociology and Social Policy is my original work which has not been submitted for any degree at this or another University. All sources of materials used for this thesis have been duly acknowledged. The comments of my advisors and examiners have also been duly incorporated.

Declared by:

Signature

Date

Habtamu Fikadu Lemu

Approved by:

Principal Advisor: Disasa Merga (Assist.Prof.)

Co-advisor: Gudina Abashula (PhD Candidate)

External Examiner: Abeje Berhanu (PhD)

Internal Examiner: Dejene Gemechu (PhD)

Table of Contents

Contents	Page
Acknowledgments.....	i
Abbreviation and Acronyms.....	ii
List of Figures.....	iii
List of Tables.....	iv
Abstract.....	v
CHAPTER ONE: INTRODUCTION.....	1
1.1. Background of the Study.....	1
1.2. Statement of the Problem.....	4
1.3. Objectives of the Study.....	7
1.3.1. General Objective of the Study.....	7
1.3.2. Specific Objectives of the Study.....	7
1.4. Significance of the Study.....	7
1.5. Scope of the Study.....	8
1.6. Limitations of the Study.....	8
1.7. Conceptual and Operational Definition of Participation.....	9
1.7.1. Conceptual Definition.....	9
1.7.2. Operational Definition.....	10
1.8. Organization of the Thesis.....	10
CHAPTER TWO: LITERATURE REVIEW.....	11
2.1. Natural Resource Management Approach.....	11
2.2. Conceptualization of Participatory Forest Management.....	13
2.3. The Importance of Participatory Forest Management.....	14
2.4. Property Right Regimes over Resource.....	16
2.5. Participatory Forest Management in Ethiopia.....	17
2.6. Community Forest and PFM Formation Process.....	20
2.7. Policy Review on Forest Resource Management System of Ethiopia.....	21
2.8. Theoretical Review.....	23
2.8.1. Gender Theory.....	23
2.8.2 Feminist Theories.....	24
2.8.3. Participatory Theory.....	24

2.9. Conceptual Framework of the Study	26
CHAPTER THREE: BACKGROUNDS OF THE STUDY AREA.....	30
3.1. Belete-Gera Regional Forest Priority Area.....	30
3.2. Shebe Sombo Woreda.....	32
CHAPTER FOUR: RESEARCH METHODOLOGY.....	36
4.1. Research Design.....	36
4.2. Sources of Data.....	36
4.3. Sampling Procedure and Sample size Determination.....	36
4.3.1. Sampling Procedure	36
4.3.2. Sample Size Determination.....	38
4.4. Methods of Data Collection.....	38
4.5. Method of Data Analysis and Presentation.....	40
4.6. Unit of Data Collection and Data Analysis.....	40
4.7. Data Validity and Reliability	41
4.8. Ethical Consideration.....	41
CHAPTER FIVE: RESULTS AND DISCUSSION.....	42
5.1. Results of the Study	42
5.1. 1. Socio-demographic Information of the Respondents.....	42
5.1.2. Level of Women Participation in Belete-Gera PFM.....	44
5.1.3. Decision Making Role of Women in PFM of Belete-Gera Forest.....	49
5.1.4. Perceptions of Women towards PFM.....	51
5.1.5. Major Factors That Influence Women’s Participation in PFM.....	55
5.1.5.1. Factors Enhancing Women’s Participation in PFM	55
5.1.5.2. Factors Hindering Women’s Participation in PFM	65
5.1.6. Challenges of WaBuB of Belete-Gera Forest in Shebe Sombo Woreda	66
5.2. Discussion of the Study	67
CHAPTER SIX: CONCLUSION AND RECOMMENDATION.....	72
6.1. Conclusion	72
6.2. Recommendations.....	74

References

Annexes

Acknowledgments

First and foremost, I would like to thank the supreme, almighty God for giving me health, strength, patience and support to complete this study.

Next, I would like to express my special indebtedness to Mr. Disasa Merga, my thesis principal advisor, for he critically guided me while carrying-out this research from the topic selection stage to the final work of this thesis. To say honestly, his contribution is not confined to sacrificing his time used up in advising me in the research work, reading and shaping the thesis; but the moral support and encouragement he gave me is also invaluable.

I would also like to express my deepest gratitude to Mr. Gudina Abashula (PhD candidate), my thesis co-advisor, for his commitment in guiding and providing me invaluable comments and suggestion that made this thesis what it is. He also assisted me to view things from diverse angle.

I'm, likewise, indebted to all individuals and organizations who have contributed much in the process of carrying out this research. My special thanks go to Mr. Kituma, Head of Belete-Gera Regional Forest Priority Area District Forest and Wildlife Enterprise for his help with getting access to existing documents in relation to the topic under investigated.

Last but not least, special thanks go to all my friends and relatives who, in one way or another, helped me at the time of my happiness and stress through encouragements and moral supports to accomplish my MA Program. I have no word to express my heartfelt thanks for your contribution in my life and you have special place in my heart.

Abbreviation and Acronyms

CEDPA	Centre for Development and Population Activities
CF	Community Forestry
CFUG	Community Forest Users Group
DFID	Department for International Development
EFAP	Ethiopian Forestry Action Program
EIA	Environmental Impact Assessment
FAO	Food and Agricultural Organization
FDRE	Federal Democratic Republic of Ethiopia
GAD	Gender and Development
GTZ	Gesellschaft für Technische Zusammenarbeit/German Technical Cooperation
IFAD	International Fund for Agricultural Development
JICA	Japan International cooperation Agency
MOA	Ministry of Agriculture
NCS	National Conservation Strategy
NGOs	Non-Governmental Organizations
NRM	Natural resource management
PFM	Participatory Forest Management
RFPA	Regional Forest Priority Area
WaBuB	Waldaa Bulchiinsa Bosonaa/Forest Management Association
WBISPP	Woody Biomass Inventory and Strategic Planning Project
WID	Women in Development
UN	United Nations

List of Figures

Figure 1.1: Interrelation between Theories to Guide the Study.....	26
Figure 1.2: Conceptual Framework Explaining Relationship between National Policy Context and other variables of community forest.....	28
Figure 1.3: Schematic Diagram of Conceptual Framework for the Study.....	29
Figure 1.4: Map of Belete-Gera Regional Forest priority Area.....	31
Figure 1.5: Map of Shebe Sombo Woreda (Study area).....	35

List of Tables

Table 1: Distribution of Respondents by Age	42
Table 2: Marital Status of Respondents.....	43
Table 3: Literacy Status of Respondents.....	43
Table 4: Ethnic Composition of Respondents.....	43
Table 5: Household Size of Respondents.....	44
Table 6: Respondents' Frequency of Attending WaBuB Meetings.....	45
Table 7: The Forest Management Activities Respondents Participate In.....	46
Table 8: Frequency Distribution of Management Stages Respondents Participate In.....	47
Table 9: Level of Respondents' Participation.....	48
Table 10: Influential Decision Maker in Respondents' Household Activities.....	50
Table 11: Perceptions of Respondents towards the Importance of PFM	51
Table 12: Reasons Why Respondents Had Positive Perception towards PFM.....	52
Table 13: Major Factors Enhancing Respondents' Participation in PFM.....	56
Table 14: Benefits Derived From Forest Resources.....	56
Table 15: Respondents' Awareness about Effects of Deforestation.....	58
Table 16: Respondents' Response about Information They Got From the Stakeholders.....	60

Abstract

The objective of this study was to assess the role of women in Participatory Forest Management (PFM) taking the case of Belete-Gera Regional Forest Priority Area (RFPA) in Shebe Sombo woreda, Jimma Zone. Data were collected from 275 respondents through household survey as well as from key informant interviews and focus group discussion from different sampling units/groups, field observation and secondary documents. Thus, both primary and secondary data were used. Collected data were analyzed both qualitatively and quantitatively. Information obtained from field observation, focus group discussions and interviews were transcribed, organized and described in written text. Data obtained from household survey were analyzed by using descriptive tools such as frequencies and percentages to present results using table. The study result indicated that women are involved in all stages of participation in Forest Management Association or Waldaa Bulchiinsa Bosonaa (WaBuB) approach such as planning, execution, decision making and controlling stages as a member of household members of the approach in the Shebe Sombo woreda. Although women's participation in the forest management has improved compared to before the inception of PFM project of Belete-Gera Regional Forest Priority Area in the study area, their participation in controlling stage and decision making process particularly speaking up and power of influencing decision making process is found to be low. The study result shown that women in the study area have positive attitude towards the importance of PFM in forest management activities. They have great value for the forest in their day to day life. Both enhancing and hindering factors that influence women's participation in WaBuB approach were identified by this study. Identified enhancing factors of women's participation in the study area were: Benefit derived from forest resources, improved awareness about forest management, granting ownership right, homogeneity of interest on forest resource products, fear of displacement from their living area, environmentalism and accountability. Housework and child care burden, lack of incentives, perception of women on their femaleness and local people perception towards women's participation in outside activities were identified to be hindering factors of women's participation in forest management activities in the woreda. It is also identified that PFM has helped great in addressing challenges of gender inequity in the study area.

Key Words: Belete-Gera RFPA, Gender, Shebe Sombo woreda, Women Participation, PFM, WaBuB

CHAPTER ONE: INTRODUCTION

1.1. Background of the Study

According to Food and Agricultural Organization/FAO (2010), forests cover 4.033 billion hectares, about 31 percent of the earth's land surface. However, the Forest Resource Assessment of FAO (2015) shows that the global forest area has changed from 4.1 billion hectares to just under 4 billion hectares, a decrease of 3.1 % over the past 25 five years and the rate of global forest area change has slowed by more than 50 % between 1990 and 2015. It also further stated that this change results from a combination of reduced forest conversion rates in some countries and increased forest area expansion in others. To this end, FAO (2015) briefly described forest area of regions or continents of the world that in Africa, Asia, Europe, North America, Oceania and South America; forest area is 624, 593, 1015, 751, 174 and 842 million hectares respectively. This assessment also indicates that there is decreasing of forest area in Africa, North America, Oceania and South America especially biggest forest area loss occurred in the tropics, particularly in South America and Africa while increasing in the rest regions of the world.

The conversion of forested areas to non-forest land use is forest loss or deforestation and it has wide-ranging environmental and socio-economic implications (Gervet 2007). Deforestation is the main type of forest cover change in the tropics, including in Ethiopia (FAO 2010; Rahman and Sumantyo 2010). However, in Ethiopia, forest cover change is often more complex than simply deforestation (Zewdu and Hogberg 2000; Bekele 2003; Darbyshire, Lamp and Mohamed 2003). The general consensus is that large scale loss of forest cover has taken place given the country's long settlement and agricultural history. Yet, there exist few quantifications of forest cover change, and most of these cover recent time periods and small spatial scales (Solomon et al. 2013). This makes it difficult to put the changing percentage of forest cover in a historical time line (Zewdu and Hogberg 2000). In general, both clearance and regeneration of forests occurred sporadically until the twentieth century, after which deforestation became much more pronounced (Bekele 2003).

The total forest area of Ethiopia is estimated to be about 12.499 million hectares, this amount to 11.4 % of the total land area of the country (FAO 2015). The annual rate of deforestation in Ethiopia was estimated to be 1% from 1990 to 2010 that 141,000 hectares of forest in the country had been lost annually between 1990 and 2010 (FAO 2010). Federal Democratic Republic of Ethiopia/FDRE (2011) and Mulugeta and Tadesse (2010) estimated the average deforestation rate of Ethiopia by combining a number of studies that as it lies somewhere between 1.0-1.5% annually. According to FAO (2015), even though forest area was increased in Ethiopia from 2010 to 2015 by 0.3% which accounts for 40,600 hectares, the annual deforestation rate of the country from 1990 to 2015 is estimated to be 0.8%.

The main direct drivers of deforestation are small-scale agricultural expansion and fuel wood consumption, and to a lesser extent, illegal logging and forest fires (FDRE 2011). The forest management administration over the last 50 years in Ethiopia has also negatively affected the forest resource by restricting local communities' access and user rights (Tadesse and Alemtsehay 2012). After 1941, Emperor Haile Selassie declared a law to privatize land and limit access to forestland. In 1975, the Dergue regime came into power with a new proclamation, nationalizing lands and putting administration of land under highly centralized system. Dessalegn (2001:38) elaborated the situation as "... many rural policies of Dergue regime were worked against environmental objectives. Collectivization, villagization and resettlement, which were carried out on a large scale in the 1980s, were accompanied by extensive deforestation and soil erosion".

In 1991, the Dergue regime fall and a new government, Ethiopian People's Revolutionary Democratic Front, came to power. The fall of the Dergue regime further devastated the environment. To this end, Tarekegn (2001) pointed out the scenario as "after the fall of the Dergue regime there was widespread deforestation of forest areas, which were seen by the local population as state forests". In 1994, the new government issued a new proclamation, which was unimplemented because of the subsequent decentralization program (Abebe, Million and Andrew 2009; Gebremedhin 2008). *That is why the Forest Conservation, Development and Utilization Proclamation No.94/1994 of the transitional government of Ethiopia repealed by the forest Development, Conservation and Utilization Proclamation No.542/2007 to overcome the aforementioned problem.*

The lesser-control over the encroachers, defective forest guarding system deteriorated the effectiveness of the prior forest management scheme. So, in order to meet the situation, participatory forest management was introduced by involving the encroachers and previously marginalized local people. Thus, the introduction of decentralized forest management program is with the general objective of controlling forest degradation and achieving conservation of biodiversity on the one hand, and empowering communities to participate and improve their living condition on the other hand (Tadesse and Alemtsehay 2012; MoA 2012). The involvement of the local communities in forest management has now become a significant feature of the national forest policy and practice of the international community that supports forestry programs throughout the world (Fisher 1999; Poffenberger 2000; and Shackleton et al. 2002). Joshi et al. (2006) and Adhikari (2011) claim that community's participation in forest resource management and utilization with the legal status makes them responsible in biodiversity conservation and controlling forest degradation. Thus, it contributes to local people's income generation, development, improvement in their living condition and empowerment.

As far as community participation in PFM is considered, Adhikari (2011) argued that women's participation plays a crucial role as they are the primary users that engage in the collection of different forest products and know a lot about the uses of forest for various purposes that men may know little. Weyup et al. (2014) on their side argued that in addressing some key environmental problems, women play major roles as they closely interact with their environment as farmers, collectors of water and firewood. They are also the one who most suffer directly from environmental problems. Due to this fact that, Bingeman (2001) argues that giving attention for women's participation in environmental and resource management issues has policy and institutional implications. To this end, Agarwal (1997) emphasizes the need to concentrate on the material realities of men and women that necessitates their environmental dependence as well as the recognition of gender issues that influence their participation in environmental management. These criteria are central issues in examining critically the participation of women in Participatory forest management and organizations that are needed to achieve this purpose.

Due to the aforementioned reasons, international agencies and nongovernmental organizations (NGOs) like the International Union for Conservation of Nature that are influential in the

participatory forest management maintain a variety of gender strategies, guidelines, and resources. The World Bank forest strategy, for example, clearly states that “the sustainable use of forests requires the participation of all rural populations, including women” (World Bank 2002: 22). The strategy also states that although women’s needs often differ from those of men, many programs continue to overlook women’s specific needs regarding participatory forest management. This lack of gender awareness and responsiveness constrain the sustainable use and management of forests and forest ecosystems throughout the world.

In Ethiopia, since PFM was introduced in the mid-1990s a number of provisions have been made within the regulatory framework to promote it by involving local communities and non-state actors. For example, the Environmental Policy of Ethiopia (2007), the Forest Development, Conservation and Utilization Proclamation (542/2007), and the Forest Management, Development and Utilization Policy (2007) all recognize the involvement of local communities, organizations and the private sector in managing forest resources including their right to benefit from forest resources. The overall policy provisions of Ethiopia in the implementation of PFM deeply acknowledge the participation of local people. In this regard, the Constitution of Federal Democratic Republic of Ethiopia (FDRE 1995) recognizes that the people have the right to directly participate at local level development initiative as the exercise of the sovereign power of the people. Moreover, it states that people have the right to participate in the formulation of policies and projects in relation to any development activity and the government is duty bound to ensure people’s participation, specifically women’s participation (Articles 43 (2); 89 (6) and (7)). The recognition of the participatory rights of the people, including women’s participation is a leeway for the introduction and application of PFM in the forestry sector of the country.

Therefore, this study assessed the role of women in Participatory Forest Management of Belete-Gera Forest Priority Area in the case of Shebe Sombo Woreda, Jimma Zone.

1.2. Statement of the Problem

Forest decentralization programs have rapidly spread in developing countries in the last decades of the 20th century (Agrawal, Chhatre and Hardin 2008). Support for the programs is emanated from grounds of economic efficiency, public accountability, community and individual

empowerment; as well as allocative efficiency (World Bank 2009). These reforms are designed to recognize forest resource ownership and use rights of the diverse local people making a living from these forests. These reforms are expected to reconcile both conservation and livelihood needs. In particular, forest decentralization is aimed at enhancing peoples' participation in management and utilization of the forest resources which in turn leads to the preservation of the forest resource, poverty alleviation and improvement in the livelihoods of the local people. Thus, managing forests responsibly and sustainably requires a balanced approach encompassing the three pillars of sustainability – economic, social and environmental (FAO 2015).

It has aforementioned that forest resource management particularly participatory forest management should also be socially beneficial in addition to economic and environmental to make it fully sustainable. To this end, (Kelbessa and De Stoop 2007) described that the social benefits of a successful PFM implementation include not only benefit sharing, but also the building of an effective and just local governance as well as democratization. In the process of introduction and implementation, the relations between several stakeholders improve as they have to agree on common outputs. Social interactions that are important for effective PFM implementation are: empowerment; involvement; negotiation and collective decision making. Thus, it is due to these reasons that different researchers from diverse academic backgrounds attracted to conduct research on participatory forest management with different area of focus in their studies.

Some scholars forwarded that it is important to conduct studies on the factors that affects the success of common resource management in which forest is one (Agrawal 2001; Poteete and Ostrom 2003). In line with this, some researchers have tried to assess factors affecting community participation in forest conservation and management in different parts of Ethiopia with an aim to assess and describe its contribution in successful establishment as well as implementation of PFM. Among them, Alemtsehay (2010), Tadesse and Abay (2013), Tewodros (2008), and Terefe (2003) have concluded that for successful forest conservation, community participation and involvement is essential. Thus, it is also true for women as a part and parcel of community.

Other researchers have also been conducted research on participatory forest management and its impacts on the livelihoods of the local people in different parts of Ethiopia. For instance, Gobeze, Bekele, Lemenih and Kassa (2009), Yemiru (2011), Tadesse and Alemtsehay (2012) have find out that PFM has contributed in the improvement of the livelihoods of participants beside forest conservation. Out of these researchers, it was only Gobeze et al. (2009) who have tried to mention about the improvement of the involvement of women in decision making, benefit sharing and role in forest management of Bonga forest in Kafa Zone, South Nation, Nationalities and Peoples National Regional State of Ethiopia following the introduction of PFM. However, they never mentioned factors that contributed in the improvement of women participation in that forest management even though gender issue is context specific in its nature.

The results of the researches of other researchers on participatory forest management in relation to people's participation in forest management specifically in terms of gender indicates that women share of active participation in participatory forest management was very low in compared with their male counter parts. They also found that men hold more decision-making powers and have more extensive rights over forest resources than women (Melaku 2012; Tadesse and Abay 2013; Dhali et al. 2012). Even the result of research conducted by Adhikari (2011) in Nepal entitled with *Women in Forest Management: a Case Study of Dharapani Women Community Forest Bharatpokhari VDC* shows that women are working only as an actor but the real actors are male even though it was established to be managed only by women.

The aforementioned previously conducted studies in Ethiopia on participatory forest management by economists and scholars from forestry background mainly focused on the environmental and economic benefits of such approach with exception of Gobeze et al. (2009) and Tadesse and Abay (2013). In addition to that the focus area of different researches which have been specifically done on Belete-Gera participatory forest management was also on forest condition and forest based livelihoods. For instance, Wondimagegn, Kaba, Kiflu and Zerihun (2009); Kitessa (2010); Takahashi and Todo (2013) can be mentioned. Thus, they fail to address the level of women's participation in such process especially in planning and decision making, contribution of women in forest management and their perceptions towards participating in forest management, the socio-cultural, economic, and institutional factors that affect women's participation from sociological point of view.

Therefore, this study has tried to investigate women's role in participatory forest management approach and their perception towards this approach as well as major factors that influence their participation using sociological perspectives with particular emphasis on Belete-Gera participatory forest management in Shebe Sombo Woreda, Jimma Zone.

1.3. Objectives of the Study

1.3.1. General Objective of the Study

The general objective of this study is to assess the role of women in participatory forest management with particular emphasis on Belete-Gera Regional Forest Priority Area in Shebe Sombo Woreda, Jimma Zone.

1.3.2. Specific Objectives of the Study

The specific objectives of the study are:

- To examine the level of women participation in PFM of Belete-Gera forest
- To assess their decision making role in PFM of Belete-Gera forest
- To examine the perceptions of women towards PFM in the study area
- To identify the major factors that influence women's participation in PFM in the study area

1.4. Significance of the Study

This study will have three major benefits: First, the finding of this study will hopefully be of scientific contributions for those who are interested to make further studies in similar issues at different geographical settings. Second, it will also help to inform policy makers to genuinely involve gender mainstreaming issue with special emphasis on women's participation in forest management activities. Third, this study will have a contribution to the current literature on common resource pool. It will also have contribution on how to establish and manage common resources successfully through collective action by taking gender issue into consideration (PFM in this case). Thus, this research contributes to the current literature on the role of women in participatory forest management to manage forest in sustainable manner.

1.5. Scope of the Study

It is beyond the capacity of the researcher to cover all issues in relation to Participatory Forest Management due to time and financial constraints. Thus, the researcher was interested to conduct this study on *The Role of Women in Participatory Forest Management: The case of Belete-Gera Forest Priority Area in Shebe Sombo Woreda, Jimma Zone*. Belete-Gera Regional Forest Priority Area (RFPA) covers Shebe Sombo and Gera Woreda of Jimma Zone, Oromia National Regional State. However, the researcher undertook research on the participatory forest management of Belete-Gera forest by taking Shebe Sombo Woreda as study area. There are three rationales for choosing Shebe Sombo Woreda as a study area. First and most, even though PFM was established in the Woreda in 2003, there is no research conducted yet on the role of women in PFM under this study area as far as the knowledge of the researcher is concerned. Thus, the researcher interested to assess the role of women in the implementation of PFM in the Woreda. Second, the annual performance evaluation record of Oromia Forest and Wildlife Enterprise, Jimma Branch shows that PFM of Belete-Gera forests in Shebe Sombo Woreda as a role model for other PFM under the enterprise such as Botor-Bacho, Sigimo-Setema and Tiro-Abelti PFM that it is considered to be better in implementation. Finally, because of its proximity to the researcher's hometown- Jimma town, it is easy for the researcher in accessing transportation to go and come back to his hometown frequently during the of time data collection. In terms of research method, this study is delimited to triangulation, which is assumed to be appropriate in conducting this study.

1.6. Limitations of the Study

This study is conducted within limited time and cost as part of academic degree i.e., for partial fulfillment of the degree of Masters in Sociology and Social Policy Program. The study emphasized only on the role of Women in Participatory Forest Management of Belete-Gera Regional Forest Priority Area in Shebe Sombo Woreda, Jimma Zone. Thus, the finding and conclusion drawn from the study may not be generalized exactly in the same manner for other places and context. Nevertheless, the study finding briefly indicated the role of women in PFM as well as major factors that influence their participation in the forest management of the study area. Hence, the findings will be of greater interest for scientific and management purposes.

1.7. Conceptual and Operational Definition of Participation

1.7.1. Conceptual Definition

Participation is the central element in participatory forest management and a complex issue and the interplay of various actors and factors are involved in ensuring its application properly. “Participation” in its simplest of meanings implies people taking part, sharing, or acting together (Dhali et al. 2012). It is basically a political process concerned with redistribution of power in a society. This usually involves transfer of administrative and financial powers from ‘haves’ to “haves not” and sharing of technical and legal information with the local people whose participation is sought (Singh 1992). Participation is shared understanding and empowerment leading to joint decision-making. It starts with consultation, moves to negotiation and ends with decision-making and action (IFAD 2001). Local participation is also defined as empowering people to mobilize their own capacities, be social actors rather than passive subjects, manage the resources, make decisions, and control the activities that affect their lives (Brandon and Michael 1993).

One of the common distinctions made by some scholars and development practitioners is that of ‘participation as a means’ and ‘participation as an end’ (Burkey 1993; Cooke and Kothari 2001; Kumar 2002; Oakley 1991). Participation as means implies the use of participation to achieve some pre-determined goals. Participation as an end is viewed as an active, dynamic and genuine process which unfolds over time and whose purpose is to develop and strengthen the capabilities of rural people to intervene more directly in development initiatives (Cooke and Kothari 2001; Oakley 1991). As an end, participation is seen as the empowerment of individuals and communities in terms of acquiring skills, knowledge and experience, leading to greater self-reliance (Burkey 1993).

According to United Nations (1975), people’s participation entails three interrelated but distinct processes: (1) the involvement of the people in decision-making, (2) the eliciting of their contribution to development programs, and (3) their participation in sharing the benefits from the development process.

1.7.2. Operational Definition

In this study, the United Nations (1975) definition on people's participation provided under conceptual definition of participation will be taken as a guiding definition. Participation will also be taken both as a means and as an end as described under conceptual definition. It is understood as a process of empowerment. Using Uphoff's (1991) classification of participation, the focus of this study will be on the following stages of participation: (1) in decision-making, (2) planning and implementing of the participatory forestry activities (3) participation in social and economic benefit sharing. The operationalization of participation in this study is therefore:

- The number of women taking part in leadership position of WaBuB
- The frequency of women attending meetings called by WaBuB committees
- The percentage of active women involved in planning up to monitoring and evaluation activities of forest management
- The numbers of women participating in social and economic benefit sharing of participatory forest activities.

1.8. Organization of the Thesis

Background of the study, statement of the problem, objectives, significance, scope, limitation of the study as well as conceptual and operational definition of participation are the main body incorporated in the first chapter. Review of literature is discussed in detail in chapter two. Belete-Gera Regional Forest Priority Area and Shebe Sombo woreda are briefly described in the third chapter. In the fourth chapter, the research methodology used in this study is presented. In the fifth chapter, findings from the household survey, key informants interview, direct observation, focus group discussions and secondary sources are presented and analyzed using both quantitative and qualitative methods of data analysis. In the final chapter, conclusion and possible recommendations are presented.

CHAPTER TWO: LITERATURE REVIEW

2.1. Natural Resource Management Approach

In many parts of the world local peoples have been managing their natural resources based on their traditional knowledge or indigenous knowledge before the stewardship role of the state. This was because local people were able to manage natural resource through complex interplay of mutual benefit and support. Their indigenous knowledge and skill played great role in managing the resource (Tirhas 2009). Nevertheless, the intervention of the state with their wholehearted interest to have control over those commonly managed resource brought a disturbances to indigenous natural resource management system (Borrini-Ferabend 2000). This has resulted in continuous forest degradation in the world.

The initiation and concern for managing natural resource dates backs to the 1970s, since the emergence of alternatives development approaches. Different actors have attempted to treat the environmental problems with simple, neat solutions focusing on biological and or technical solution and neglecting the social dimension (Bryant and Bailey 1997). Contrary to such views, however, resource management comprises ecological, social, economic, legal, and political aspect in relation to community participation (Castren 2005). Hence, management of forest resource needs participation of community around the forest.

Natural resource management tasks has been shown as co-management with participatory approach, where the objective is to operate a program for rural people and communities so much as to set up a program that will be managed with them, devolving significant authority to local institutions (Uphoff 1996). At the heart of various debates concerning the proper management of natural resources management, there are differing values and interests concerning the natural environment and the proper relationship of humans to their ecological surroundings. It is obvious that natural resources like water and forests are common property resource. Common resource management requires collective action, which in turn requires member cooperation to manage their resource effectively (Ostrom 1990). As such, social, cultural and compensating mechanism plays an effective role in the management and development of community forest resource. In this

context, it is vital to trace how long terms benefits and mutual consent leads to the successful participation of users and the consistent success of community forest users groups.

There are different influencing factors of benefit sharing which guided through the principle of common pool of forest resources management (Adhikari 2011). The national level benefits and local level benefits both shared in the community forestry through arrangement between government and community (Carlsson and Berkes 2005). The state owns the ownership of land and the community owns the rights of resources utilization and management. Therefore, the provisions of governmental laws and regulations including various directives and community structure including cultural and normative values shape the relationship and have a great effect on the activities of the community forests in benefits extraction and distribution. Paudyal (2008) argued that some of these major influencing factors are community characteristics such as ethnicity and wealth ranking. More homogenous communities in ethnic composition and average wealth ranking users have fewer disputes on benefit distribution and other managerial aspects. Moreover, Nigheingle (2003) and Paudyal (2008) have described the following criteria to assess group's effectiveness in participatory forest management.

Socio-cultural Factors: The membership and leadership has a great impact on the benefit sharing mechanism in participatory forest management of community forest. Tradition, norms and values as well as perception and attitudes of local people towards benefits from forest resource products also influences benefit sharing as well as their level of participation in forest resource management.

Institutional Factors: The decision-making process and mechanism in operational plan and their customary arrangement of implementation measures affect community forest management. Others factors like punishment against rule breaking, existing arrangements for discussion of common problems, collective choice arrangements, relationship between user groups and the state, monitoring of the resource condition, congruence between appropriation, provision rules and local conditions affects benefit sharing of forest users group. These also affects their level of participation and decision making process.

Economic Factors: The transparencies of social development activities have a major role in management and the decision of benefit distribution. Moreover, socio-economic condition of users and their income sources, level of education, formation of Community Forest User Groups and its institutional development, inclusion or exclusion criteria in the group may play a great role to give more attention for sustainability of community forests.

2.2. Conceptualization of Participatory Forest Management

The concept of resource co-management in general and forests in particular that incorporates state and citizen participation has been around for decades and has changed in theory, practice, and terminology over the past fifteen years (Farrigan 2005). There are various definitions given to participatory forest management among different scholars. Hobley (1996) expressed the term participatory forest management was used as an umbrella term to include shared forest management, joint forest managements, collaborative forest management and community forestry, Community based forest management. According to Weinberg (2010) participatory forest management is a mechanism to protect forests and enhance the livelihoods of communities who use and benefit from forests in the process. Participatory forest management is used as a broad term to describe systems in which communities (forest users) and government services work together to define rights of forest use, to develop ways of sharing management responsibilities, and to agree how to divide forest benefits.

PFM refers to the legal empowerment of local communities to manage forest resources for, in the first instance, their sustained livelihoods, and in the second instance, conservation values (Zelalem 2005). Borrini-Feyerabend (2000) defines PFM as a ‘situation in which two or more social actors negotiate, define and guarantee amongst themselves a fair sharing of the management functions, entitlements and responsibilities for a given territory, area or set of natural resources’. Participatory approaches to natural resource management encompass ideas about the desirability of citizens actively engaging in the institutions, policies and discourses that shape their access to resources. Through participation in collective resource management, it is claimed that people can re-negotiate norms, challenge inequalities, claim their rights and extend their access (Cleaver 2007).

The essence of PFM plan are common-property regime and are a body of system of environments, resources, and conservation programs participating local peoples that can be more generally termed as 'participatory conservation'. Participatory conservation is a way of approaching conservation initiatives, which has emerged along with participatory approaches to development since the 1970's (Hobley 1996). From 1890s-1970s conservation was promoted throughout the world using exclusionary means to conserve landscape from human use, like national park model from state led bureaucratic, technocratic or expert driven approach (Berkes 2004). This model remain common but have lost popularity for numerous reasons, within their boundaries as well as their inflicting negative social impact on local population dependent on the resource (Berkes 2004). Taking into consideration about the role of communities in conservation as part of participation, benefit will be gained as conservation incorporate multiple scales of ecological, social, political, and economic concerns (Berkes 2004).

2.3. The Importance of Participatory Forest Management

PFM attempts to secure and improve the livelihoods of local people dependent on forest resources by involving all stakeholders in the process of forest management, understanding their needs and situations, allowing them to influence decisions and receive benefits, and increasing transparency (Hobley 1996). But without clear property rights, as long as resources have value, they will be used in less than ideal ways and almost certainly will be degraded, often to the point where they end up close to worthless. Sometimes this phenomenon is called the "Tragedy of the Commons" (Hardin 1968) and reflects the idea that potentially very valuable resources can be degraded when it is not clear who gets the products generated from natural resource investments and/or who has the right to control resources. Establishing clear property rights through appropriate institutional arrangements is therefore perhaps the critical prerequisite to enhanced tree planting, stewardship, management, and tree cover in many low income countries (Mekonnen and Randall 2008).

As scholars rightly put it, PFM is process oriented activities and in these activities the main actors are the government and community whether their roles and responsibilities can vary depending on the resource base (Borrini-Feyerabend 2000). There is no generalized model for a successful PFM approach, but in principle should be based on the existing traditional use,

management rules and traditional institutions (Irwin 2004). Of the different collective decision-making rules, those related to property rights have long been recognized as an important precondition for effective management of the commons. The original argument for increasing community participation in the improving of environment project arise from the need to better target people's need, by including indigenous knowledge, and ensure that benefits are fairly divided and lower management cost (Irwin 2004). The economic reason behind PFM is that the communities will conserve forest resource if benefits of management action outweigh the cost of forest conservation. Therefore, the issue is what benefit the communities are gaining out of involving themselves in the process of forest management or tree planting in some case (Zelalem 2005). Forest areas that are managed by or together with rural communities are likely to have lower levels of forest disturbance and improved forest condition than areas that are either under exclusive state management or under open access regime (Tom 2009).

The general viewpoints of managing forest in common is to convince people of the benefit of sustainable utilization and by guaranteeing use rights to engage them in sustainable forest management. For this to be successful, people must be convinced that it is indeed possible to maintain the resource over indefinite period of time provided use is regulated. Second, it must be possible to guarantee continued streams of benefit from forest products and services (Yonas 2007). The forest products under PFM are the most important sources of income contributing to household per capita income and per capital cash income. Governing common pool resources such as forests is difficult because such resources combine the most problematic aspects of resource governance, namely subtractability and excludability (Ostrom 1990). These resources are used by multiple individuals while generating finite quantities of resource units, where one person's use subtracts from the quantity of resource units available to others. Moreover, most common-pool resources are sufficiently large that multiple actors can simultaneously use the resource system, and excluding potential beneficiaries is very costly (Ostrom 1990). The issue of tenure is also very important. Right of access to and /or ownership of forest resources completely change the perceived and actual values of the resources to the community. Empirically, secured property rights have been linked to more sustainable forestry (Castren 2005). According to impact assessment made by JICA on Belete-Gera Regional Forest Priority Area (2011) "on average, where there are PFM and people feel a sense of beneficiaries and ownership forest area

increases by 1.5 percent in the first two years of study, while forest area where there is no association declines by 3.3 percent (p16)". Therefore institutional arrangement like property right regimes is needed so as to conserve the natural resource and it provides incentives for such activities.

2.4. Property Right Regimes over Resource

According to Melaku (2003) institutional arrangements like property right regimes have important bearing on resource conservation and management. This is because some property right types provide incentives for such activities while others do not. Property right is a deliberate social contract where right over property are constitutionally or customarily conferred, outlined and enforced by the state as well as by community. Bromly (1998) defines property right as institutional arrangements to govern access to land and other resource as well as the resulting claim of the title holder on those recourses and the benefits they generate. Property rights regimes define actors' right of access and control property. They are hence socially defined entities (Yeraswark 2000). Clarifying the difference and similarities between property system, rights and owners is an essential first step towards an understanding of interaction between people and forest (Gibson et al. 2000). Malaku (2003) identified four types of property regimes: state property, private property, common property and open access.

Private Property Right Regimes: is situation where an individual exercise an absolute right over his property, particularly over natural resources where there was no law to regulate utilization from start (Bromley 1998).

State (Public) Property Regimes: The state as a social institution is assumed to be the ultimate support of the nation's resources, heritages and sovereignty. Such resources as national parks, conservation forests, waterways and riverbanks, mountains and gorges may remain under the protection of the state for protection purposes (Melaku 2003).

Common Property Regimes: Here, two categories are identified: regulated and unregulated. The regulated common property is different from the unregulated in only one feature. In the former not only utilization is controlled, but also the benefit to members is proportional to input

from each (Melaku 2003). It is a property rights arrangement where resources are owned commonly and users allocate right and duties to members (Ostrom 1990). It is based on inalienable land rights shared by members of a social group (Yeraswork 2000). In unregulated common property regime resources are still owned commonly and non-members are excluded; but consumption may not be necessarily equal among members because utilization is uncontrolled. This case is due to factors such as size or nature of property (Melaku 2003).

Open Access Property Regimes: This is situation where no one holds rights to a resource and nobody is excluded or they are used by all, but cared for by none (Melaku 2003). Destruction or degradation of forest resources is most likely to occur in open-access forests where those involved, or external authorities, have not established effective governance (Ostrom 1990).

2.5. Participatory Forest Management in Ethiopia

In Ethiopia, the involvement of local people in natural resource management activities can be traced back to the countrywide massive programs for natural resource conservation and rehabilitation that were initiated as a reaction to the 1972/73 famine (Yeraswork 2000). According to Yeraswork (2000), communities' involvement in these programs, sometimes also referred as participation, is understood to be a contribution of labor and resources that often is arranged together with food for work payments. Particularly, the involvement of people in soil and water conservation and afforestation programs was a top-down and coercive process. Thus, the efforts were not complemented with the necessary commitment and enthusiasm from the local people and were even met with resistance that ended with little outcome to show for the enormous investments made (Yemiru 2011). Yeraswork (2000) indicated both the lack of appropriate local level institutions and the ineffective mode of the participation process that failed to implement successful community based natural resource management. Local level organizations (Peasant Associations), despite their mandate to organize collective action and manage common goods, had no prior experience in natural resource management (common property management) and they were discredited in the eyes of their members due to their association with the regime, where they served as instruments of unpopular rural programs. Owing to the large area under the Peasant Associations' jurisdiction, there was a low level of shared sense of community that resulted in less effective collective action (Yemiru 2011).

Management of natural forests has been the task of the state, particularly following their designation as state forests by the 1975 proclamation that nationalized rural lands and forest resources. Following this nationalization, local people were legally prohibited from access to the traditional benefits they used to get from state forests. However, the enforcement of the state ownership was weak and inefficient (Bekele 2003). The 1980 forest and wildlife conservation and development proclamation (Proclamation no. 192/1980) defined most of the natural forests as state forests. A government order further identified all forest areas above 80 hectare as state forests, although this was not recognized by local administrations as it was not issued as a legal regulation (Bendz 1988). This has created uncertainty about ownership in most forest areas. The traditional or customary rights to forest use by local people therefore still loom large in real practice, creating a de facto legal pluralism and strengthening an open access situation with no or limited incentives for the sustainable use and management of forest resources (Bendz 1988; Stellmacher 2007). The situation typically portrayed Fitzpatrick's (2006) description of the conditions for the evolution of an open access situation in third world countries – the presence of heterogeneous claimants; high stakes in terms of livelihood security; a certain amount of state incapacity or illegitimacy; some degradation in local norm-based systems; and a degree of antagonism and overlap between legal and norm-based property arrangements. This situation combined with the pressing need of local people for forest products and land for crop production and grazing precipitates an ever shrinking forest area and environmental degradation.

Participatory management of natural resources has become a major subject of policy debates in Ethiopia in the recent past on a par with food security and rehabilitation of natural resources (Keeley and Scoones 2000). The participatory agenda was revived following the extensive destruction of conservation structures and deforestation activities during the change of government in the early 1990s. These incidents were conceived as manifestations of public discontent and the failure of the heavy-handed, top-down, and campaign style approaches to natural resources management. As a result, discourses on the need to understand rural livelihoods, local contexts, and the need for consensual involvement of the community in development and conservation activities began to gain ground in the policy debate. Concurrently, the National Conservation Strategy (NCS 1994) of Ethiopia widely acknowledged the need to

integrate development with environmental protection and the importance of the participation of local population.

The conservation strategy adopted a decentralized approach in developing the strategies that facilitated the consideration of ecological diversity and the integration of institutional and stakeholders' conflicts in the use and management of natural resources (Wood 1993). As stated in the NCS (1994:1), "If a conservation project is to be really participatory, the community has to feel, at least as much as the planning expert, that it has decided that conservation is its priority problem, and that it wants to undertake specified conservation measures, e.g. planting trees." In addition, two important aspects of participation are emphasized in the National Conservation Strategy of 1994 that it stresses an equal share of power in decision-making between local people and the government (experts) and, 2) the need to define the participating stakeholders based on their perception or view of forests as resources. Further, the decentralization processes started by the current government and the increasing emphasis on participation in the international development literature also have their impact in strengthening the participatory agenda (Keeley and Scoones 2000).

Participatory forest managements was introduced in mid-1990s as one of the solutions to solve the problem of open access to forest resources and promote ownership, accountability and sustainable forest management in Ethiopia through community participation (Gobeze et al. 2009). It was introduced to Ethiopia by some NGOs and donor agencies, notably FARM Africa, SOS Sahel, GTZ and JICA. These NGOs and donor agencies attempted to respond to the forest management problems in Ethiopia through the introduction, adaptation and establishment of PFM projects. The few PFM pilot activities that started in Ethiopia include projects at Chilimo and Bonga forests by FARM Africa, at Borana by FARM Africa and SOS Sahel, at Adaba Dodola by GTZ, and Belete Gera forest by JICA (Temesgen *et al.* 2007 and Terefe 2002). Environmental conservation and social issue was the two main objectives of introducing PFM in Ethiopia. The one emphasizes mitigation of biodiversity loss, forest degradation and deforestation; while the other views a concern for livelihoods in forest neighboring areas as well as the rights to utilize forest resources legally. These two are closely interlinked under PFM (MoA 2012; Winberg 2010).

2.6. Community Forest and PFM Formation Process

Article 2 (6) of the Oromia Forest Proclamation (2003), defines community forest as “the state forest where the use right and management responsibility is transferred to organized local community or forests developed by organized community on communal land.” This Proclamation has recognized in clear terms the users’ right and management responsibility of the local communities on the state forests which are transferred to be managed by them. Community forestry is a policy meant for the benefit of the poor, by bringing about social changes and establishing efficient institutions at the local level. The Oromia Forest Proclamation (2003) also states about strengthening of community participation on forest development and protection. As part and parcel of community, women participation is also considered. According to (FAO 1998), community forest is any situation, which intimately involves local people in forestry activity in which it is a community oriented forest management system where local users of the forest control, manage and utilize forest resources for their own benefits. The ultimate objective of community forest is to raise the standard of living of the local community and conserve the forest.

According to MoA (2012), PFM is used to describe systems in which communities and government institutions providing technical services in the forest sector work together by defining the rights of forest resource use, identify and develop forest management responsibilities, and agree on how forest benefits will be shared between forest users– the community and the government partner. Therefore, PFM is considered as one of the viable options in forest resource management with active involvement of the user communities at all stages, i.e. mobilization, planning and implementation. MoA (2012) further states the common features across all the PFM models exercised in Ethiopia are the introduction of the concept, popularization and community mobilization; establishment of Forest Management Associations or Community Based Organizations, participatory forest resources assessment, forest management plan preparation, signing of management agreement and finally implementation of the management plans. Gender balance within PFM system is also very essential and needs to be considered in its establishment. Mainstreaming gender issues in PFM practice is aimed at achieving gender balanced development. It promotes and practices development initiatives (in this case PFM) that have equal involvement and roles for, and impact on, both men and women.

When investigating forest users and uses, it is important to understand distinct gender roles and interests in forest use. Men and women will use different forest products and therefore have specific knowledge and information concerning those products. For instance, women are usually the ones responsible for fuel wood collection while men are usually the ones involved in timber cutting and sale. Therefore, mainstreaming gender issue is very crucial in PFM formation process (Farm-Africa 2007).

2.7. Policy Review on Forest Resource Management System of Ethiopia

In the past, large forests were managed as crown property by emperors and kings basically as sources of fuel wood and timber for the royal households (Amogne 2014); such forests were protected and encroachment was forbidden (Dessalegn 2001). According to Sisay (2008), the first elaborate and modern legislation on forest resources came during emperor Haile Selassie I (1930-1974) in 1965 which gave recognition for three forms of forests (namely state forest, private forest and protected forest). The main objective of the forest legislation during the 1960s was not so much to promote resource conservation but rather to enlarge the sources of state revenue (Sisay 2008; Dessalegn 2001). This shows that the forest resource management paradigm during that time was environmental protection type. The forests were preserved and protected for their economic value mainly as a source of fuel wood and construction material in which it led an extensive deforestation because the legislation placed all large forests under state ownership, and put severe restrictions on the use and management of private forests. The schemes were restrictive and had a damaging impact on the livelihood of the people who lived in and around them (Amogne 2014; Dessalegn 2001).

In 1980, Dergue regime (1974-1991) proclaimed a new law called forest and wildlife conservation and development proclamation No. 192/1980 by stating that the forest cover was depleted because of the selfish interest of the aristocracy and the nobility of the previous government (Sisay 2008). Paradoxically, according to Yeraswork (2001), natural forests were used as spring boards for plantations that outwardly expanded at the expense of peasant holdings during the *Dergue* regime in the course of time, which turned community members against the resources. Dessalegn (2001) described the situation as “many of the state forests managed by the ministry of agriculture during the *Dergue* regime were enlarged by expropriating farms or

grazing land. Afforestation thus posed a threat to many peasants because it encroached on farmland, evicted households living in or near it, and took away land that was common property and had economic, social or cultural value (Amogne 2014). State environmentalism during the *Dergue* era, as argued by Dessalegn (2001), had placed high emphasis on government control of environmental assets on one hand, and the protection of such assets by restricting or prohibiting their utilization by the surrounding community on the other hand.

According to EPA (1998), the most negative environmental impact during the *Dergue* regime came from policy and regulatory interventions that increasingly and cumulatively eroded the rights of individuals and communities to use and manage their own resources. In addition, programs designed by the *Dergue* Regime like collectivization, villagization and resettlement approaches were implemented with devastating effects on forest resources of the country (Tarekegn 2001; Messay and Bekure 2011).

When we look at the forest management system of Ethiopia since 1991, in 1994, a new proclamation came into picture, namely, “Forest conservation, development and utilization” proclamation No. 94/1994. Another great endeavor was the establishment of Ethiopian Forestry Action Program (EFAP), which is a working document that has direct relation with forest development and conservation (Sisay 2008). In 2007, the council of ministers adopted a forest policy which gives due attention to forest development and conservation considering its significance to the national economy, food security and sustainable development of the nation (Sisay 2008). The overall objective of the policy is “to conserve and develop forest resources properly so that there could be sustainable supply of forest products to the society and contribute to the development of the national economy.” As stated in forest development, conservation and utilization proclamation No. 542/2007 (FDRE 2007), in order to properly conserve, develop and utilize the forest resources of the country, major forestlands should be designated as state forests, their boundaries should be demarcated with the participation of the local community and they should be registered as protected and productive forests (article 8:1); forests shall be protected from forest fire, unauthorized settlement, deforestation, undertaking of mining activities and other similar dangers (article 9:7). It also states that the local community may reap grasses, collect fallen woods and utilize herbs from a state forest in conformity with the management plan

developed for the forest by the appropriate regional body. The harvesting of forest products, grass and fruit as well as the keeping of beehives in state forests may be permitted based on the objective realities of the locality (Article 10:3-4) and state forests shall be used to generate income from tourism (Article 10:5).

Generally, the policy and legal framework in Ethiopia provides reasonable legal basis for the implementation of PFM and these include the principles contained in the National Constitution, Conservation Strategy and Environment Policy of Ethiopia. The overall policy provisions deeply acknowledge the need for public participation. In this regard, particularly the Constitution of the Federal Democratic Republic of Ethiopia (FDRE 1995), recognizes that the people have the right to directly participate at local level development initiative as the exercise of the sovereign power of the people. Thus, people have the right to participate in any development activity and the government is duty bound to ensure people's participation, especially women's participation (MoA 2012).

2.8. Theoretical Review

2.8.1. Gender Theory

Gender is socially constructed ideological differences and relations between men and women that vary by situation and context. Gender is not something we are born with, and not something we have, but something we do (West and Zimmerman 1987) – something we perform (Butler 1990). Gender analysis requires going beyond statements about “women” and “men” to understand how historical, demographic, institutional, cultural, socio-economic and ecological factors affect relations between women and men of different groups, which partly determine forms of natural resource management (Adhikari 2011).

Gender theories are more about the socially constructed roles of men and women as well as the relationships between them in a given society with the inequality these gender roles entrenches at a specific time and place (German Development Bank 2006). While the gender approach offers the possibility to analyze the social construction of roles based on sex and the resulting similarities and differences due to such socially constructed practices, its main strength is that it seeks to uncover the power differential between and the inequalities that the system of gender

generates between men and women. There are some theories to describe women's participation in development programs, Women in Development (WID), Women and Development (WAD), Gender and Development (GAD) (Adhikari 2011). But in this study, WID and GAD will be used because the study is all about inclusion of women and their decision making role in PFM.

Women in Development approach calls for greater attention to women in development policy and practice, and emphasizes the need to integrate them into the development process (Reeves and Baden 2000), whereas Gender and Development approach to development policy and practice focuses on the socially constructed basis of differences between men and women and emphasizes the need to challenge existing gender roles and relations (Reeves and Baden 2000; CEDPA 1996). GAD approaches generally aim to meet both women's practical gender needs and more strategic gender needs by challenging existing divisions of labor or power relations. Although WID and GAD perspectives are theoretically distinct, in practice, possibly involving elements of both is very important in development program as far as inclusion of women and their decision making power is concerned. Hence, to assess women's decision making power, it is better to look at both of them in a given development program (Reeves and Baden 2000).

2.8.2 Feminist Theories

Feminist theories denote a range of theories with the basic principles of "Feminism"; this asserts equal rights and demands legal protection for women. Feminist theory manifested in various forms (e.g. Marxist, liberal, radical, social feminism) and disciplines (history, sociology, Anthropology, environment, etc.). Central to studying women's roles and relations with the natural environment, Ecofeminism emerged in the mid-1970s, and was the first attempt to theorize these interactions (Luitel and Timsina 2008). The themes at its core are: exploitation, domination and oppression of women and nature (Sargission 2001 in Upadhyay 2008).

2.8.3. Participatory Theory

Stiller and Yadav (1978 as cited in Adhikari 2011) argued that development without local people participation will be an incomplete affair. Sundaram (2002) claims that the participation of beneficiaries can be understood in terms of participation in decision making, planning, implementation, monitoring, evaluation and sharing the benefits of development programs. A local person always has to be in a better position to identify their needs and prioritize the needs

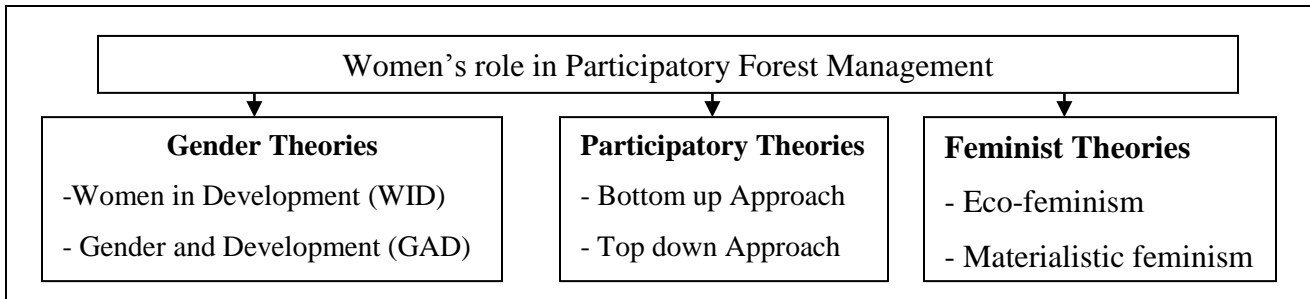
in order to avoid duplication of resources, minimize delay and ensure accountability. As the result of participation, the people will be in a better position to assess their own rights and responsibilities too (Adhikari 2011).

Participation is the sum of organization, empowerment and contribution. The mechanism to ensure participation is to organize people first, create common interest and create mutual understanding so that they will contribute to the ends desired to be achieved. The contribution bonds individuals together, creates collective member and rectify the imbalance between weak and stronger. Freedom and opportunity to participate, the ability to participate, and willingness to participate are also the essence to be considered while talking about participation. Buttoud (1999), in his typology of participation, distinguished between resource, functional, auto-mobilization, passive and active participation. In resource participation, stakeholders are invited to participate and can present ideas or information, but their presence may merely be symbolic. In functional participation, people take part in decision-making process and are likely to contribute to discussion. In auto-mobilization, one or several stakeholders instigate exchanges of relevant issues with the other group members; participation is thus defined de facto. In active participation, participants contribute more or less directly to decision making process via negotiation procedure with multilateral relation between public authorities and the actors, while in passive participation; participants are not involved in decision-making process. According to Agarwal (2001) participation is passive when a “participant is informed of decisions ex post facto; or attends meetings, assists in decision-making without speaking up”, and active when a “participant expresses opinions whether or not solicited or taking initiatives of other sorts”. She also refers to “nominal participation”, “consultative participation”, “activity-specific participation” and “interactive participation” (empowering), the last of which is seen as the highest degree of participation type, and since it applies when participants have a voice and influence group decisions. Decision-making and implementation plays most important role in Participatory theories, there are two types of approaches to facilitate participation: top-down and bottom up approaches.

Generally, theories which are used to guide this study with particular emphasis on the role of woman in participatory forest management is shown in Figure 1.1 below. Theories, which are directly, relate with the Neoclassical Economics (WID) and Social Economics (GAD), Bottom

up and top down approaches of participatory theories and eco-feminism and materialistic feminism were used from feminist theories.

Figure 1.1: Interrelation between Theories to Guide the Study



2.9. Conceptual Framework of the Study

The user's identification, preparation of community forest bylaws, preparation of forest operational plan, forest utilization, forest protection and monitoring and evaluation are major steps taken in implementing participatory forest management in community forest. Moreover, it is known that both men and women are involved in these kinds of community forest management. However, in the Ethiopian context, with respect to cultural and social practices, it is norm that men grasp opportunities by dominating women even though the constitution of the country as well as the national policies of the ruling government puts that both men and women should be equally involved in development activities of the country i.e. the equality aspect to both women and men have included whereas equity aspect is in shadow especially in decision making area with regarding to resources management.

The conceptual framework explains the relationship between national policy and women's participation in Participatory forest management, socio-economic context, natural capital, financial capital, social capital, physical capital and human capital. The assets in this conceptual framework lie at the core of the women empowerment context to play role in participatory forest management. The framework is developed to enable information about people's assets to be presented visually, which are much important with the inter-relationships between the various assets (DFID 1999). The definition of livelihood assets (capitals) provided below for each capital one to one is adopted from (Bennett et al. 2012; DFID 1999; Ellis 2000).

Human Capital: It represents the skills, knowledge, ability to labor and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives. At a household level human capital is a factor of the amount and quality of labor available; this varies according to household size, skill levels, leadership potential and health status.

Natural Capital: is the term used for the natural resource stocks from which resource flows and services (e.g. nutrient cycling, erosion protection) useful for livelihoods are derived. There is a wide variation in the resources that make up natural capital, from intangible public goods such as the atmosphere and biodiversity to divisible assets used directly for production (trees, land).

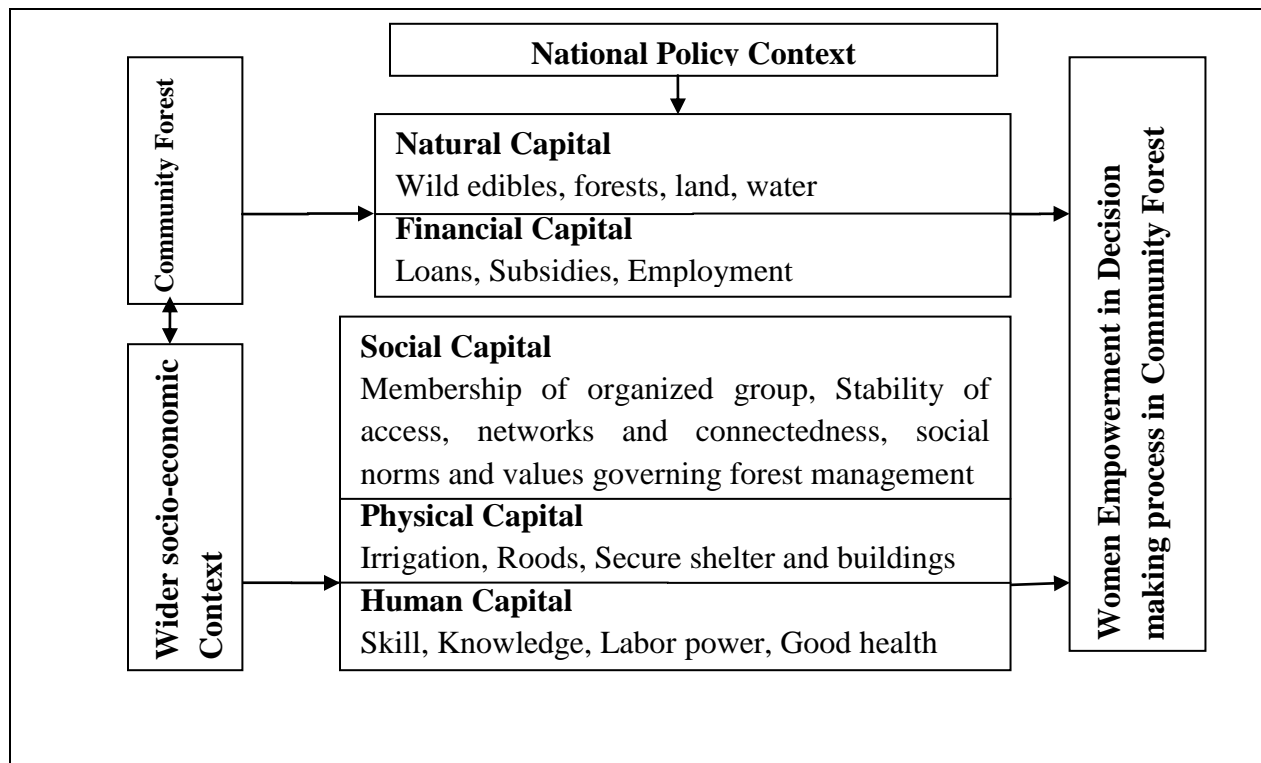
Social capital: There is much debate about what exactly is meant by the term ‘social capital’. In the context of the women in decision making process framework it is taken to mean the social construction upon which people draw and pursuit of women’s role in participatory forest management for the purpose of this thesis. These are developed through; networks and connectedness, membership of more formalized group rules, norms and sanctions and relationships of trust, reciprocity and exchanges.

Physical capital: It comprises the basic infrastructure and producer goods needed to support livelihoods. Infrastructure consists of changes to the physical environment that help people to meet their basic needs and to be more productive. Producer goods are the tools and equipment that people use to function more productively. The following components of infrastructure are usually essential for sustainable development: supply of food that is affordable transport, secure shelter and buildings, adequate water supply and sanitation and access to information.

Financial Capital: Financial capital denotes the financial resources that people use to achieve their livelihood objectives. The definition used here is not economically robust in that it includes flows as well as stocks and it can contribute to consumption as well as production. However, it has been adopted to try to capture an important livelihood building block, namely the availability of cash or equivalent that enables people to adopt different empowerment strategies.

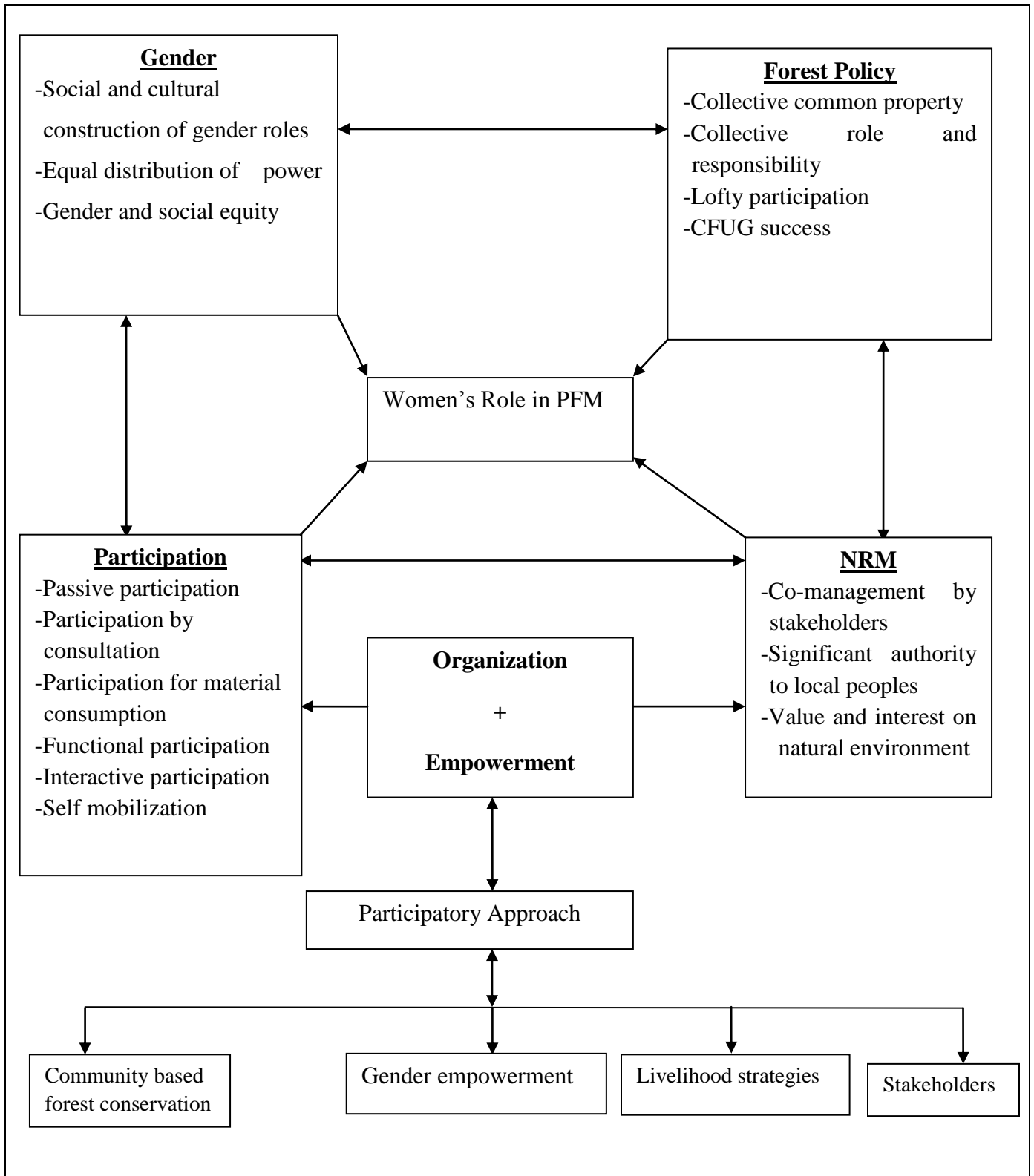
National policy: National policy plays vital role on every kind of development field. After reviewing literatures on community forest, national policies, Rules, Regulations and Local development organizations which shows vertical and horizontal relationship on various contexts. Vertical relationship shows top down hierarchy and horizontal relation shows same parallel status. Increasing or decreasing of natural as well as financial capital, depend upon national policy. Natural and financial capital has parallel relation with community forest but it depend how Community Forest is working, these two components effect the women’s decision making power and process of participatory forest management. Social, physical and human capitals has vertical relation with socio-economic context which have effect on the field of women empowerment in decision making and process of Participatory forest management.

Figure 1.2: Conceptual Framework Explaining Relationship between National Policy Context and other variables of community forest



In conclusion, conceptual framework used to guide this study was adapted conceptual framework developed by Adhikari (2011) adopting theories, and national policy context from afore reviewed literatures. The schematic diagram of overall conceptual framework for this study is given below.

Figure 1.3: Schematic Diagram of Conceptual Framework for the Study



Adapted from Adhikari (2011)

CHAPTER THREE: BACKGROUNDS OF THE STUDY AREA

3.1. Belete-Gera Regional Forest Priority Area

The Belete-Gera Regional Forest Priority Area (RFPA) is located in Gera and Shebe Sombo woreda of Jimma Zone in Oromia National Regional State in the southwestern part of Ethiopia. It is one of the largest RFPAs of the 38 RFPAs of the Oromia national regional state (Almaz and Taye 2003). The total forest area is about 150,000 hectares, an area more than twice as large as Singapore (Takahashi and Todo 2013). It is characterized as an Afromontane evergreen forest, dominated by trees like *Syzigium guineense*, *Olea welwitschii*, *Prunus africana* and *Pouteria adolfi-friederici* (Demissew *et al.* 2004).

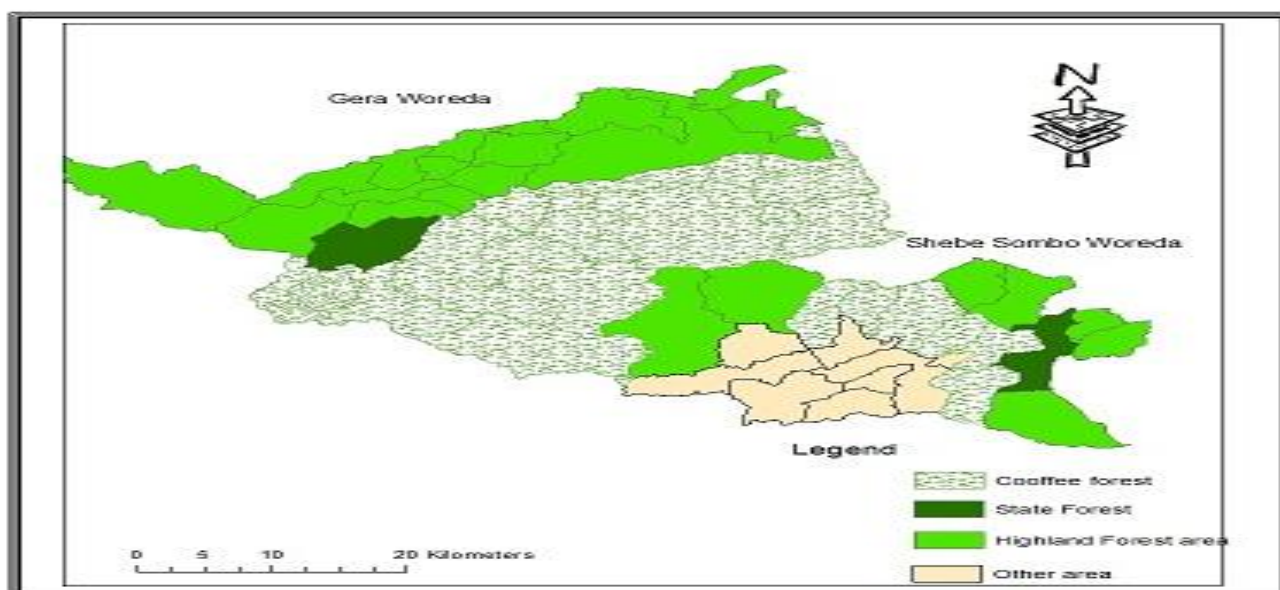
As part of the highland rain forest, the natural vegetation in the Belete-Gera RFPA is subject to annual precipitation of 1,500 mm and an annual average air temperature of approximately 20 degrees Celsius. The topography of the Belete-Gera RFPA is complicated and consists of undulating hills in the 1,200 to 2,900 m range, with steep mountainous terrain in some places (Takahashi and Todo 2011). This RFPA covers 30 villages and 80 sub-villages in Gera Woreda and 14 villages and 46 sub-villages in Shebe Sombo woreda. The Belete-Gera forest is unique in that it produces wild forest coffee as well as regular garden coffee. “Wild forest coffee” refers to coffee that grows spontaneously in the local forest, and which is genetically distinct from commercial varieties. In fact, the Belete-Gera forest is one of the major candidates for being the ultimate origin of coffee (Takahashi and Todo 2013). Thus, the forest area can be divided into two types: the coffee forest area, and the highland forest area without coffee (Takahashi and Todo 2011). In both types of forest, the residents are mostly farmers, producing cereals, such as wheat, barley, and teff, vegetables, honey, and milk. In addition, farmers produce coffee in the coffee forest area and extract spices, bush meat, wood and medicines from the forest (De beenhouwer *et al.* 2015).

PFM Project of Belete-Gera RFPA was implemented by JICA and Oromia Forest and Wildlife Enterprise, a public institution in charge of forest preservation in the Oromia National Regional State, and commenced in October 2003. The project had three major components: establishing community-driven forest management associations (Waldaa Bulchinsaa Bosonaa, or WaBuB);

improving agricultural technologies and practices through farmer field schools, and livelihood support through the Forest Coffee Certification Program. The project was implemented in two phases and its second phase was completed in 2010 (Takahashi and Todo 2011; 2013).

Estimation using satellite images indicates that the forest area in Gera and Shebe Sombo woreda decreased by 40 percent during the period 1985-2010 (Takahashi and Todo 2013). In the Belete-Gera forest priority area, forests are mostly used by local residents, and large-scale commercial logging is not present. The previous PFM Project of Belete-Gera forest managers stressed three reasons for the rapid deforestation in the area: expansion of farmland into the forest; wood extraction for home consumption and commercial sales of firewood and timber; and illegal settlement by migrants from other regions of Ethiopia due to the country's growing population. Although wood extraction is illegal in the forest area, which is owned by the government, it was difficult to prevent, as there had been no active system or institution for forest management, either community- or government-driven, before the project was implemented (Takahashi and Todo 2013).

Figure 1.4: Map of Belete-Gera Regional Forest priority Area



Source:CSA Shapefile 1998

3.2. Shebe Sombo Woreda

Shebe Sombo Woreda, the study area of this study is one of the Woreda of Jimma Zone in Oromia National Regional State of Ethiopia. It was structured as independent Woreda taking Shebe town as its capital maintaining its present day status and area of land in 2006 from Seka Chokorsa Woreda. Currently the woreda undertakes its administrative duties and responsibility in twenty rural and two urban Kebeles which is twenty two in total (Shebe Sombo Woreda Administration Office 2015).

Location: Location of the woreda extends between 7°17'-7°44' North and 36°17'-36°52' East part of Jimma Zone. It share border with Seka Chokorsa in North and North East, South Nation, Nationalities and People state particularly Kefa Zone in South and South East, and Gera Woreda in West and South West. It is situated in the Southern part of Jimma zone (Shebe Sombo Woreda Rural Land and Environmental Protection Office Plan 2015).

Area: On the basis of the current border delineation, the woreda has a total surface area of 766.68Km² accounted for 3.8 percent of the total area of Jimma Zone (Shebe Sombo Woreda Rural Land and Environmental Protection Office Plan 2015).

Reliefs: The present land configuration of the woreda is the result of tertiary volcanic (Acidic volcanic and basaltic flow). The largest part of the woreda areas belongs to the part of western highland and associated with lowland in the south part of the Woreda. The Woreda has two different altitudes; the vast southern, central and the south western part that lies with elevation between 1500 and 2000 meter above sea level (63 percent) are characterized by flat land. The northern, western and eastern part of the woreda lies between 2000 and 2500 meter above sea level (37 percent) latitude. The lower elevations of the woreda is found on the Kische part of the woreda 1250 meter above sea level and its altitude increasing toward the north central part of the woreda. Even though there are no well-known mountains, Plateaus, Hills, Plains and Valleys in the woreda some mountains like Do'o, Boru and Tugo Milki with height of 2450m, 2400m and 2420m available in the woreda respectively. Thus, the highest elevation of the woreda is 2,500 meter above sea level (Shebe Sombo Woreda Agriculture Office Plan 2015).

Drainage: The total area of the woreda is fall in the Gojeb river of Gibe river basin; Gojeb, Anja, Gurati and the smaller Anja are the major perennial rivers that drain to Gibe River. Their major uses are being to traditional irrigation and to wash red coffee. It is observed that the woreda does not have lakes. When we come to climatic condition, most part of the woreda belongs to subtropical (Badda Daree) and cool (Baddaa) agro-climates. These two climates do respectively constitute 40 and 60 percent of the woreda areas. The western parts do have (cool) Agro-climates with the mean annual temperature ranges between 17- 20⁰C .While, the West part of the woreda does classified to subtropical climate with mean annual temperature ranges between 20-23⁰C. The rainfall of the woreda is weakly bi- modal with spring a small rainy season during the months of April and May while summer along rainy season during the months of June, July and August. The vast area of the Woreda annual rainfall varies between 1,400mm and 1,900mm (Shebe Sombo Woreda Agriculture Office Plan 2015).

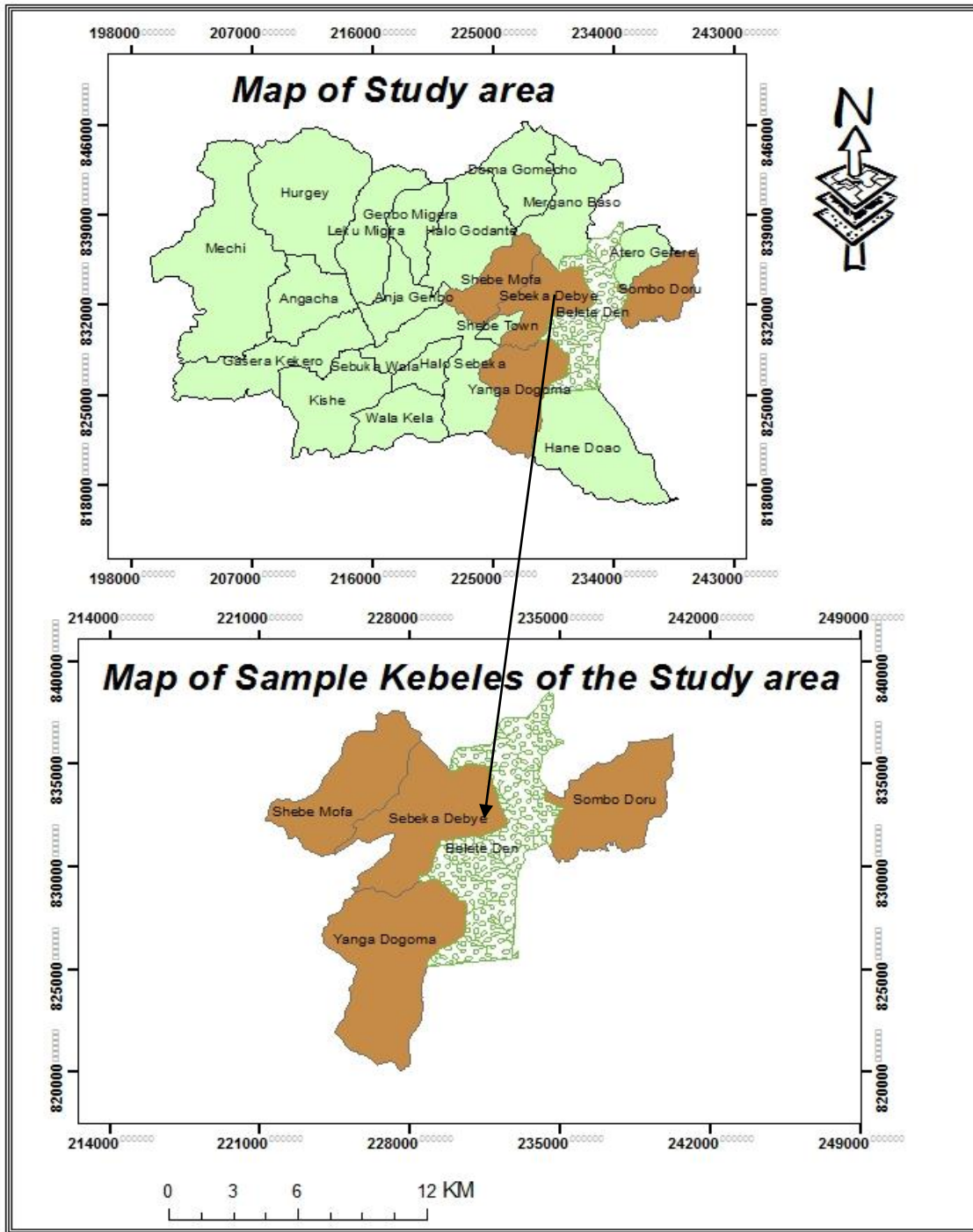
Types of Soil: -The pattern of Shebe Sombo soil is clear indication of the relationship which exists between climates, the geological structure and vegetation cover on the other hand, among that type of soils which include some of the best agricultural soils are: Red-brown (35 percent), black soils (45 percent) and grey arid brown soils of heavy texture accounts 20 percent. All these type of soils have good agricultural potentialities except sandy soil. Loam soil and sandy soil respectively also exist in the woreda that they can be used as the row materials for construction (Shebe Sombo Woreda Agriculture Office Plan 2015).

Vegetation covers: - The woreda is reached by natural forest. The natural forest coverage of the woreda is around 35,000 hectare and man-made forest covers about 10,000 hectares. Out of the total natural forest area of the woreda about 25,597.94 hectares is under participatory forest management (Takahashi and Todo 2011). Participatory Forest Management is operational in 14 Kebeles of the Woreda. There are 44 forest management associations organized on Belete-Gera Regional Forest Priority Area under PFM approach in the aforementioned Kebeles. Thus, these forest management association units entitled to manage 25,597.94 hectares of forest in the Woreda (Shebe Sombo Woreda Agriculture Office Report 2014).

Population: According to CSA (2013), the total population of the woreda is projected to be 141,037 of which 71,150 are male and 69,887 are Female. In terms of area of residence, 132,935 people live in the rural areas while 8,102 people live in the urban centers. In terms of age, 70,776 are adult population between 15-64 ages whereas 43,565 are children from 0-14 age and 24,988 are elderly above 64 years old. The woreda has high adult population i.e., people whom their age ranges between 15-64 years old.

The Economy: The economy of the woreda is highly dependent on agriculture that it is the main livelihood strategy for most of the population of the woreda because their life depends on different agricultural activities. Hence, almost it occupies the largest share in the livelihoods of the population. However, it is subsistence in its nature due to the fact that it is not mechanized. The woreda has an ideal agro-climatic condition (dominated by sub-tropical and cool) which is suitable for production of cereals. Mixed farming is a common practice in the woreda. As a result, the livelihoods of the rural people are dependent on both crop farming and livestock rearing. Thus, agriculture has a lion share in the economy of the woreda beside some other service sectors. Forest product is also a source of income in this area. The main sources of income for the local communities are selling of crop, livestock and forest products obtained from natural forests (Shebe Sombo Woreda Finance and Economic Development Office Plan 2015).

Figure 1.5: Map of Shebe Sombo Woreda (Study area)



Source: CSA Shapefile 1998

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1. Research Design

Research design which has been used in this study is a cross-sectional design that data were collected at a point in time. This is due to the fact that this study is conducted within a limited time framework i.e. it is not a longitudinal study. This descriptive cross sectional design is believed to assist studying the role of women in making decision with their extent of participation in PFM as well as data related to factors that influence women's participation in PFM in the study area. Thus, corresponding data were collected and analyzed to achieve the study.

4.2. Sources of Data

Both primary and secondary data sources were used in this study. Primary data were collected from women in the household members of Forest Management Association (Waldaa Bulchiinsa Bosonaa in local language, Afan Oromo), the staff members of Belete-Gera District Forest and Wildlife Enterprise, as well as from Shebe Sombo woreda Branch. Primary data were also collected from community leaders, religious leaders and elders. Secondary data were collected from different related documents in relation to the topic under investigation in addition to the annual report of Shebe Sombo woreda Forest and Wildlife Enterprise as well as from performance evaluation reports of Belete-Gera District Forest and Wildlife Enterprise.

4.3. Sampling Procedure and Sample size Determination

4.3.1. Sampling Procedure

There are fourteen Kebele administrations that have been adopting the WaBuB (forest management association) approach in Shebe Sombo woreda. Out of these Kebeles, WaBuB in ten Kebeles of the woreda are organized on forest with coffee and the rest four Kebeles are forest without coffee. Hence, multi-stage sampling procedure was employed to select sample for the study.

In the first stage, the researcher decided to take four Kebeles from the WaBuB operational Kebeles clustered into two based on the availability of coffee in the forest as forest with and without coffee. Forest with coffee is found in ten Kebeles whereas forest without coffee is found in four Kebeles of the woreda. Preliminary information was used from Belete-Gera District Forest and Wildlife Enterprise about women involvement in forest resource management in WaBuB operational Kebeles of the study area. It was witnessed from the preliminary information that the participation of women in WaBuB approach in the Kebeles of forest with coffee is better than that of forest without coffee. Thus, based on this information, the researcher decided to have proportional sample from both clusters. Hence, the researcher decided to select three Kebeles from forest with coffee and one Kebele from forest without coffee. This is due to the fact that it is impossible for the researcher to cover all of the WaBuB operational Kebeles within limited time and available resources undertaking the study. Hence, it should be clear that the researcher decided purposively only on the number of sample Kebeles for the study rather than selection of actually studied sample Kebeles. Sample Kebeles of the study were selected through simple random sampling from both clusters by drawing lottery according to their proportion. Thus, Sebeka Debiye, Shebe Daso and Yenga Dogama Kebeles from forest with coffee, and Sombo Deru Kebele from forest without coffee were selected respectively as sample Kebeles of the study.

In the second stage, household members of WaBuB under PFM approach were selected from each four Kebeles through systematic sampling method to recruit respondents. Lists of the name of the household head members of WaBuB approach is found at each Kebele on the community's forest bylaws. Hence, the sample frame of this study was the list of household head members of WaBuB at each Kebele. Actually, respondents of this study, particularly respondents of household questionnaire, were women, that mean all women from the systematically selected household members of WaBuB approach has got an equal chance to be selected from the total household members of WaBuB in aforementioned Kebeles.

In the third stage, Kish grid sampling method was used to select women whose their age are greater than fifteen from the systematically selected households as a respondent of the study.

Thus, only one woman was selected from each systematically selected household members of WaBuB as a respondent of this study.

4.3.2. Sample Size Determination

Household members of WaBuB approach in Sebeka Debiye, Sombo Deru, Yenga Dogama, and Shebe Deso Kebeles are 327, 160, 243, and 150 respectively. Therefore, the total population of the study is 880 household members of WaBuB in the aforementioned Kebeles. Hence, sample size was determined from this population. Since the membership of WaBuB under PFM approach in the study area is at household level, the researcher found it reasonable to systematically identify the household or family head members of the WaBuB approach in the study area to recruit respondents. In this manner, the sample size of the study is determined through using simplified formula for proportions developed by Yamane (1967). A 95% confidence level and $P = 0.5$ are assumed. Here is the equation, $n = \frac{N}{1 + N(e)^2}$. Where n is the sample size, N is the population size, and e is the level of precision. Therefore, the sample size of the study is 275 respondents. Based on this calculation, proportionate numbers of respondents were drawn from each Kebeles. Accordingly, 102, 50, 76 and 47 respondents were selected from Sebeka Debiye, Sombo Deru, Yenga Dogama, and Shebe Deso Kebeles respectively. Household questionnaire was administered to the respondents by the recruited data collectors and the researcher. Hence, the researcher took part in collecting data and also supervised the enumerators. The researcher replaced three respondents from household members of WaBuB for non-responsiveness was occurred from the previously selected respondents of the study during data collection.

4.4. Methods of Data Collection

Mixed research method was used to collect data in this study. Mixed research methods enable to minimize weaknesses and maximize strengths of the study under investigation. A central premise of mixed methods is that “the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone” (Creswell and Plano Clark 2007:5). It also provides better quality data than a single method. This, in turn, assisted the researcher to have both numeric and non-numeric data with an objective to triangulate results of the study. Thus, both quantitative and qualitative data were collected to fill

each other's gap and helped to overcome the problem of missing of necessary data for the study. Thus, the following methods of data collection were employed to collect data for this study.

Household Survey: Household survey method was used to collect data from women in the household members of WaBuB under PFM of Belete-Gera forest. Semi-structured household questionnaire was designed as a tool for this method of data collection.

In depth Interviews: Face to face interview encourages capturing of respondents' perceptions in their own words and is a very desirable strategy in qualitative data collection (Frechtling, Sharp and Westat 1997). This type of research method guarantees a high response rate and makes it easier to explain things to informants (Neuman 1994). Thus, in this study, in-depth interview was conducted with three women from WaBuB members.

Key Informant Interview: Key informant interview was employed to collect data from Executive committee of WaBuB, Head of Belete-Gera Forest and Wildlife Enterprise as well as Forestry expert from Shebe Sombo woreda purposively in order to get in-depth information about women's participation in WaBuB approach of forest management. Hence, key informant interview was conducted with four individuals. The researcher prepared interview guide to ask their experiences and the changes they observed in relation to women's participation in forest management.

Focus Group Discussion: Focus groups discussions are a form of group interview, though not in the sense of backwards and forwards between interviewer and group. Rather, the reliance is on the interaction within the group who discuss a topic supplied by the researcher, yielding a collective rather than an individual view (Morgan 1988). Hence, the participants interact with each other rather than with the researcher, such that the views of the participants can emerge as the participants' rather than the researcher's. It is from the interaction of the group that the data emerge. Therefore, this method was used to collect views of local people towards women participation and their role in participatory forest management of Belete-Gera Forest as well as the importance of PFM as forest system in their local area. For such reasons, the researcher conducted two focus group discussions with community leaders, religious leaders and elders as

well as women at two different settings. The size of the group was eight people at each two different settings. Equal number of both men and women took part in the discussion actively at both settings. The discussion consumed three hours i.e. one and half hour for each FGD.

Field Observation: Field or direct observation was used to collect data. Information collected during observation was very useful for the triangulation of data. The researcher has directly observed a meeting of executive committee and a general assembly, observed the participation of community forest users group in the meetings, transparency in information and accountability of the WaBuB members in Belete-Gera Forest. The researcher has also tried to observe their participation in activities planned to ensure forest conservation and forest under their management. The regeneration or degradation status of forest under the study area was also observed. Observation checklist was used as an instrument for this method of data collection.

Document Analysis: Annual performance evaluation of Shebe Sombo Forest and Wildlife Enterprise reports was assessed in detail. Data were also collected from the record office of Belete-Gera District Forest and Wildlife Enterprise as well as from previous studies in attempting to explore and extract required information.

4.5. Method of Data Analysis and Presentation

The collected data were analyzed and described both in quantitative and qualitative research approach simultaneously. Since both types of data, numeric and non-numeric were collected, using both qualitative and quantitative data analysis tools were needed to triangulate the collected data to have complete information. Information obtained from field observation, focus group discussions and interviews were transcribed, categorized, and analyzed using thematic analysis and narrations. Data obtained from household survey were analyzed by using descriptive tools such as frequencies and percentages to present results using table.

4.6. Unit of Data Collection and Data Analysis

In this study, data were collected at the individual level and analyzed both at household and community levels. Thus, unit of data collection is individual while units of analysis for this study are communities and households.

4.7. Data Validity and Reliability

The issue of reliability and validity is about the trustworthiness and accuracy of the data. Accordingly, the study derived a set of operational measures from literatures, collected data and tried to compare the collected data with the conceptual and operational definitions in order to ensure its validity. On the other hand, triangulation was used to ascertain the reliability of the study. The employed four types of instruments of data collection to collect data for this study such as household questionnaire, interview guide, focus group discussion guide, and observation checklist were the mechanisms to ensure its reliability. The household questionnaire was pre-tested before undertaking the actual data collection in order to avoid ambiguous terms and less relevant ideas. Concerning the qualitative data, attempt was made to go back to the field in order to read the transcribed data and get confirmation from the key informants and the FGD participants regarding its accuracy. Finally, the collected data was triangulated and interpreted in relation to the review of the literature for the purpose of analytical generalization.

4.8. Ethical Consideration

The researcher was committed to follow all social sciences' research ethics including the issue of confidentiality or anonymity and informed consent of the participants of the study. Questionnaires were prepared in English and translated into Afan Oromo, the language respondents of the study speak. The design of the household questionnaire did not harm to the quality of the data as it did not include any identifying information like name, or address of a person on questionnaire. The respondents were also well informed as the study is only for the purpose of academic research rather than for any other business or illegal activities. Hence, they were not forced to answer any question they were not comfortable with and there was a room for them to ask for a clarification of any question they want to be clarified.

CHAPTER FIVE: RESULTS AND DISCUSSION

5.1. Results of the Study

This chapter presents and analyzes results obtained from this study. The socio-demographic information of the respondents of the study, the level of women's participation in Belete-Gera PFM, their role in decision making in this approach as a forest management system, perceptions of women towards PFM and major factors that influence women's participation in Belete-Gera PFM in the study area are presented in this chapter.

5.1. 1. Socio-demographic Information of the Respondents

In this section, age, sex, literacy status, marital status, ethnic background, religious affiliation, household size, major occupation of the households of the respondents' and source of their households' income are analyzed and described in detail.

Table 1: Distribution of Respondents by Age

No.	Age group	Frequency	Percent
1	15-25	63	22.91
2	26-35	78	28.36
3	36-45	60	21.82
4	46-55	53	19.27
5	56-65	19	6.91
6	66 and above	2	0.73
	Total	275	100

Source: Field Survey 2016

This table depicts that from the minimum age group of respondents recruited for this study and maximum age without limitation, women of different age groups are taking part in WaBuB approach of Belete-Gera PFM in their living area. However, information obtained from document analysis revealed that age should only be considered as criteria to elect and be elected as committees of WaBuB approach. WaBuB approach of Belete-Gera PFM has its own rule and regulation which serves as a guideline both WaBuB members and government forest agency_ Oromia Forest and Wildlife Enterprise, Jimma Branch. It is a kind of forest management agreement between the two parties. This rule and regulation is known as forest bylaw i.e., community's rule and regulation on forest management. This forest bylaw states that both male

and female, being member of the household members of WaBuB should be at least above eighteen years old to elect and be elected as a committee of WaBuB approach.

When we come to sex of the respondents of this study, all respondents of the household survey were women. This is due to the fact that the study is concerned with women's role in PFM approach.

Table 2: Marital Status of Respondents

No.	Marital Status	Frequency	Percent
1	Married	233	84.7
2	Single	33	12
3	Widowed	9	3.3
	Total	275	100

Source: Field Survey 2016

The above table shows that out of total respondents (275) of this study, 233 (84.7 percent) are married while 33 (12 percent) and 9 (3.3 percent) are single and widowed respectively.

Table 3: Literacy Status of Respondents

No.	Literacy Status	Frequency	Percent
1	Able to read and write	52	18.91
2	Unable to read and write	223	81.09
	Total	275	100

Source: Field Survey 2016

The table indicates that in terms of literacy status, 223 (81.09 percent) of respondents responded that they are not able to read and write while 52 (18.91 percent) replied they are able to read and write.

Table 4: Ethnic Composition of Respondents

No.	Ethnic Background	Frequency	Percent
1	Oromo	270	98.18
2	Amhara	2	0.73
3	Kafa	3	1.09
	Total	275	100

Source: Field Survey 2016

The above table shows that in terms of ethnic composition, 270 (98.18 percent) of respondents are Oromo whereas 2 (0.73 percent) and 3 (1.09 percent) respondents replied that they are

Amhara and Kafa respectively. As far as their religious affiliation is concerned, all respondents, 275 (100 percent) responded that their religious affiliation is Islam.

Table 5: Household Size of Respondents

No.	Household size	Frequency	Percent
1	1-4	54	19.64
2	5-8	206	74.91
3	9 and above	15	5.45
	Total	275	100

Source: Field Survey 2016

The above table indicates that the household size of 54 (19.64 percent) respondents ranges between 1- 4, the household size of 206 (74.91 percent) respondents ranges between 5 to 8 and the household size of the rest 15 (5.45 percent) respondents is above 9. The occupation of the households of the respondents is agriculture namely crop and mixed farming. Out of the total respondents, 47 (17.09 percent) and 228 (82.91 percent) responded that their household occupation as a livelihood strategy is crop and mixed farming respectively. All respondents of the study, 275 (100 percent) responded that their household’s major income source is agriculture. Beside agricultural activities, be it crop and mixed farming as their households’ income source, 209 (76 percent) of respondents replied that forest products like naturally grown spices called long pepper or Tunjoo in local language and Aframomum Cororrima are also their additional sources of income. It was identified by this study that women are the responsible family members to collect these spices from the natural forest for free and take to the market for sale to generate income for the family. The informants of the study from interviews and FGD discussants said that women sale a kilo of sundried long pepper up to 30 birr at their local market.

5.1.2. Level of Women Participation in Belete-Gera PFM

Respondents of this study were asked whether they know the presence of WaBuB approach in their living area as a forest management system or not before getting into the issue of dealing with their level of participation in the approach. Accordingly, based on the question asked them to respond, all of them replied that they know very well about the existence of WaBuB approach as a participatory forest management system in their local area. Having known their knowledge about its presence in their living area, attempt was made to identify their participation in it.

Concerning this, all respondents, 275 (100%) of them responded that they have been taking part in the approach as the household members for the approach encourages women to become part of the members to protect and conserve forest in their living area since membership to the approach starts from the household level.

As far as the level of women’s participation is concerned, their mere membership in the approach may not adequate to understand to what extent women participate in the approach equally with their male counterparts. To this end, the respondents were asked to evaluate their level of participation in the WaBuB approach in Belete-Gera forest. Criteria of their evaluation was based on involvement in different activities of forest management, taking part in the election of WaBuB committees and frequency of attending meetings called by the committees, and generating idea or speaking up in decision making process as well as acceptance of their idea in the WaBuB approach of the study area. Accordingly, out of total respondents of the study, 117 (42.55 percent), 139 (50.55 percent) and 19 (6.9 percent) responded that they participate very active, active and less active respectively.

Table 6: Respondents’ Frequency of Attending WaBuB Meetings

No.	How often do you attend meetings	Frequency	Percent
1	Always	190	71.43
2	Sometimes	76	28.57
3	Not participate at all	9	3.27
	Total	275	100

Source: Field Survey 2016

Result from the above table indicates that out of total respondents, 266 (96.73 percent) of them responded that they attend meetings called by the executive and sub-committees of WaBuB approach and the rest 9 (3.27 percent) answered that they have never been attended meetings called by the committees. Out of the 266 (96.73 percent) ever attended meetings, 190 (71.43 percent) of them replied that they actively attend every meetings called by WaBuB’s executive and sub-committee regularly to discuss on different issues in relation to forest protection and conservation whereas about 76 (28.57 percent) responded that they attend the meetings occasionally.

On the other hand, those respondents who replied that they have never been attended meetings called by WaBuB's executive and sub-committee reasoned out that they are busy with housework activities and childcare burden. In addition, they have also responded that because their husbands are participating and they thought that the husbands' participation itself is enough. These women further elaborated that they have to effectively manage the household chores since this is their traditional responsibilities according to the norm of the community.

Table 7: The Forest Management Activities Respondents Participate In

No.	Activities	Frequency	Percent
1	Seedling and nursery	270	98.18
2	Plantation	273	99.3
3	Protection of forest	275	100
4	Forest utilization	275	100
5	Monitoring and evaluation	57	20.73

Source: Field Survey 2016

The above table depicts that except seedling and nursery, plantation as well as monitoring and evaluation, all respondents of the study replied that they are involved in forest management activities. The result on seedling and nursery, and plantation in the table depicts that, 270 (98.18 percent) and 273 (99.3 percent) respondents responded that they are participating in the activities respectively. On the other hand, result on monitoring and evaluation from the table indicates that 57 (20.73 percent) of respondents replied that they participate in monitoring and evaluation of community forest activity. Respondents reasoned out that this is due to the fact that monitoring and evaluation involves walking long distance in the forest which is very difficult for women to participate in the same way they participate in the other activities of forest management. In addition, information obtained from document analysis shown that monitoring and evaluation of forest management is always undertaken by internal controlling committee of WaBuB together with the Belete-Gera District Forest and Wildlife Enterprise twice a year. However, some informants and FGD discussants claimed that all household members of WaBuB approach including women take part or attend discussion on the report of monitoring and evaluation, and will have equal chance to discuss and give comments openly on the results obtained from monitoring and evaluation of the forest management activities as well as the way out forward.

Even though seedling and nursery as well as tree planting is part and parcel of forest management activity based on the forest management agreement made between WaBuB and

Oromia Forest and Wildlife Enterprise, Jimma Branch; respondents from household survey as well as informants from interviews and FGD discussants mentioned that seedling and tree planting are currently being undertaken on the private lands of the members of WaBuB rather than for common ownership which is allowed for WaBuB members to plant indigenous trees in any available open spaces in natural forest and use them for their own benefits as a group.

The Belete-Gera participatory forest management adopted bottom-up approach (decision making from the beneficiary) so as to manage the activity. The respondents were asked in which stage they have been participating and responded accordingly. Their response is summarized and described below as follow:

Table 8: Frequency Distribution of Management Stages Respondents Participate In

Stages of participation	Response							
	Always		Several times		Few times		Never participated	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Planning stage	229	83.27	26	9.45	11	4	9	3.3
Decision making stage	57	20.72	58	21.09	151	54.9	9	3.3
Execution stage	267	97.09	8	2.91	-	-	-	-
Controlling stage	23	8.36	80	29.09	163	59.27	9	3.3

Source: Field Survey 2016.

Almost all respondents covered in this study were participating in all stages of forest management activities. However, frequency of their participation in the different stages of the forest protection and conservation management activities varies from one stage to the other. Out of total respondents covered in this survey, 229 (83.27 percent) responded that they always participate in planning stage whereas 26 (9.45 percent) and 11 (4 percent) replied that they have participated in the planning stage several times and few times respectively. From total respondents of this survey, 57 (20.72 percent) of respondents responded that they always participate in decision making stage of forest management whereas 58 (21.09 percent) and 151 (54.9 percent) replied that they participated in decision making stage several times and few times respectively till data was collected for this study. 267(97.09 percent) of respondents replied that they participate always in execution stage whereas 8 (2.91 percent) responded they have participated several times in this stage. Of total respondents of the study, 163 (59.27 percent) responded that they participated in controlling stage rarely in times while 80 (29.09 percent)

replied that they participated in controlling stage several times. Finally, 23 (8.36 percent) of the respondents replied that they always participate in controlling stage of forest management activities. Out of total respondents, 9 (3.3 percent) responded that they never participated in planning, decision making and controlling stages of forest management. They reasoned out that because it is their husbands who participate in these stages.

Table 9: Level of Respondents' Participation

Activities	Level of Participation					
	Very Active		Active		Less active	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Forest user's identification	275	100	-	-	-	-
Preparation of WaBuB's bylaws	44	16	216	78.54	15	5.45
Forest protection and conservation	275	100	-	-	-	-
Forest resource product utilization	275	100	-	-	-	-

Source: Field Survey 2016

All respondents covered in this study replied that their participation in forest user's, identification, forest protection and conservation as well as forest resource product utilization is very active. However, out of total respondents, only 44 (16 percent) respondents responded that their level of participation in preparation of WaBuB's bylaws is very active whereas 216 (78.54 percent) and 15 (5.45) percent responded that their level of participation is active and less active respectively. The later respondents on the bylaws preparation together, provided reason for their being less active in the preparation of WaBuB's bylaws that because it was prepared by some selected individuals including both male and female from the local people living in and around the forest in collaboration with experts from Oromia Forest and Wildlife Enterprise, Jimma Branch. Information obtained from document analysis also confirms the responses of these respondents regarding with the preparation of WaBuB's bylaws. Nonetheless, what the PFM implementation manual state is contrary to the claiming of the respondents as a reason that all members of the WaBuB approach have been participated in the preparation of the bylaws through their representative since those selected individuals were chosen from the local communities by the communities themselves.

5.1.3. Decision Making Role of Women in PFM of Belete-Gera Forest

The mere physical existence of women in PFM may not tell us the role they play in decision making related to the PFM approach. Due to this reason, respondents were asked whether they are member of executive and sub-committee of WaBuB approach or not. Based on administered questionnaire, it was identified that out of total respondents of the study, 44 (16 percent) of respondents responded that they are member of executive and sub-committee of the approach in the forest management activities.

The rest respondents are members of the forest management association as part of the household members of WaBuB in managing Belete-Gera forest priority area in Shebe Sombo Woreda. Executive and sub-committee of the approach are elected by its members. The results obtained from interviews and FGD revealed that both men and women take part in electing their representative from both male and female who could lead them well in forest management as well as work with the government forest agency and different interested NGOs. The committees will also work on the issue of household members benefit sharing from the forest resource product beside forest protection and conservation with an aim to make the forest management sustainable as per the objectives of PFM program. Of total respondents of the study, 264 (96 percent) responded that they have participated in the election of WaBuB's committees at their sub-village since WaBuB approach is organized at sub-village level having its own identified forest block within identified village. There are many forest users group organized into WaBuB at sub-village within one Kebele administration i.e. there can be more than one WaBuB in one village. Result from household survey shown that 11 (4 percent) of respondents replied that they never participated in the election of the committees of the approach because their husbands took part as a head of household even though the forest bylaws of WaBuB stated that both men and women should participate in the election of WaBuB committees. The election of the committees of WaBuB takes place one time within two years.

Respondents were asked to respond whether they attend meetings called by the committees of WaBuB approach or not; based on asked question, 266 (96.73 percent) of respondents responded that they attend meetings called on to discuss about forest management in their local area whereas 9 (3.27 percent) replied they never attended any meetings. Of total Respondents,

attendants of meetings called by WaBuB's committee, whether they are active or less attendants, are 266 (96.73 percent) together. Out of attendants of WaBuB meetings, only 56 (20.36 percent) mentioned that they give idea or generate idea on the meetings. They replied that their idea is acceptable and encouraged by the committees of WaBuB for the question they were asked whether the idea they generate is acceptable or not. The rest 210 (76.36 percent) attend meetings called on by the committees to discuss about forest management in their local area and only accept what is said by others without having a say on their own side.

Respondents responded to the question asked to evaluate their influencing power in decision making that, 54 (19.64 percent) of respondents replied that they have strong influencing power. The respondents have reasoned out that they participate in generating idea and their ideas are considered in forest management activities, approving decisions made by the committees as well as resist decisions made against the interest of the community in general and women in particular, and acceptance of the persons they elected as a committee members. Of total respondents, 212 (77.09 percent) responded that their influencing power in decision making is weak. They stated that they only accept what is decided by the committees of the approach as a reason for their weak influencing power in decision making. The rest 9 (3.27 percent) respondents responded that they never participated in decision making process of forest management for it is their husbands who participate on decision making issues as a household head.

Table 10: Influential Decision Maker in Respondents' Household Activities

Activities	Decision Maker					
	Male		Female		Both in understanding	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Housework /domestic work	-	-	275	100	-	-
Childcare	-	-	211	76.7	64	23.3
Collecting firewood	-	-	275	100	-	-
Investment on household	176	64	17	6.18	82	29.82
Income generation activities	188	68.36	24	8.73	63	22.91
Agricultural activities	203	73.82	9	3.27	63	22.91
Women's participation in PFM	13	4.73	64	23.27	198	72

Source: Field Survey 2016

Based on the questionnaire administered to respondents of this survey with aim to identify influential decision maker in their families, all respondents responded that females are influential

decision maker in housework and fire wood collection activities. Majority of the respondents, 211 (76.7 percent) replied that female is an influential decision maker in childcare while 64 (23.3 percent) of respondents claimed that both male and female are influential decision maker regarding with childcare. Out of total respondents, 176 (64 percent), 17 (6.18 percent) and 82 (29.82 percent) responded that the influential decision maker in investment on household in their families is male, female and both in understanding respectively. Concerning with influential decision maker in income generation activities, 188 (68.36 percent) respondents replied that it is male whereas 24 (8.73 percent) and 63 (22.91 percent) responded that the influential decision maker is female and both in understanding respectively. Out of total respondents, 203 (73.82 percent) replied that male is influential decision maker on agricultural activities while 9 (3.27 percent) and 63 (22.91 percent) respondents responded that the influential decision maker on agricultural activities in their household is female and both in understanding respectively. Of total respondents, 198 (72 percent) responded that both female and male in understanding decide on women’s participation in PFM while 64 (23.27 percent) and 13 (4.73 percent) replied that female and male is influential decision maker in their family on women’s participation in PFM respectively.

5.1.4. Perceptions of Women towards PFM

This study result revealed that the local community in general and women in particular in the study area have positive attitude or perception towards PFM. The survey result indicated that all respondents of the study replied that they believe PFM is very important in protecting and conserving forest in sustainable manner for it is important solution to alleviate forest destruction.

Table 11: Perceptions of Respondents towards the Importance of PFM

No.	How do you see the importance of PFM approach in conserving	Frequency	Percent
1	It is very important	263	95.64
2	It is important	12	4.36
3	Less important	-	-
4	It is not important	-	-
Total		275	100

Source: Field Survey 2016

The above table depicts that all respondents of the study reacted positive about the importance of PFM approach in conserving forest. Out of total respondents of the study, 263 (95.64 percent) responded that PFM approach is very important in conserving forest while 12 (4.36 percent)

replied that it is important. They stated that this is because they have seen encouraging change as a result of WaBuB approach in forest conservation in their local area. Respondents were also asked to respond how they see PFM in improving the livelihoods of local community. Based on asked question, 211 (76.72 percent) of respondents responded that it is very good, 60 (21.81 percent) of respondents replied that it is good while 4 (1.45 percent) responded that it is not good. Respondents those replied PFM is not good in improving the livelihoods of local people reasoned out that the approach is delimited only to natural forest excluding plantation. They also mentioned that they are not sharing benefits from man planted forest (plantation) even though it was they, local people, who planted and protected it from destruction.

The respondents were asked to state major reasons why they think PFM is important and hence they have positive perception towards this approach in forest protection and conservation. The response mentioned by the respondents is indicated in the table below.

Table 12: Reasons Why Respondents Had Positive Perception towards PFM

No.	Reasons Stated	Frequency	Percent
1	It reduces deforestation	269	97.82
2	It gives authority to the local community	275	100
3	Create sense of accountability	226	82.2
4	Improve the livelihoods of the local community	271	98.54
5	It gives right to use the forest resource product	273	99.3
6	Others	171	62.2

Source: Field Survey 2016

As the above table indicates, respondents have mentioned that PFM helped to reduce deforestation, brought improvement in forest regeneration, encouraged to grow new young seedlings and improved their livelihoods. These are the major reasons why they have developed positive view to the approach. All respondents of the study replied that they developed positive perception towards PFM because it gives authority to the local communities i.e. it empowers them. Out of total respondents of the study, 269 (97.82 percent) of respondents positively accepted PFM because they are impressed with the reduction of forest destruction in their surroundings and 273 (99.3 percent) of them impressed with the right it gives to the local communities to use the forest resource product from the forest. In terms of PFM contribution in improving the livelihoods of the local communities, 271 (98.54 percent) of respondents reasoned out that it has crucial role in improving the livelihoods of the local community especially

marginalized group like women and poor people. Respondents of household survey and informants from interviews and FGD discussants mentioned that PFM contributed much to improve livelihoods of local people living in and around the forest that their previous grass thatched house changed into iron roof. Informants of the study further stated that their access to medical facilities have been amplified and be able to pay health service fees. PFM improved consumption and nutritional status of WaBuB members. They added that participants of PFM became self-reliant in food security and produce for commercial purpose. This improvement in food security is due to utilization of technology to increase their agriculture productivity. Respondents from household survey as well as informants from interviews and FGD discussants mentioned that their children get more access to education and currently they are able to send their children to school at different urban centers by paying house rent and school fee for them for the sake of better education facilities.

Moreover, the accountability it creates to the community is also the most important reason for 226 (82.2 percent) of respondents to have positive perception towards PFM as a sustainable forest management approach. Results from interviews and FGD also revealed that in addition to the factors stated in the above table, ownership feeling and positive expectation of using forest in the future are the most important factors that encourage the local people especially women to manage the forest actively. Informants added that since PFM devolved power and granted usufruct right to the local people living in and around the forest, it make the people more accountable to protect forest from destruction. Local people in general and women in particular in their living area, consider forest as their own child. Therefore, people can have positive view towards externally imported program if and only if they are empowered on the resource, and willingly be accountable to the resource.

Evidence from the baseline survey of PFM establishment in Shebe Sombo woreda indicates that gender issue was the main agenda from the inception stage of PFM establishment of Belete-Gera forest priority area in Shebe Sombo woreda as one of the project's site. Of total respondents, 242 (88 percent) of respondents responded that PFM highly empower women in forest resource management intertwining with farmers field schools in which equal participation of men and women in all perspectives took place with regarding to trainings and technical support provided for the members of WaBuB approach of Belete-Gera PFM. One of the key informants of this

study said that farmers' field school participants were limited to 16 males and 16 females in each farmers field school. Participants attended lectures on agricultural technologies in (open-air) classes and training at experimental plots for 3-4 hours every week. The main crops produced in the experimental plots were vegetables such as cabbages, onions, carrots, and beets. Farmers also learned how to nurse trees, such as grevillea, neem, avocado, and apple trees, to promote reforestation. These trainings and technical support were provided for them with an aim to diversify the livelihoods of the local communities on the small plot of farmlands they owned. These made great contribution in improving the livelihoods of the local communities and forest conservation. Point that should be underscored here is that even though the main aim of farmer field schools is farmers' livelihood diversification, both key informants and FGD discussants claimed that it had great contribution in empowering not only women but also household members of WaBuB approach as well as the whole communities participating in PFM economically, politically and socially.

Just to narrate the idea of one of the informants from in-depth interview of this study on the farmer field schools program, a 42 years old woman said that:

Barumsi Qonnaan Bulaa Dirreerraa waan baay'ee nu barsiise, akka itti lafa xinnoo irraa kuduraa fi muduraa adda addaa oomishuun gabaatti dhiyeeffannuu, faayidaa bosonaa fi itti fayyadama isaa, miidhaa mancaatiin bosonaa geessisu, dhimmoota adda addaa irratti yaada keenya baafne akka itti ibsannu, hawaasa waliin jiraannu wajjin sirritti akka walitti dhufnuuf baay'ee nu gargaareera. Dhugaa dubbachuuf taanaan sagntaan sun dubartoota golaa baasee eegumsaa fi kunuunsa naannoo keessummaa bosonaa irratti hubannoo guddaa nuuf uumee kunoo sadarkaa amma irra jirru irraan nu gahe.

Means farmers field school had helped us to know many things: how to produce and supply different kinds of vegetables and fruits from small plots of farmland to the market, forest use and its utilization, effects of deforestation, how to express our feelings on different issues, strengthened our social ties with each other. To speak frankly, that program brought out women onto the stage from a kitchen in our local area and created awareness for us on how to protect and conserve our environment especially sustainable forest management. Generally, it has enabled us to be on the stage in which we are nowadays.

Nonetheless, 26 (9.45 percent) of respondents responded that PFM less empower women in forest management. These respondents reasoned out that there is no any incentive or opportunity

available particularly for women in the approach to empower them economically through creating income generating activities. Out of total respondents of the study, 209 (76 percent) and 66 (24 percent) responded that PFM approach as forest management in improving their livelihoods is very good and good respectively. Thus, the local communities of the study area, women as main concerns of this study, have positive attitude towards PFM approach as a forest management in improving their livelihoods.

Of total respondents, 267 (97.09 percent) respondents responded that their involvement in WaBuB approach of Belete-Gera PFM is very important. Information obtained from informants and FGD discussants revealed that the local communities of the study area in general and women in particular have a good understanding about PFM approach in protecting and conserving forest. As far as this study is concerned with women participation, respondents remarked that women as a part and parcel of the local communities are more eager in forest management than men after their awareness is improved through provided trainings and awareness creation program by the concerned government officers from government forest agency and NGO's like JICA. They argued that this is because women are at forefront to be affected by deforestation.

5.1.5. Major Factors That Influence Women's Participation in PFM

There are many factors that can be taken as influencing factors of people's participation in forest management activity. These factors can be seen as enhancing and hindering factors. Both enhancing and hindering factors that influence women's participation in forest management of Belete-Gera forest in Shebe Sombo woreda are identified by using household survey via making use of open-ended questionnaires, interview and discussion guide as well as through analysis of existing documents.

5.1.5.1. Factors Enhancing Women's Participation in PFM

There are many factors that can be taken as enhancing factors for women participation in participatory forest management. These enhancing factors are identified through mixed methods and triangulated together. The respondents have listed-out some of the most important variables that enhanced their participation. Closed-ended questions were also used to confirm at what extent the variable can play a role in motivating them.

Table 13: Major Factors Enhancing Respondents' Participation in PFM

No.	Major factors	Frequency	Percent
1	Physical benefit (Local consumption)	267	97.09
2	Improved awareness (Awareness created) about forest management	253	92
3	Monetary benefit from forest product (Generating cash income)	209	76
4	Granting ownership right (usufruct right)	176	64
5	Homogeneity of interest on forest resource	174	63.27
6	Fear of displacement (Fear of losing membership)	102	37.09
7	Environmentalism (Having bad feeling to forest destruction)	88	32
8	Accountability (Moral obligation)	33	12

Source: Field Survey 2016

5.1.5.1.1. Benefit Derived From Forest Resource

Respondents were asked whether they get any benefit from participating in WaBuB/ PFM approach or not, then the entire respondents reacted that they are getting benefits from this resource. They were asked at what extent the benefit derived from forest initiates them to actively participate, 238 respondents (86.54 percent) replied that it strongly motivates them. Informants and FGD discussants of this study also said that benefit derived from forest play crucial role in enhancing the level of people's participation in forest management activities. Local people living in and around the forest are getting benefit from forest and forest product for themselves and for their animals. According to interviewees and FGD discussants, benefit that people generate from forest resource is one of the most important initiating factors in participatory forest management.

Table 14: Benefits Derived From Forest Resources

No.	Major factors	Frequency	Percent
1	Monetary benefit	207	75.27
2	Using forest product for housing, fence and fuel	275	100
3	Grazing, shading	156	56
4	Soil conservation and watershed	269	97.82

Source: Field Survey 2016

The benefits listed in the above table can be categorized into physical and monetary.

I. Physical Benefit or Local Consumption

The most frequently appreciated variable by the respondents is the physical benefits they got from forest resource products. There are many kinds of physical benefits that people got from forest and forest products. As they have mentioned the benefits comprise the consumption of the

forest products for their own self like fuel wood, timber and pole for building house and fence construction, fodder for their cattle in the forest, shading purposes, regulation of climate, soil conservation and watershed purpose. In this case, local consumption is the most kind of benefit according to information obtained from informants. Informants claimed that it is directly related with their daily life.

Out of total respondents, 267 (97.09 percent) stated that the physical benefits they get out of forest resource in existing condition and its products initiate them to participate in WaBuB approach of Belete-Gera PFM in Shebe Sombo woreda. In the table above, it is succinctly indicated that all respondents of the study accepted that forest is useful for their daily life such as fuel wood. In the contract made between WaBuB members and Oromia Forest and Wildlife Enterprise, Jimma Branch by the mediation effect of JICA, the local communities living in and around the forest as a whole have the right to use the forest on the basis of agreement among members. However, the forest bylaws of WaBuB approach clearly stated that the utilization of the forest has its own specified rule and regulation, which assumed to ensure the sustainability of forest resources.

II. Monetary Benefit or Source of Cash Income

The second type of benefits people are getting is the currently monetary benefits they are generating from the forest. It is one of the basic sources of additional cash for the people who are living within and near the forest area. The earnings from sales of the forest products are the cash income people generating. Out of total respondents, 228 (82.91 percent) respondents replied that their households are occupationally engaged in mixed farm while 47 (17.09 percent) responded that their households engaged in crop farming. As some observation goes and some respondents elucidated, majority of them, specifically women member of household members of WaBuB approach are engaged in selling in different kinds of spices like long pepper as well as Aframomum Cororrma and other forest products so as to generate additional income and thus, 209 (76 percent) of respondents are using the forest resource products as additional income source.

According to some informants of the study, the monetary income people getting from forest and forest product is the important factor in motivating local people in general and women in particular to take care of the forest. They also argued that if they were not guaranteed the right to use the forest resource, some of the individuals will excessively exploit or use it inefficiently causing great damage on the forest.

5.1.5.1.2. Awareness Created

Awareness created or improved awareness is one of the factors that motivate people based on the response of the respondents for the question they were asked about what factors motivate them to participate in forest management. Out of total respondents, 253 (92 percent) respondents responded that understanding the importance of forest and the effect of the deforestation are the major factors that encouraged them to participate in Belete-Gera PFM (WaBuB approach) actively.

All respondents of household survey as well as informants and FGD participants of the study agreed that forest resource is very important for their life. When they were asked the level of forest stock status around their living area prior to the establishment of PFM approach, all respondents, 275 (100) reacted that forest stock was decreasing. All respondents were also replied that they have witnessed that forest stock is increasing from the establishment of PFM approach on Belete-Gera RFPA for the question they were asked about the status of forest stock after the establishment of the approach. Respondents of this study were also asked whether they know or not about the adverse effect of deforestation. Based on asked question, 273 (99.3 percent) of respondents replied that they know it very well. Only 2 (0.73 percent) replied that they do not know its effect.

Table 15: Respondents' Awareness about Effects of Deforestation

No.	Effects of Deforestation	Frequency	Percent
1	Desertification	271	98.54
2	Poverty, hunger	153	55.63
3	Lack of construction material, fuel wood and fodder	267	97.09
4	Land degradation and wind force	119	43.27
5	Absence of water	123	44.73
6	Loss of natural shade	257	93.45

Source: Field Survey 2016

The table shows that respondents are well informed about the effect of deforestation on their survival. Majority of the respondents, 271 (98.54 percent) of respondents, understood that desertification is one of the major problems of deforestation. Informants from interviews and FGD discussants said that having a better knowledge about impact of deforestation encourages people to take part in forest management activities actively to conserve forest.

Informants further explained about the past situation of the forest in their environs and showed the areas that were covered by the forest previously by putting their finger as a pointer. Some of them remember the extensive deforestation that has been taken place in their local area prior to the establishment of PFM. Out of total respondents, 216 (78.54 percent) respondents replied that they have knowledge about the manifestation of severe deforestation before the establishment of Belete-Gera PFM in the local area whereas 46 (16.73 percent) of the respondents responded that they have knowledge as there was some deforestation. In contrary to the aforementioned response, 13 (4.73 percent) of respondents replied that they do not know whether there was deforestation or not in the study area during that time.

Regarding with awareness created about forest use and effects of deforestation, all respondents of the study responded that they have been informed very well. Of total respondents of the study, 271 (98.54 percent) respondents replied that both JICA and government officers from government forest agency have been informed them about forest use and effects of deforestation to improve their awareness about forest management. Information obtained from informants and FGD discussants of the study revealed that women as member of household members of WaBuB have got better information about forest use and impact of deforestation from the awareness created for local people particularly by JICA. They were also asked about the role of the information, 265 (96.36 percent) of respondents noted that having known about the effect of deforestation has crucial role in enhancing their participation in forest management. Both respondents from household survey as well as informants from interviews and FGD discussants claimed that awareness created about the ecological benefit of forest and effects of deforestation strongly initiates women to participate actively and practice the recommendation.

Information obtained from document analysis shown that JICA has great role in making people aware of the forest use and the devastating consequence of deforestation in collaboration with Oromia Forest and Wildlife Enterprise, Jimma Branch as the government forest agency. The

participatory forest management project of Belete-Gera forest priority area was terminated in 2010. The project transferred management of the forest to Oromia Forest and Wildlife Enterprise, Jimma Branch and WaBuB members. The Oromia Forest and Wildlife Enterprise, Jimma Branch signed forest management agreement with WaBuB members and transferred the Belete-Gera forest management to WaBuB. Evidence obtained from record office of Belete-Gera District Forest and Wildlife Enterprise through document analysis revealed that the project staff members being with officers from Agriculture office taught WaBuB members about the sustainable forest management by visiting them frequently at their living areas. Moreover, the project, during the time of its operational, arranged a visit-learning program for some selected group of men and women of community at the degraded areas of Northern, Central and Western parts of Ethiopia. Out of total respondents of this study, 23(8.36 percent) of respondents replied that they visited different regions of the country. These respondents argued the visit program has contributed much in improving their awareness about forest use and effects of deforestation. Informants from interviews and FGD discussants said that such practical demonstration has played an important role in changing the attitude of people. As a result of such like effort, information has been diffused to the rest of the local people who were not involved in the visit program.

Table 16: Respondents’ Response about Information They Got From the Stakeholders

No.	Stakeholders involved in informing local people about forest use and effects of deforestation	Frequency	Percent
1	JICA	265	96.36
2	Agriculture Office	128	46.54
3	School	73	26.54
4	Mass media	97	35.3

Source: Field survey of 2016

The above table depicts that JICA played a great role in disseminating information and teaching people about forest use and effects of deforestation. In fact, information obtained from document analysis indicated that there were staffs involved from Agricultural office, but only some respondents considered them as part of government organ. Respondents of the study mentioned that school and mass media are also the two other sources of information about forest use and effects of deforestation.

5.1.5.1.3. Granting Ownership Right

According to 176 (64 percent) of respondents, granted the ownership right on forest resource enhanced their participation on forest management activities. When we consider table 13, respondents listed out property right as an enhancing factor of their participation in PFM on fourth stage. On the other hand, table 14 could likely indicate that all respondents ensured that they have the use right for their consumption. Having ensured the use right, respondents mentioned that they give priority to current benefit which they practically get rather than the ownership right, which is everlasting. Information obtained from interviews and FGD revealed that, in fact, what people practically get outweighs the future expectation. According to these informants, this could be for some major reasons like most of the people's view is outshined by past government nationalization of private property, extreme poverty of the country and the level of people's understanding about the differences between exclusive right and use right.

Informants also added that people have the right to use every resource, taking it as their own possession. However, most of the people have sense of greed to possess the forest property. If there is no rule and regulation that ensure people the right to use, the local people will over utilize and or utilize inefficiently for only temporary benefit. Respondents were asked whether the approaches ensured empowerment on resource and create sense of accountability or not. The entire respondents reacted to the question that PFM ensured empowerment and create a sense of accountability to all of individual members of the approach collectively.

As indicated above, all respondents agreed that they have the right to use forest for house construction, fence and fuel. The forest bylaws of WaBuB stated that when members want to cut off large trees, for the purpose of house construction, pole, and timber; they are supposed to make an appeal to WaBuB executive committee of the sub-village. The committee presents the application to the members for decision so that if the members found that it is reasonable, they decide and allow him or her to do so. Informants of the study said that giving the right to use forest and forest products has played a great role in developing a sense of ownership right so that they feel much concern towards the forest.

All key informants of this study said that granting local people ownership right to use forest and forest products collectively is also giving responsibility to manage the forest which differentiates it from public property, public property is open-access to all, whereas collective property is

where the resource is clearly defined and demarcated to specified people. In the case of public property, people may not have clear sense of ownership or sense of privacy on the natural resource. Therefore, there is no effort in protection and economic utilization. In the case of collective property, there are specified people ensured of the ownership right. In such a case, there is some sense of private ownership. There is also internal rule and regulation to administer the members. Consequently, there will be a better management and relatively efficient utilization of resource.

5.1.5.1.4. Homogeneity of Interest on Forest Resource Products

This is about homogeneity of the WaBuB members' interest in forest issues. Respondents of the study were asked whether there is homogeneity of interests within a group in the forest management or not. Based on asked question, 174 (63.27 percent) respondents responded that there is very high similarity of people's interests within WaBuB members on the issue of forest resource while 99 (36 percent) respondents replied there is less similarity. However, only 2 (0.73 percent) respondents stated that there are differences of interest on forest resource products within the members. Again they were asked whether this similarity enhanced their participation or not. Accordingly, 261 (94.91 percent) respondents stated that it has strongly enhanced their participation while 14 (5.09 percent) respondents replied that it slightly enhanced participation. Informants from interviews and FGD discussants have also claimed that people living in and around the forest have similar interest on forest resource management. These people either have coffee in the forest or their own specified tree to hang bee hives in the forest to produce honey.

5.1.5.1.5. Fear of Displacement from Their Living Area

The WaBuB was established with local people living in and adjacent localities of the forest. So, these people are supporting their life directly or indirectly from forest and forest resource products. Fodder for their cattle, fuel wood, their farmland is near the forest, and they use forest products like spices, coffee, medicinal plants, honey and others for their own consumption as well as for commercial purpose. Table 13 indicates that 102 (37.09 percent) of respondents mentioned fear of displacement as one factor that motivated them in the forest management. Informants from interviews and FGD discussants have also mentioned that there was fear of displacement at the inception of PFM approach as forest management system in their living area.

Depending on observation and information obtained from FGD discussants, it can be said that the area where both WaBuB members and non-WaBuB members who are living adjacent to the forest had been living in the high forest for some years in the past. Those people, who are living adjacent to the forest, illegally exploited the forest. They and other external users who are living closer to the high forest gradually cleared the forest. One can be sure that, local people including the current WaBuB members and people from near town and some other individuals from distance cleared the forest. FGD discussants mentioned that before the establishment of WaBuB/PFM approach in their area, different people from both the current WaBuB members and others within the woreda as well as illegal settlers from other area have took part in clearing the forest for their self-interest. From document analysis, by the policy, the high forest is the property of the government, which should be controlled by the state. Some key informants of the study said that even though Kebele administration recognizes the local communities living in and around the forest as dwellers of the area, the local people suspected that government could demarcate their living area in the forest region and displace them. This suspicion has developed with the coming of the project of participatory forest management of Belete-Gera forest priority area by JICA in 2003.

Informants from in-depth interview and FGD discussants of this study mentioned fear of displacement as enhancing factor of local people's participation in general and women in particular in forest management as follow:

One of the major factors that speed up the registration of WaBuB members is fear of displacement. Not only men but also women filled with fear of displacement and highly involved in the registration process undertaken in forest user's identification. At the beginning of PFM establishment in Belete-Gera forest, we were in suspect of some bad outcome. We had neither confidence nor belief in the realization of the project. As a result, we resisted accepting the project realization idea at the beginning. Because we are highly adapted with this forest for survival and we have fear we could not adapt somewhere outside the green forest. But later on, we were informed to be organized into forest management association through assistance of PFM project just to manage and share benefits from the forest. So, to share benefits from the forest, we were told that all local people living in and around the forest should be member of the forest management association unless we could not share any benefits from forest and forest resource products. Then, we registered to the membership of WaBuB approach and able to be involved in the forest management activities.

The respondents from household survey also explained that local people living in and around the forest gradually developed trust on the project, for their awareness is improved and the forest use right is guaranteed for them.

5.1.5.1.6. Concern for Forest Protection and Conservation

As to some respondents, they do not like to see the high deforestation; they would rather like to see the improvement of the forest. They have bad feeling towards destruction of forest resource. Accordingly, 88 (32 percent) of respondents described that they have lived within the forest for a longer period of time starting from their forefathers. So, they greatly concerned about the forest but they do not have power to save it from destruction before the establishment of the WaBuB approach. They explained that, they are satisfied now because they are owners of the forest and have power to protect and conserve it from destruction. According to them, their active participation emanates from the love they have for the forest and devolution of power to them. One of the informants of this study from in-depth interview also said that she sees the forest as her child. She further stated that she takes care for this forest as she does so to her child. FGD discussants also claimed that living with the forest for a long period of time, knowing the benefit of the forest and devolution of power to local people have contributed not only for women; but also for local people to render great attention to conserve forest.

5.1.5.1.7. Accountability

Regarding accountability, out of total respondents of the study, 33 (12 percent) respondents responded that accountability or moral obligation is dominant motivating factor in the forest conservation activities. In fact, as it is indicated above, 226 (82.2 percent) of respondents claimed that they have positive attitude towards PFM because they feel accountable to it.

According to informants from interviews and FGD discussants, the most important engine in initiating the local people in general and women in particular to forest management are the benefit they have been granted, security of forest tenure, awareness of people to the advantage of the existing forest and disadvantage of deforestation. On the other hand, these informants said that if all these are satisfied but local people are not accountable to the resource by the law; many problems will come to rise. They also said that they themselves could use the forest unwisely so that there could be competition within the members in using the forest excessively, which leads to severe exploitation.

5.1.5.2. Factors Hindering Women's Participation in PFM

Different hindering factors of women's participation in WaBuB/PFM approach in the study area were identified. Respondents of household survey as well as informants from interviews and FGD discussants mentioned different hindering factors for women's participation in WaBuB approach of Belete-Gera forest management. Identified hindering factors of women's participation in WaBuB approach of forest management are housework and child care burden, lack of incentives, perception of women on their femaleness and local people perception towards women's participation in outside activities. Informants from interviews and FGD discussants said that the first two factors are the prevailing hindering factors of women's participation in WaBuB approach of Belete-Gera forest priority area in the woreda even though respondents from household survey stated all the four aforementioned factors as hindering factors of women's participation in forest management activities.

Respondents were asked to respond whether there is special opportunity for women participating in WaBuB/ PFM approach of Belete-Gera forest in Shebe Sombo woreda or not. Based on asked question, all respondents of this study, 275 (100 percent) responded that there is no special opportunity available for women different from their male counterparts participating in the forest management. Results obtained from interviews and FGD discussants also revealed that there is no any incentive available only for women. Informants of the study discussed absence of special opportunity for women in the approach interlinking with lack of incentives and considered it as one of the hindering factors of women's participation in the forest management in the study area.

Housework and childcare burdens are the other factors that are identified as inhibiting factors of women's participation in Belete-Gera forest management in the woreda. Of total respondents of the study, 137 (49.82 percent) respondents replied that according to the local community's norm, women have to care for children and engaged to domestic work activities while men are responsible to the outside activities. Informants from interviews and FGD discussants also argued that even though awareness is created for the local people as a whole about the issue that both men and women can do housework and childcare activities, due to the custom of the local people; still it is considered only as the women's role. Informants of the study, particularly from in-depth interview, mentioned constructed gender role based on sex in their community as hindering factors especially for those who have no one to help them housework and childcare

activities to participate frequently in forest management activities as per the forest management plan of the WaBuB approach in their sub-villages.

Other hindering factors of women's participation in WaBuB/PFM approach of Belete-Gera forest priority area are identified to be perception of women themselves towards their participation and local people's perception on their femaleness to participate in outside activities. Although both informants from interviews and FGD discussants argued that people's perception towards women's participation in development activities outside domestic work is improved, 42 (15.27 percent) of respondents from household survey replied that local people's perception hinders women to participate in WaBuB approach of forest management because of their femaleness. It is also identified that 13 (4.73 percent) of respondents responded that they only put into practice what is decided by the WaBuB's committee and their male counterparts; because they are female.

5.1.6. Challenges of WaBuB of Belete-Gera Forest in Shebe Sombo Woreda

All respondents from household survey as well as informants from interviews and FGD discussants mentioned that WaBuB/PFM approach of Belete-Gera forest in Shebe Sombo woreda is facing challenges from newly established households after the forest management agreement was signed between WaBuB members and Oromia Forest and Wildlife enterprise, Jimma Branch to manage the forest. The awareness of these newly established households is not strongly improved in relation to sustainable forest management. Some members of the association also sometimes go against the rule and regulation of forest management. Support from the state is also unsatisfactory to provide legal assistance for forest users against encroachers and offenders. This is reflected in the judicial procedure, which is protracted, and decisions have reportedly been less deterrent. Because of the weak law enforcement, there is a continuous clash between members of forest users group and others on access to the forest and use of its products.

Another challenge of Belete-Gera PFM mentioned by the informants is membership to WaBuB is at household level but there are conflicts of interest on forest resource use in the area at individual level. Informants of the study also stated that population pressure or growth is also another challenge specifically in relation to increasing number of young population in the forest priority area. They added that the approach didn't consider young people as much as possible.

Despite the challenges surrounding the Belete-Gera forest in Shebe Sombo woreda, most respondents are optimistic about the sustainability of PFM. Those who doubt the sustainability of PFM base their pessimism on the perceived failures of the government structures to provide the required support. 228 (82.9 percent) of the respondents believe that PFM is sustainable and will last long even though there is a challenge. They feel that these challenges would be resolved through time as experiences build and the institutions strengthen through active community participation. Local government authorities are also optimistic regarding the sustainability of PFM and its contribution in the improvement of local people's livelihoods and forests conservation.

5.2. Discussion of the Study

This study captured the role of women in PFM in the case of Belete-Gera RFPA in Shebe Sombo woreda of Jimma zone, Oromia National Regional State in Ethiopia where PFM has been introduced in 2003 by JICA in collaboration with Oromia Forest and Wildlife Enterprise. The findings of the study indicated that PFM as a system of forest management appears to have achieved the dual purposes of positively affecting the forest (i.e. improved forest protection and conservation) and livelihoods of the PFM participants. The continuity of these achievements depends on the cooperation of the local people, which was won through the granting of user rights to the forest resources, and subsequent empowerment in decision-making regarding the forest. Granting of usufruct for the members of PFM has also great contribution in enhancing participants to participate in WaBuB/PFM approach of Belete-Gera forest in the study area. This agrees with study conducted on the impact of farmer field schools on agricultural income and skills: Evidence from an aid-funded project in rural Ethiopia specifically in Belete-Gera RFPA. The study reported that farmer field schools have potentially helped to alleviate deforestation through improving the incomes of local farmers in the area (Takahashi and Todo 2011).

The study has also shown that women, getting chance to participate in WaBuB/PFM approach as their male counterparts, assisted them to enhance their social connectedness with each other as well as with different government bodies to express their problems. This helped participants to strengthen their social capital. Respondents from household survey and informants from interviews and FGD discussants of this study stated that trainings and technical support previously provided by JICA during Belete-Gera forest PFM project implementation in the study

area has promoted their human capital. They claimed that their knowledge about forest use and effects of deforestation increased. They also claimed that they have developed good skills to produce different vegetables and fruits on their small plot of farmland to generate income. Respondents witnessed that this in turn helped them to improve their livelihood through diversifying their livelihoods strategy. This agrees with the observation made by Tadesse and Alemtsehay (2012) that their study findings clearly reported that PFM has created more chances of interaction for local people not only with each another but also with the government officials as well.

The findings of this study revealed that women are participating in different stages of participation in WaBuB approach of forest management activities. However, their level of participation differs from one stage to the other. For instance, women are active participant in planning and execution stages whereas they are less participant in decision making and controlling stages of forest management activities. It is also indicated that women participate actively in forest user's identification, forest protection and conservation as well as forest resource utilization. It is identified in the study that the level of women involvement in Belete-Gera forest management in Shebe Sombo woreda is improved from its previous status of Belete-Gera PFM establishment. This could possibly be seen from the results obtained from respondents of the study that all of them replied women are taking part in the forest management activities. Information obtained from interviews and FGD discussants has also revealed that there is great improvement in relation to women's level of participation in the forest management activities due to improved awareness from their experience of the previous level of women's participation in the forest management in the study area.

The findings of this study also illustrated that women participate actively in the election of WaBuB's committees. For instance, 264 (96 percent) of respondents replied that they participated in electing the committees of WaBuB in their sub-villages. Election of committees of WaBuB takes place every two years. The forest bylaws of WaBuB briefly stated that one cannot be elected more than two times in the committees of the approach. It also gives full right to the members of the approach to elect anyone whomever they believe could lead them better in forest management activities i.e., criteria for one to be elected in the committees of WaBuB is based on his or her competence to manage forest as well as standing for fair utilization of forest

resource by the members of the approach. The bylaws of WaBuB also stated that women should be elected in each and every committees of WaBuB approach. The finding of this study also revealed that different ethnic groups are serving as a WaBuB's committee being with the Oromo people in the study area. Out of the 44 (16 percent) members of WaBuB committees from the respondents of this study, three women are from other ethnic groups different from the Oromo nation. Out of these three women, one is from Amhara and the rest two are from Kafa ethnic background respectively. Hence, it can be said that there is no marginalization. Thus, this agrees with the idea that the involvement of communities in forest resource management is considered a way of increasing democratization process (Nygren 2005), particularly when the communities elect their representatives and establish local institutions to make specific decisions. Such representations are also considered as signs of democracy (Ribot 2006).

Results of the study indicated that 266 (96.73 percent) of respondents responded that they attend meetings called on WaBuB committees to discuss about forest management in their local area. Nonetheless, out of the 266 (96.73 percent) attendants of meetings, 56 (21.05 percent) of them responded that they strongly participate in giving idea or speak up on meetings to discuss on the forest management activities whereas 210 (78.94 percent) of them replied that they physically attend meetings called on by the committees without raising any idea contributing to decision making process in the forest management. Hence, women's power of influencing decision making of Belete-Gera forest management is very low in the study area in terms of speaking up and putting pressure on the decision making process. Of total respondents, this study finding indicated that it is only 54 (19.64 percent) of respondents who responded that they have influencing power in decision making. Regarding with decision making power in their own family issues, results from the study indicated that women are found to be very influential decision maker in housework and firewood collection as well as childcare activities whereas investment on household, income generating activities, and agricultural activity are decided by their male counterparts. This indicates there is high dominance of male in decision making on their family issues in the study area. The study result indicated that, out of total respondents of the study, 198 (72 percent) responded that both female and male in understanding decide on women's participation in PFM. Even though this study revealed improvement of the decision making power of women in forest management activities from their previous status prior to the establishment of Belete-Gera PFM approach which could possibly agrees with the study

conducted on PFM of Bonga forest (Gobeze et al. 2009); yet it strongly supports with the study on Dharapani Women Community Forest Bharatpokhari VDC of Nepal which succinctly reported that male are influential decision maker though the community forest was established to be managed by women solely (Adhikari 2011).

This study finding revealed that women in the study area have positive attitude towards the importance of PFM in forest conservation. They have great value for the forest in their daily life. They expressed their attachment to the forest by symbolizing themselves as “fish in water”, fish being the people and water being the forest. They are proud of the forest that they inherited from their forefathers and obtaining various benefits from it. Respondent of the study mentioned that forest is source of energy, water to drink for themselves and their animals, shade for coffee production, suitable climate for their agricultural activities and so on. Overall, they believe that forest has invaluable contribution in their livelihoods. This is consistent with a study conducted on Gera forest which significantly reported about positive perception of local people towards forest (Disasa 2015).

All respondents from household survey as well as informants from interviews and FGD discussants remarked that women are more eager in forest management than men especially after the improvement of their awareness through awareness creation program on the effects of deforestation by the government forest agency and NGO’s like JICA. They argued that this is because, women, as principal collectors of forest product, suffer the most as a result of forest degradation. Forest degradation results in short supply of fuel wood and fodder, water and consequently increases hardship of the rural communities in meeting their subsistence needs. The women have to walk long distances to collect fuel wood and water, and have to spend several hours per day, neglecting their more important household jobs. Hence, women have good awareness about the challenge they face if the forest is destructed. This is in line with the study conducted in India on gender issue in participatory forest management that the study briefly reported the severity of the effect of forest degradation particularly on women and concluded that women, therefore, greatly value forest conservation (Jattan 2003).

This study has also attempted to reveal different influencing factors of women’s participation in forest management activities of Belete-Gera forest in Shebe Sombo woreda. Accordingly, both enhancing and hindering factors that influence women’s participation are identified. The major

enhancing factors of women's participation are: Benefit derived from forest products that can be both monetary and physical benefit, improved awareness about forest use and effects of desertification, granting ownership right, fear of displacing from their living area, homogeneity of interest on forest resource, environmentalism and accountability. This finding agrees with the study on Adaba-Dodola integrated forest management program which significantly reported almost all of the aforementioned factors as encouraging factors of local people's participation in the PFM activities of the area (Terefe 2003). Other studies in different countries also indicated that factors that encouraged women's participation included: Concrete benefits, free interaction between men and women and social norms that do not discriminate against women's involvement in decision making (Nuggehalli and Prokopy 2009); viewing participation as an ongoing and open-ended process of social change rather than as a predefined outcome, which helps increase understanding of instances of women's renegotiation of their social roles and status (Giri and Darnhofer 2010).

The major constraints or factors hindering women's participation in forest management activities in the study area are identified to be multiple burdens such as childcare, fetching water, cooking food, lack of incentives, perception of their own and local people on their femaleness. This agrees with the observation made by Musyoki et al. (2013), that there is a highly significant relation between gender and participation in forest conservation. Women are quite disadvantaged due to their social and household chores both indoor and outdoor tasks. Therefore, their multiple roles hinder them to participate actively in forest management activities alike their male counterparts although the study findings indicated the improvement of women participation in forest management in the study area.

The results of this study also indicated that the local people in general and women in particular have positive insight towards PFM sustainability. The study on the future scenario of Chilimo Forest which is being managed by forest users' cooperatives indicated that without PFM, the resource base would have been severely degraded in less than ten years, and PFM would constitute a win-win scenario for forest and forest dwellers (Kassa et al. 2009). In agreement with this study in Chilimo, the present study also reflected an optimistic view of participants on sustainability of PFM arrangements.

CHAPTER SIX: CONCLUSION AND RECOMMENDATION

6.1. Conclusion

In Ethiopia, women are not only in forest management but also in all sectors ignored previously as a decision maker. But now a day, the current ruling government started to give high priority to women's involvement in all sector through the policy. Hence, women have been playing different roles in forest management. The national constitution as well as the forest conservation, development and utilization proclamation, and forest policy of Ethiopia has been encouraging marginalized group especially women's participation in development activities particularly forestry sector as far as this study is concerned. The 2012 Guideline of Ethiopia to scale up the implementation of participatory forest management in all parts of the country briefly described the importance of gender mainstreaming in forestry sector with special attention on involvement of marginalized group particularly women.

There is good attempt to integrate and empower women in the WaBuB approach of Belete-Gera FPRA in the Shebe Sombo woreda. The approach contributed much in addressing challenges of gender inequity in the study area. Both men and women equitably shared responsibilities of managing the forest and the benefits accruing from the forest. Men and women also have equal right of vote and participation in WaBuB's executive and sub-committee for leadership position. Similarly, regardless of ethnic background, all participates in the forest management activity under equal membership right, benefit sharing, voting and other administrative duties within WaBuB. However, there is no any particularly available incentive for women aimed to improve their income like creating income generating activities which in turn would enhance their participation in the forest management activities. Moreover, mainstreaming gender in the approach is emphasized more on gender power structure in the management of forest resource although it did not bring change as it was expected in terms of decision making power.

Even though there is improvement of women's participation in the forest management activities in the study area, their participation in controlling stage and decision making process is still found to be low. Different factors such as tradition and social attitudes place constraints on women's participation in forest management activities. Majority of them are participating just

physically in various community forest activities and lack influential decision-making role. Thus, it can be said that they are in the shade of male member of community and family.

Local people especially women have positive attitude towards PFM. It empowered and enabled local people to organize themselves and enhance their participation in the forest management activities. Bottom-up participatory approach is followed in the WaBuB approach of Belete-Gera forest management. Thus, free access to the forest has been regulated well currently than earlier time. PFM approach in the study area also benefited participants for it increased and more diversified their sources of income. Hence, it is possible to conclude that the sustainability of PFM depends on the transparent partnership between the members of the forest users and their leaders on the one hand and between their institutions notably WaBuB or and the State on the other.

There is high participation for material consumption i.e. managing the forest for economic perspective in the study area. Involving in realization of problem and decision-making are self-motivation type of participation, which is low. Same as involving in monitoring and evaluation, general assemblies and meetings are information giving and functional participation that shows in third position. Knowledge on local environment and local climate suitable plant is more important than scientific knowledge and technological approaches to forest resources management.

Forest users groups or WaBuB members, particularly women, while collecting firewood as well as different spices from the natural forest emphasize more on their immediate benefit rather than taking into consideration the future benefit; they destruct small naturally growing trees under the shades of the forest. This is contradicting from the natural theory of eco-feminism. Farmers, those who have coffee in the forest, cut some trees considering as unimportant for coffee production although the community bylaws strictly prohibit cutting tree and even entering into the forest boundary carrying an axe.

Oromia Forest and Wildlife Enterprise, Jimma Branch as a government forest agency is not showing much commitment to support WaBuB approach in the study area as much as expected

as per the forest management agreement made between the association and Enterprise. Support from the state particularly from the executive body is also unsatisfactory to provide legal assistance for forest users against encroachers and offenders. Thus, it can be concluded that government forest agency is less committed to provide trainings and technical supports for the members of WaBuB after forest management is totally transferred to the WaBuB.

6.2. Recommendations

Based on the findings of this study, the researcher would like to forward the following recommendation to be considered in PFM implementation.

1. Participation of women in influencing decision making process is very low. Therefore, trainings and technical support should be given for women by the government forest agency to enhance their participation in breaking silence and able to influence decision making process in forest management activities.
2. WaBuB members of Belete-Gera forest in the study area are managing forest more for economic perspectives and not showing eco-feminism. Therefore, awareness should be created on eco-feminism and agro-forestry model to increase non-timber forest products as alternative forest products, and allow plant of low economic value to conserve natures' heritage.
3. Policy should promote rural employment and increase incomes while ensuring sustainable resource use from community forest. Therefore, legal arrangements should be make for ensuring income generation activities for youth and women from forest resource products as an incentive to encourage their participation.
4. The government forest agency should show its commitment to support the efforts of communities and their institutions to responsibly manage these resources by creating enabling environments and ensuring technical and legal support.
5. Local people in general and women in particular are complaining for they are not sharing benefits from the plantation or man planted forest, which nowadays, Oromia Forest and Wildlife Enterprise, Jimma Branch planted timber industry to produce different kinds of timbers in Shebe Sombo woreda. Therefore, the enterprise should work as per the forest management agreement signed with WaBuB members to make the local communities beneficiaries from the industry.

References

- Abebe, H., Million, B., and Andrew, R. 2009. *Small and medium forest enterprises in Ethiopia*. Retrieved on November 12, 2015 from <http://www.iied.org/pubs/pdfs/13553IIED.pdf>
- Adhikari, U. 2011. Women in Forest Management: A Case Study of Dharapani Women Community Forest Bharatpokhari VDC. Kaski, Nepal
- Agarwal, B. 1997. “Editorial: re-sounding the alert-gender, resources and community action.” *World Development* 25(9):1373-1380.
- Agarwal, B., 2001. Participatory exclusions, community forestry, and gender: an analysis for South Asia and a conceptual framework. *World Development* 29, 1623–1648.
- Agrawal, A.A., Chhatre, A., and Hardin, R. 2008. “Changing governance in the worlds’ forests.” *Science* 320: 1460-1462.
- Alemtsehay, J.2010. *Determinating Factors for a Successful Establishment of Participatory Forest Management: A Comparative Study of Goba and Dello Districts, Ethiopia*. MA thesis, the University of Agder, Kristiansand, Norway
- Almaz Fiseha and Taye Bekele. 2003. *Participatory appraisal over community-based stakeholder groups, institutions, incentives and Gender issues*. Rainbow Management and Development Consult (RMDC). Jimma, Ethiopia.
- Amogne, A., E.2014. Forest resource management systems in Ethiopia: Historical perspective. *International Journal of Biodiversity and conservation*, Vol.6 (2), pp121-131
- Bekele M.2003. *Forest property rights, the role of state and institutional exigency: the Ethiopian experience*. PhD dissertation, Swedish University of Agricultural Sciences, Uppsala
- Bendz, M. 1988. Forests and Forestry in Ethiopia: a compendium. Bastanås, Sweden, Rural Development Consultants.
- Bennett, N., Lemelin, R.H., Koster, R., Budke, I. A. 2012. Capital assets framework for appraising and building capacity for tourism development in aboriginal protected area gateway communities. *Tourism Management*; 33:752–66.
- Berkes, J. 2004. Rethinking Community Based Conservations. *Conservation Biology* 18:621-630.
- Bingmen, K.2001. *Policy, Gender and Institutions: A Journey through Forest Management Issues in the Kullu Valley*. Himachal Pradesh: University of Manitoba.
- Borri Feyerabend, G. 2000. *Co Management of Natural Resource: Organizing, Negotiating and Learning By Doing*. Yaoundé, Cameroon

- Brandon, E.K., and Michael, P. W. 1993. "The Principle and Practice of Buffer Zones and local participation in Biodiversity conservation." *AMBIO Vol. 22 No. 2-3*
- Bromley, D.W.1998. *Property Regime in Environmental Economics. The International year book of Environmental and resource economics*. Edward Elgar: Cheltenham.
- Bryant, L. and Bailey, R.L. 1997. *Third World Political Ecology*. Routledge: London
- Buttoud, G., 1999. Principles of participatory processes in public decision. In: Niskanen, Vayrynen (Eds.), *Regional Forest Programmes: A participatory approach to support forest based regional development: EFI Proceedings*, pp. 11–28.
- Butler, Judith. 1990. *Gender Trouble: Feminism and the Subversion of Identity*. New York and London: Rutledge.
- Burkey, S. 1993. *People First: A guide to Self-Reliant, Participatory Rural Development*. London: Zed Books.
- Carlsson, L., and Berkes, F.2005. "Co-management: concepts and methodological Implications." *Journal of Environment Management*, Vol. 75, pp 65-76
- Castern, T. 2005. *Ownership and incentives in joint forest management: survey of development policy review*. UK: Black publishing agency
- Chhatre, A., and Agrawal, A. 2008. 'Forest commons and local enforcement, *Proceedings of Community forests in Asia. Experience from Nepal, Indonesia and the Philippines*
- Cleaver, F. 2007. Understanding agency in collective action. *Journal of human development*, **8**: 223-44
- Cooke, B., and Kothari, U. 2001. *Participation: The new tyranny?* (eds). London: Zed Books.
- Creswell, J. W., and Plano Clark, V. L. 2007. *Designing and Conducting Mixed Methods Research*. London, Sage.
- CSA. 2010. *The 2007 Population and Housing census of Ethiopia Results for Oromia Region*. Addis Ababa, Ethiopia.
- CSA. 2013. *Population Projection of Ethiopia for all Regions at Wereda Level from 2014-2017*. Addis Ababa, Ethiopia.
- Darbyshire, I., Lamp, H., and Mohamed, U. 2003. "Forest Clearance and Regrowth in Northern Ethiopia during the Last 3,000 Years." *Holocene 13(4):537–546*.
- De Beenhouwer M., Mertens J., Geeraert, L., and Jocqué, M. 2015. Express Biodiversity Survey in Belete Gera forest, Ethiopia. Glabbek, Belgium: Biodiversity Inventory for Conservation, BINCO Express Report 4, 24 pp.

- Dessalegn R. 2001. Environmental change and state policy in Ethiopia: lessons from past experience. Addis Ababa, Ethiopia. *Forum for social studies monograph Series 2*, pp. 10-108.
- Demissew, S., Cribb, P., Rasmussen, F. 2004. *Field guide to Ethiopian orchids*. Royal Botanic Gardens. Kew, UK, 300 pp.
- DFID.1999. *Sustainable Livelihood Guidance Sheets*. DFID, London.
- Disasa, M., L. 2015. The Significance of Indigenous Knowledge and Institutions in Forest Management: A Case of Gera Forest, in Southwestern Ethiopia. *International Journal of Science and Research (IJSR)*, Volume 4 Issue 4.
- Ellis, F. 2000. The determinants of rural livelihood diversification in developing countries. *Journal of Agricultural Economics*, 51(2), 289-302.
- Environmental Protection Authority/EPA/ of Ethiopia. 1998. *Democratic republic of Ethiopia national action programme to combat desertification*. Addis Ababa, Ethiopia.
- FAO.1998. *Asia's Women in Agriculture, Environment and Rural Production, Sustainable Development Department*. FAO/UN, Bangkok, Thailand.
- FAO. 2010. *Global Forest Resource Assessment. Country Report Ethiopia: FRA 2010/065*. FAO, Rome, Italy.
- FAO/UN. 2010. *Progress towards Sustainable Forest Management: Global Forest Resources Assessment main report*. FAO-forestry paper -163.
- FAO/UN. 2015. *Global Forest Resource Assessment*. FAO/UN, Rome, Italy.
- FARM-Africa / SOS Sahel Ethiopia .2007. *The Key Steps in Establishing Participatory Forest Management: A field manual to guide practitioners in Ethiopia*. Addis Ababa, Ethiopia.
- Farringa, G. 2005. Understanding community forestry: A qualitative meta-study of the concept, the process, and its potential for poverty alleviation in the United States case. *The Geographical journal of poverty and environment* **171**: 56-69
- Federal Democratic Republic of Ethiopia (FDRE). 2007. *Forest Development, Conservation and Utilization Proclamation No. 542/2007*. Federal Negarit Gazeta No. 56, Addis Ababa, Ethiopia.
- Federal Democratic Republic of Ethiopia (FDRE). 2011. *Forest Carbon Partnership Facility (FCPF) Readiness Preparation Proposal (R-PP)*. Addis Ababa, Ethiopia.
- Federal Democratic Republic of Ethiopia (FDRE). 1995.*The Constitution of the Federal Democratic Republic of Ethiopia*. Federal Negarit Gazeta, first year No. 1, Addis Ababa, Ethiopia

- Fisher, R. J. 1999. "Devolution and decentralization of forest management in Asia and the Pacific." *Unasylva*, vol. 50, no. 99, pp 3-5
- Fitzpatrick, D. 2006. Evolution and chaos in property rights systems: The Third World tragedy of contested access. *Yale Law Journal*, 115(5), 996-1048.
- Frechtlinhg, L., Sharp,K., and Westat, J.N.1997. "User-Friendly Handbook for Mixed Method Valuations." *National Science Foundation, Kathmandu*, pp 212-224.
- Forest proclamation of Oromia Region. 2003. Forest proclamation of Oromia proclamation No.72/2003. Finfine: Megeleta Oromia.
- Gebremedhin, A. 2008. "*Determinants of Success of Participatory Forest Management (PFM) The case of WAJIB approach in Ethiopia*" MSc dissertation submitted to Institutes for Environmental decision.
- German Development Bank. 2006. *Gender Mainstreaming for Gender Equity: The Experience of International Development Agencies*. Germany, Frankfurt.
- Gervet, B.2007. *Deforestation Contributes to Global Warming*. Lulea University of Technology. Lulea, Sweden.
- Gibson, C., E., Mckean, M.A. 2000. Forest, people and governance: some initial theoretical lessons. In Gibson, C.G., Mckean, M.A., and Ostrom, E. (eds). *People and forest: Communities and Governance (pp102-175)*. Cambridge: The MTI press.
- Giri, K. and Darnhofer, I. 2010. Nepali women using community forestry as a platform for social change. *Society and natural resources* **23** (12): 1216–1229.
- Gobeze, T., Melaku, B., Lemenih, M. and Kassa, H. 2009. Participatory Forest Management and its impacts on livelihoods and forest status: the case of Bonga forest in Ethiopia. *International Forestry Review*. Vol. 11: 3.
- Hardin, G. 1968. *The Tragedy of the Commons*. Science, New Series, Vol. 162, No. 3859, pp. 1243-1248.
- Harrison, E. 2002. 'The Problem with Locals': Partnership and Participation in Ethiopia. *Development and Change*, 33(4), 587-610.
- Hobley, M.2005. Building state–people relationships in forestry: Forest Policy and Environment Programme. Overseas Development Institute, UK.
- IFAD. 2001. *International Fund for Agricultural Development*. Participatory Approaches for an Impact-Oriented project cycle Strengthening Impact orientation of IFAD’s project cycle.

- Irwin, B.C. 2004. *Establishing New Forest Management System for the dry evergreen Forest of Borena, South Ethiopia. An examination of SOS Sahel's Borena Collaborative forest management project.* Mekele University.
- Jattan, S.P. 2003. *Gender issues in participatory forest management in India.* Canada, Quebec City: XII World Forestry Progress.
- Joshi, M.L., Dhakal, G, Paudel, R, Shrestha, A, Paudel, P.B., & Timsina, N.P. 2006. "The Livelihood improvement process: An inclusive and pro-poor approach to community Forestry." *Journal of Forest and Livelihood, Vol. 5, Nepal, pp 46-52*
- Kassa , H. B., Campbell , M., Sandewall , M., Kebede , Y., Tesfaye , G., Dessie , A., Seifu , M., Tadesse , E., Garedew and Sandewall , K. 2009. Building future scenarios and uncovering persisting challenges of participatory forest management in Chilimo Forest, Central Ethiopia. *Journal of Environmental Management* 90:1004–1013.
- Keeley, J. and Scoones, I. 2000. Knowledge, power and politics: the environmental policy-making process in Ethiopia. *The Journal of Modern African Studies*, 38(01), 89-120.
- Kelbessa, E., De Stoop, C.2007. Participatory Forest Management (PFM), Biodiversity and Livelihoods in Africa, *Proceedings of the International Conference 19-21 March 2007, Addis Ababa, Ethiopia; the Government of Ethiopia in Collaboration with Other Stakeholders*
- Kitessa, H. 2010. "Status of Indigenous Tree species regeneration under exotic plantations in Belete Forest, South West Ethiopia." *Ethiopian J. Deuc. &Sc. Vol.5 No 2*
- Kumar, S. 2002. *Methods for Community Participation: A complete guide for practitioners.* London: ITDG Publishing
- Luintel, H., and Timsina, N.2008. "Is forestry decentralization effective in empowering women's agency?" Forest Action, Kathmandu, Nepal.
- Mekonen A., and Randall, B. 2008. *Is There a Link between Common Property Forest Management and Private Tree Growing? Evidence of Behavioral Effects from Highland Ethiopia.* Discussion Paper Series, Addis Ababa.
- Melaku, B. 2012. *Gender Perception on Conservation of Forest Resources: the Case of Wondo Genet, Ethiopia.* Submitted to IUFRO 6.08 Gender and Forestry Conference – Environmental Governance and Four Decades of Gender Research: Where Do We Stand? November 27-29, 2012.
- Messay, M., and Bekure, W .2011. The impact of resettlement schemes on land-use/land cover changes in Ethiopia: a case study from Nonno resettlement sites, central Ethiopia. *J. Sustainable Develop. Afr.* 13(2):269-293.

- MoA. 2012. *Guideline for Participatory Forest Management in Ethiopia*. Addis Ababa, Ethiopia
- Morgan, D.L.1988. *Focus Group as Qualitative Research*. Beverly Hills: Sage.
- Mulugeta L., and Tadesse, W. 2008. Review of forest, woodland and bush land resources in Ethiopia up to 2008. Addis Ababa, Ethiopia.
- Musyoki, J. Mugwe, J. Mutundu, K. and Muchiri, M.2013. Determinants of Household Decision to Join Community Forest Associations: A Case Study of Kenya. *SRN Forestry research Article Volume 2013 (2013), Article ID 902325*.
- NCS.1994. National Conservation Strategy: National policy on the resources base, its utilization and planning for sustainability. National Conservation Strategy Secretariat, Ministry of Natural Resource Development and Environmental Protection. Addis Ababa, Ethiopia.
- Neuman, W.L. 1994. *Social Research Methods: Qualitative and quantitative approaches (2nd ed.)*. Allyn and Bacon, London.
- Nigheingle, A. 2003. "Nature-society and development: social, cultural and ecological change in Nepal." *Geoforum*, Vol. 34 No. 4, pp.525-540
- Nuggehalli, R.K. and Prokopy, L.S. 2009. Motivating factors and facilitating conditions explaining women's participation in co-management of Sri Lankan forests. *Forest policy and economics* **11**: 288–293.
- Nygren, A.2005. Community-based forest management within the context of institutional decentralization in Honduras. *World Development* 33: 4, 639–655.
- Oakley, P. 1991. *Projects with people: The practice of participation in rural development*. Geneva: ILO.
- Ostrom, E. 1990. *Governing the commons: The evolution of institutions for collective action*. Cambridge: Cambridge University Press.
- Paudyal, R.B. 2008. *Agrarian Structures and Distributive Outcomes: A Study of Community forestry in Nepal*. Unpublished PhD Dissertation, Institute of Social Studies, Netherland
- Poffenberger, M. 2000. *Communities and Forest Management in South Asia*. Gland, Switzerland: IUCN.
- Poteete, A., and Ostrom, E. 2003. *In Pursuit of Comparable Concepts and Data about Collective action*. Cambridge: Cambridge University Press.
- Rahman, M. M, and Sumantyo, J. 2010. "Mapping tropical forest cover and deforestation using synthetic aperture radar (SAR) images." *Appl Geomat* 2:113–121

- Reeves, H., and Baden, S. 2000. *Gender and Development: Concepts and Definitions*. Brighton, UK: Institute of Development Studies.
- Ribot, J.C.2006. *Choose democracy: environmentalists' socio-political responsibility*. *Global Environmental Change* 16: 2, 115–119.
- Shackleton, S., B. Campbell, Wollenberg and Edmonds, D.2002. “Devolution and community based natural resource management: Creating space for local people to participate and benefit”. *Natural Resource Perspective*, No. 76.
- Singh, K. 1992. *People's Participation in Natural Resources Management Workshop Report*. Institute of Rural Management, India, New Delhi.
- Sisay, N.2008. “Ethiopian government efforts to increase forest cover: a policy oriented discussion paper.” In Bane J, Sisay N, Alemu M, and Randall BP (eds.) *Polices to increase forest resources of Ethiopia*, Proceedings of a policy workshop organized by Environmental Economics Policy Forum for Ethiopia (EEPFE) and Ethiopian Development Research Institute (EDRI): Addis Ababa, Ethiopia.
- Stellmacher, T. 2007. The historical development of local forest governance in Ethiopia - from imperial times to the military regime of the Dergue. *Afrika Spectrum*, 42(3), 519-530.
- Sundaram, S. 2002. *Rural Development*. New Delhi: Himalaya Publishing House.
- Tadesse G., E., and Abay, T. M. 2013. “Explaining the Determinants of Community Based Forest Management: Evidence from Alamata, Ethiopia.” *International Journal of Community Development* Vol.1, No. 2, 2013, 63-70.
- Takahashi, R., and Todo, Y. 2011. *Impact of Farmer Field Schools on Agricultural Income and Skills: Evidence from an Aid-Funded Project in Rural Ethiopia*. JICA Research Institute. Report no.30, Tokyo, Japan.
- Takahashi, R., and Todo, Y. 2013. *Impact of a Shade Coffee Certification Program on Forest Conservation: A Case Study from a Wild Coffee Forest in Ethiopia*. JICA Research Institute. Tokyo, Japan.
- Tareegn Y.2001. “Enclosing or 'individualizing' the 'commons'? The implementation of two user-rights approaches to 'communal' areas management in post-Derg Northern Ethiopia.” in (ed.) Pankhurst, A. *Natural Resource Management in Ethiopia*. Addis Ababa, Ethiopia.
- Temesgen, T., Irwin, B. Jordan, G. and Mckee J. 2007. Forests use them or lose them, an argument for promoting forest-based livelihoods Rather than Alternative Non-forest-based Livelihoods within PFM programmes in Kelbessa, E. and De Stoop, C. (eds.) *Participatory forest management (PFM), Biodiversity and livelihoods in Africa*. Proceedings of the International Conference, 19-21 March 2007. FARM Africa/SOS Sahel, Addis Ababa, Ethiopia.

- Terefe, D. 2003. Factors Affecting People's Participation in Participatory Forest Management: The case of IFMP Adaba-Dodola in Bale zone of Oromia Region; MA Thesis Addis Ababa University School of Graduate studies Regional and Local Development Studies (RLDS)
- Terefe, T. 2002. Forest dwellers' association (WAJIB) as an approach in participatory forest management: The case of Adaba-Dodola. MSc thesis reports No 2002:61. Sweden: Swedish University of Agricultural Sciences.
- Tewodros, W.2008. *Factors Affecting the Knowledge, Attitude and Practice of Forest Dependent Manja Community towards Forest Conservation in Kaffa Zone, SNNPE*. MA Thesis Addis Ababa University School of Graduate studies Regional and Local Development Studies (RLDS).
- The Centre for Development and Population Activities Training Manual Series. 1996. *Gender and Development*. U.S.A., Washington, D.C. retrieved from <http://www.cedpa.org>
- Tirhas Mabratu. 2009. *Understanding local forest management institutions and their role in conserving woody species biodiversity: M.Sc. in Tropical Land Resource Management*. Mekele: Mekele University.
- Tom, B., and Said, I. 2009. *Participatory Forest Management in Tanzania: Lessons learned and experiences to date*. Tanzania, Dare Salam.
- Upadhyay, P. 2008. "Anthropological Perspectives on users Participation in Common property Resource Management in Jayakot Community Forest." A research report, Kaski
- Uphoff, N. 1991. "Fitting Projects to People". In M. M. Cernea (ed.), *Putting People First: Sociological Variables in Rural Development*. New York: Oxford University Press.
- Uphoff, N.1996. '*Getting the process Right Improving Water Management with Farmer Organization and Participation*' a working paper presented at Cornell University for synthesis project. Ithaca, New York.
- United Nations. 1975. *Popular Participation in Decision Making for Development*. UN Department for Economic and Social Affairs, New York.
- Wade, R.1987. The management of common property resources: collective action as an alternative to privatization or state regulation. *Cambridge Journal of Economics*, 11, 95-106
- West, C. and Zimmerman, D. 1987. "Doing Gender." *Gender and Society*, 1:125-151.
- Winberg, E. 2010. *Participatory Forest Management in Ethiopia, Practices and Experiences*. Food and Agriculture Organization, Sub Regional Office for Eastern Africa (SFE). Addis Ababa, Ethiopia.

- Wondimagegn Mengist, Kaba Urgessa, Kiflu Haile and Zerihun Kiflu. 2013. Comparative study of forest under participatory forest management: A case of Belete-Gera Forest, Southwest Ethiopia. *Middle-East Journal of Scientific Research* 17(5):607-612
- Wood, A. P. 1993. Natural Resource Conflicts in South-West Ethiopia: State, Communities, and the Role of the National. *Nordic Journal of African Studies*, 2(2), 83-99.
- Woody Biomass Inventory and Strategic Planning Project (WBISPP). 2004. *Forest Resources of Ethiopia*. Addis Ababa, Ethiopia
- World Bank. 1995. *Participation Sourcebook*. Washington, World Bank
- World Bank. 1996. *The World Bank Participation Sourcebook*. Washington, D.C
- World Bank. 2002. *Sustaining Forests: A Development Strategy*. Washington, DC: World Bank
- World Bank. 2009. *Community driven development*. Retrieved on 18, November, 2015 from <http://go.worldbank.org/24k81HVVso>.
- Wuyep, Z.S. Vincent, C.D., Arin, H.B., Daloeng H.M., and Baminda, A.B. 2014. Women participation in Environmental Protection and management: Lessons from plateau state, Nigeria. *American Journal of Environmental Protection*, 2014, vol.2, No.2, 32-36
- Yamane, T. 1967. *Statistics: An Introductory Analysis* (2nd Ed). New York: Harper and Row.
- Yemiru, T. 2011. *Participatory Forest Management for Sustainable Livelihoods in the Bale Mountains, Southern Ethiopia*. Uppsala: Swedish University of Agricultural Sciences.
- Yeraswork Admassie. 2000. *Twenty Years to Nowhere. Property Rights, Land Management and Conservation in Ethiopia*. Lawrenceville and Asmara: The Red Sea Press Inc.
- Yeraswork, A. 2001. "Overview of natural resources management in Ethiopia and policy implications". In Pankhurst A (ed.) *Natural Resource Management in Ethiopia*, proceedings of the workshop organized by Forum for Social Studies in collaboration with the University of Sussex. Addis Ababa, Ethiopia.
- Yonas Yemshaw. 2007. *Legalize it or lose it: participatory forest management in Africa. International conference on participatory forest management, Biodiversity and livelihoods in Africa .march 19- 21, 2007*. Addis Ababa, Ethiopia.
- Zelalem Temesgen. 2005. *An introduction to Chilimo Participatory Forest Management Project*: Addis Ababa, Ethiopia.
- Zewdu, E, and Hogberg P. 2000. "Reconstruction of forest site history in Ethiopian highlands based on natural abundance of soils." *Ambio* 29(2):83-89.

Annexes

Annex 1: Questionnaires

Introduction

This questionnaire is prepared with an aim to assess *The Role of Women in Participatory Forest Management: The case of Belete-Gera Regional Forest Priority Area in Shebe Sombo Woreda, Jimma Zone*. Hence, you are sincerely required to provide me genuine information. The information that you provide me is very important for this study. Thus, I kindly request you to provide me your answer. The information that you provide me will only be used for academic purpose. I also ensure that any sources of this information will be fully anonymous.

A. Questionnaires for Respondents

I. Personal Information

1. Age: 1. 15-25 2. 26-35 3. 36-45 4. 46-55 5. 56-65 6. 66 and above
2. Sex: _____
3. Literacy status: 1. Able to read and write 2. Unable to read and write
4. Marital status: 1. Single 2. Married 3. Widowed 4. Divorced
5. Ethnicity: 1. Oromo 2. Amhara 3. Kafa 4. Yem 5. Others, please specify _____
6. Religious Affiliation: 1. Islam 2. Orthodox 3. Protestant 4. Others, please specify _____
7. Number of family members (Household size): 1. 1- 4 2. 5-8 3. 9 and above
8. Major occupation of Households 1. Crop farm 2. Mixed farming 3. Livestock 4. Others, please specify _____
9. What is the source of your income? 1. Agriculture 2. Business 3. Remittance 4. Daily labor
5. Forest product sell

II. Level of Participation in PFM

10. Do you know the presence of WaBuB in your area? 1. Yes 2. No
11. If your answer for Q.10 is yes, do you participate in it? 1. Yes 2. No
12. If your answer for Q. 11 is yes, how do you evaluate your participation in this forest management approach based on your involvement in different activities of forest management, election of WaBuB committees and frequency of attending meetings called by

the committees, and generating idea or speaking up in decision making process of the WaBuB approach? 1. Very active 2. Active 3. Moderate 4. Less active

13. If your answer for Q.12 is less active, what are the reasons for your less involvement?

14. Do you attend meeting called by WaBuB executive and sub-committee? 1. Yes 2. No

15. If your answer for Q. 14 is yes, how many times? 1. Always 2. Sometimes

16. If your answer for Q. 14 is no, why? _____

17. In which activities of PFM you highly participate? You can choose more than one

- | | |
|-------------------------|------------------------------|
| 1. Seedling and Nursery | 4. Forest utilization |
| 2. Plantation | 5. Monitoring and evaluation |
| 3. Protection of forest | 6. Others, (specify) _____ |

18. In which activities of PFM from the under listed you don't participate? You can choose more than one

- | | |
|-------------------------|------------------------------|
| 1. Seedling and Nursery | 4. Forest utilization |
| 2. Plantation | 5. Monitoring and evaluation |
| 3. Protection of forest | 6. Others, (specify) _____ |

19. What the reason could be for your answer of Q.18? _____

20. Select in which stage of participation you are involved in PFM and the frequency of your involvement

No.	Stages of participation	Frequency of participation			
		Always	Several times	Few times	Never participated
1	Planning Stage				
2	Decision Making Stage				
3	Execution Stage				
4	Controlling Stage				

21. How do you level your participation in the below listed activities in table?

No.	Activities	Very active	Active	Less active
1	Forest user's identification			
2	Preparation of WaBuB's bylaws and operational plan			
3	Forest protection			
4	Forest product utilization			

22. If there are activities you considered your level of participation as less active for Q.21, please provide the reasons behind _____

III. Decision Making Role of Women in PFM

23. Are you member in any committees' of WaBuB? 1. Yes 2. No
24. Have you participated in the election of WaBuB's executive and sub-committee in your sub-village? 1. Yes 2. No
25. Do you attend meeting called by WaBuB to discuss on forest management? 1. Yes 2. No
26. If your answer for Q. 25 is yes, do you give idea or generate idea? 1. Yes 2. No
27. If your answer for Q.26 is yes, what is your decision making power in discussion?
1. Acceptable 2. Sometimes-acceptable 3. Not acceptable
28. If your answer is Q.25 is no, why? _____
29. How do you evaluate your decision making power in WaBuB approach? Your answer should be based on generating idea and consideration of your ideas in forest management activities, approving decisions made by the committees as well as resist decisions made against the interest of the community in general and women in particular, and acceptance of the persons you elected as committee members. 1. Strong 2. Weak 3. Never
30. If your answer for Q.29 is weak, what is the reason behind that? _____
31. Whose decision in your family is more influential to do below mentioned activities?

No.	Area of Decision	Decision Maker		
		Male	Female	Both husband and wife
1	Housework			
2	Childcare			
3	Collecting fuel wood			
4	Investment on household			
5	Income generation activities			
6	Agricultural activities			
7	Women's participation in PFM			

IV. Perception of Women towards PFM

34. How do you see the importance of PFM approach in conserving forest?
1. It is very important 2. It is important 3. Less important 4. It is not important
- 35 If your answer for Q.34 is option 1 or 2, what is your reason? You can choose more than one
1. It gives Authority (power) to the community 2. It create a sense of accountability
3. It reduces deforestation 4. It improve the livelihoods of the local community
5. It gives us right to use the forest product 6. If other, please specify _____

36. If your answer for Q.35 is not important, what do you suggest as the best means of conserving high forest? (Please rank in order of their importance)
1. Sole government control
 2. Privatizing to household sector
 3. Privatize to private investors
 4. Sole communities control without any intervention
 5. Community and NGO's partnership
 6. Indigenous institutions
 7. Other (Specify) _____

37. In your opinion, how do PFM empower you in forest resource management?

1. Highly empower
2. Less empower
3. Doesn't empower

38. If your answer for Q.37 is option number 3, what the reason could be? _____

39. How do you see PFM in improving the livelihoods of the local community in general and women in particular?

1. Very good
2. Good
3. Not good

40. If your answer for Q.39 is option number 3, what the reason could be? _____

41. How do you see the importance of women participation in forest resource management?

1. Very important
2. Important
3. It is not important

42. What could be the reason for your answer of Q.41? Please describe your reason _____

V. Factors that Influence women's Participation in PFM

43. What was the level of forest stock around your living area before Oromia Forest and Wildlife Enterprise Jimma Branch decentralized the power to community forest management?

1. Decreasing
2. Increasing
3. Remaining the same

44. What was the level of forest stock around your living area after Oromia Forest and Wildlife Enterprise Jimma Branch decentralized the power to community forest management?

1. Decreasing
2. Increasing
3. Remaining the same

45. If your answer for Q.44 is 1 or 2, what are the major reasons? _____

46. Have you reduced cutting tree after you organized to WaBuB? 1. Yes 2. No

47. If **yes** for Q.46, why _____

48. If **no** for Q.46, why _____

49. Have you ever been informed about forest use? 1. Yes 2. No

50. If yes for Q.49, who informed you? You can choose more than one!
1. NGOs like JICA
 2. Government officer from forest department
 3. Students and teachers
 4. Others, (Specify) _____
51. What was your knowledge about deforestation before becoming member to WaBuB?
1. There was severe deforestation going on
 2. There was some deforestation going on
 3. There was no deforestation going on
 4. I don't know about any deforestation
52. If your answer for Q.51 is option No.1, are you encouraged to forest management because you feel there is a problem? 1. Strongly 2. Slightly 3. No
53. If your answer for Q.51 there is no deforestation, do you feel that it hinders your participation? 1. Strongly 2. Slightly 3. No
54. Do you have any knowledge about the effect of deforestation? 1. Yes 2. No
55. If *yes* what are they? _____
56. How do you get knowledge about the effect of deforestation? You can choose more than one!
1. Learning in school
 2. Information from mass media
 3. Training by government organs
 4. Learned from JICA
 5. Others, (Specify) _____
57. If your answer for Q. 54 is *yes*, what is its impact from your experience?
1. It has strong impact on participation.
 2. It has less impact on participation
58. Do you get any benefit from participating in forest management? 1. Yes 2. No
59. If your answer for Q.58 is *yes*, what are the benefits you get? (Put them in rank)
1. Monetary benefit from forest product
 2. The right of using forest for housing and fuel
 3. Physical existence of forest use in the future
 4. Mental satisfaction
 5. Benefit from soil conservation and watershed
 6. Others, (Specify) _____
60. Do the benefits you get initiate you to participate in forest management? 1. Yes 2.No
61. If your answer for Q.60 is *yes*, how do it initiates your participation?
1. Strongly
 2. Slightly
 3. Nothing
62. Are there any losses you have encountered because of participation? 1. Yes 2. No

63. If your answer for Q.62 is yes, what are the losses you have encountered? (Put them in rank of order)
1. It limit cutting tree
 2. Limit farm land expansion
 3. Limit using forest for grazing livestock
 4. It add extra work
 5. The cost of participation is greater than its benefit
 6. Others, (Specify) _____
64. What the interest of your group looks like on the issue of forest management
1. There is great similarity within a group
 2. There is less similarity within a group
 3. There are great differences within a group
 4. There is less differences within a group
65. If your answer for Q. 64 is 1 or 2, do this similarity of interests
1. Strongly enhanced your participation in the group
 2. Slightly enhanced your participation in the group
 3. No effect on participation
66. If your answer for Q. 64 is 3 or 4, is the difference of interests
1. Strongly inhibited your participation in the group
 2. Slightly inhibited your participation in the group
 3. No effect on your participation
67. Are there any available opportunities for women participating in WaBuB? 1. Yes 2. No
68. If your answer for Q.70 is yes, describe how it enhance your participation _____
69. Please list if there is a factor that you believe may enhance your participation in forest management in your local area different from the aforementioned factors _____
70. What hinders your participation in WaBuB of your local area? _____
71. What are the challenges of WaBuB in forest management? _____
72. What should be done to overcome these challenges and hindering factors of women participation in WaBuB approach of Belete-Gera forest? _____

Annex 2: Interview Guide

The aim of preparing this interview guide is to assess *The Role of Women in Participatory Forest Management: The Case of Belete-Gera Regional Forest Priority Area in Shabe Sombo Woreda, Jimma Zone*. As informant, you are selected as a key informant of this study and your participation in this research is entirely voluntary and greatly appreciated. Hence, you are sincerely required to provide me genuine information. The information that you provide me is very important for this study. The information you provide me will only be used for academic purpose. I also ensure that any sources of this information will be fully anonymous. Any audio recordings that may be made will be stored securely and will only be listened to by myself or my supervisor and will be destroyed after the research is complete.

Thank You for Your Cooperation!

A. Interview Guide

1. Who are the stakeholders of Belete-Gera Participatory Forest Management?
2. What are their role and responsibility in managing the forest?
3. Are there women in the executive and sub-committee of WaBuB of Belete Gera forest?
4. Is really power devolved to the local community and sense of accountability created?
5. Does Belete-Gera Participatory Forest Management ensured women empowerment in forest management? How?
6. What are the objectives of Belete-Gera PFM? Do it achieving its objectives?
7. Do support and trainings are provided for the members of WaBuB? Are women beneficiary from the training?
8. Do trainings on livelihood diversification provided for the local people?
9. Do gender issue considered in trainings and support provided for members of WaBuB?
10. How do you evaluate the level of women's participation in forest management in the area?
11. What is the role of women in making decision in PFM approach of Belete-Gera forest?
12. What is the attitude of local people towards women's participation in forest management? What about the women's perception towards PFM approach as forest management system?
13. Do customary law, national forest policy, national constitution and international declaration and convention on gender mainstreaming in sustainable environmental management particularly forest management as far as this study is concerned; have impact on the participation of women in forest management?

14. What is the benefit of participating in WaBuB of Belete-Gera forest management?
15. What are the major factors that enhance Women's participation in participatory forest management?
16. What are the major factors that hinder women's participation in forest management of Belete-Gera forest?
17. What you believe should be done to enhance women's participation in WaBuB under PFM?
18. What are the shortcomings of Belete-Gera participatory forest management in general and in relation to women's participation in particular?
19. What should be done to overcome these shortcomings?

Annex 3: Focus Group Discussion Guide

The aim of preparing this focus group discussion guide is to assess *The Role of Women in Participatory Forest Management: The Case of Belete-Gera Regional Forest Priority Area in Shabe Sombo Woreda, Jimma Zone*. You are selected as the participants of this FGD and your participation in this study is entirely voluntary and greatly appreciated. Hence, you are sincerely required to provide me genuine information. The information that you provide me is very important for the study. The information you provide me will only be used for academic purpose. I also ensure that any sources of this information will be fully anonymous. Do not discuss issues that you are uncomfortable with and have the right to withdraw your participation. This focus group discussion has taken one and half hour for each FGD.

Thank You for Your Cooperation!

A. Focus Group Discussion Guide

1. How and when forest management association formed in your local area?
2. Who organized Forest Management Association and elected its executive committee and sub-committee? Do gender issue was taken into consideration?
3. What is the composition of Forest Management Association members' by sex, location, class, religion, age, marital status, literacy rate and economic status?
4. How do local community in general and women in particular see the importance of PFM approach in conserving forest?

5. Why do local people in general and women in particular participate in WaBuB? Do their participation is for environmental conservation or for material purpose?
6. What is the perception of people towards women's participation in WaBuB? What about women's perception towards participation in WaBuB approach as a forest management?
7. What factors enhance women's participation in WaBuB as a forest management system in your local area? What opportunities are available to encourage their participation?
8. Do forest department of government provide support and trainings for local community? What kind of support and trainings? Was gender issue considered in the trainings?
9. Do the support and trainings help to improve the livelihoods of local people in general and women in particular and conserve forest in sustainable manner?
10. How do women are encouraged to participate in community forest resource management activities? What are the major factors that encourage women participation in PFM?
11. What are the major factors that inhibit women participation in Belete-Gera participatory forest management?
12. What are the challenges of WaBuB approach as a system of Belete-Gera forest management?
13. What would you believe should be done to overcome these hindering factors and shortcomings?

Annex 4: Observation Checklist

The below listed are observation checklist used in field observation.

1. Who is there in the meetings of WaBuB committees? Only men, women or both?
2. What are their roles? Do women represented in the committees of the approach?
3. What distinguish them? Ethnicity? Religion? Age?
4. What is being done to protect and conserve forest?
5. What is going on to manage the forest?
6. Do women physically take part in forest management activities?
7. What are people talking about the forest management?
8. What does the forest looks like? Is it regenerating? Is there forest destruction?