AN ANALYSIS OF THE PARTICIPATION OF MEN AND WOMEN IN THE WATER FOREST RESOURCES USERS GROUPS: A CASE OF SINAZONGWE DISTRICT FROM 2010-2014

BY

BRISTONE SIMULYAMANA

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DEDICATION

This dissertation is dedicated to my mother, Beritha Muleya, my late Father Moses Simulyamana who gave me life, love, hope for the future and for watching over me. Last but not least I dedicate this piece of work to my wife Mavis Mudenda, my daughter Faith and my sons, Praise and Joshua, without whose support and patience this work would not have been completed.

DECLARATION

I, Bristone Simulyamana do solemnly declare that this dissertation represents my own work and that it has not previously been submitted for a diploma or degree at this or another University.

Signed: _____

Date: _____

APPROVAL

This dissertation by Bristone Simulyamana is approved as fulfilling part of the requirements for the award of the degree Master of Arts in Gender Studies of the University of Zambia.

Name of examiner:	signature:	Date
1. Dr Phillimon Ndubani	_____	_____
2. Dr Joseph Simbaya	_____	_____
3. Dr Thankian Kusanthan	_____	_____

ABSTRACT

Since the 1995 Beijing women's Conference there has been international recognition of the need for women's participation in water and forest resources management. Zambia has introduced users groups to enable women and men to control these resources. The main objective of the study was to analyse the participation of men and women in water and forest resources users groups in Sinazongwe District from 2010 to 2014. A descriptive case study design was used. One hundred and twenty (120) household respondents (68 women and 52 men) who were randomly sampled answered a household questionnaire. Purposively selected for interview were fourteen (14) Primary School Head teachers, sixteen (16) Village Head persons, sixteen (16) Chairpersons of committees, one (1) Official from Sinazongwe District Council, one(1) World Vision Sinazongwe Area Development and one(1) Forest Department Officials . Three (3) FGDs were conducted with male and female committee members.

The study found that livelihoods of local people depended on water and forest resources, more men than women attended meetings. However, although men predominated, some women also represented their households. On speaking in meetings men dominated while a minority of women also spoke though often they were not taken seriously. On roles, many women were elected as treasurers while a minority were also elected as chairpersons. Women maintained water point surroundings and planted *Faidherbia abida* in their fields of cultivation. Men repaired boreholes and protected water points by building wooden fences. Both policed water and forest resources. Various socioeconomic factors such as low level of education among women reinforced patriarchal subordination which undermined their participation.

This study concluded that men played more prominent roles than women. However, women also had an influence as treasurers where they ensured safety of financial resources. A minority were chairpersons. Women needed to be empowered for their effectiveness.

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ACRONYMS

CEDAW	Convention on Elimination of All Forms of Discrimination Against Women
CITES	Convention on International Trade on Endangered Species
CRS	Catholic Relief Services
FAO	Food and Agricultural organization
FGDs	Focus Group Discussions
FUG	Forest users group
GBM	Green Belt Movement
IWRM	Intergrated Water Resources Management
JETS	Junior Engineers and Technicians and Scientists.
JFM	Joint Forest Management(JFM*)*
JFMC	Joint Forest Management Committees
KDF	Kaluli Development Foundation
MDGs	Millennium Development Goals
NGOs	Non Government Organisations
NTFPs	Non Timber Forest Products
SAFE	Student Alliance for Female Education
UN	United Nations
UNCED	United Nations Conference on Environment and Development.
UNDP	United Nations Development Programme
UNICEF	United Nations Children's' Emergence Fund
UNREED	United Nations Reducing Emissions Forest Degradation and Deforestation
UK	United Kingdom
WIDO	Women in Development Organisation.
WUG	Water users groups

CHAPTER ONE: INTRODUCTION

This section presents background to the utilisation and management of water and forest resources. It is followed by the discussion of the Water and Forest resources users groups in Sinazongwe.

1.1 Background.

In many countries, women's role in addressing problems of water and forest resources has been well acknowledged. In the United States of America, Rachel Carson's S*ilent Spring, 1962,* led to banning of environmentally unfriendly agro pesticides which polluted rivers. In Africa, Wangari Maathai (FAO:2012)Green Bolt Movement(GBM) founder show cased women's role in conservation efforts which is important to sustainable utilisation and management of water and forest resources. Therefore, women have contributed to sustainable natural resource management. While efforts (Agarwal: 2001, Lu:2008) to promote water management and utilisation rhetoric on participation of women, research shows that their influence is low. This is despite evidence of remarkable work, efforts and experiences highlighted.

In Africa, women produce 80 percent of food, while continuing to face difficulties in gaining access to water and forest resources critical in sustainable production. This contributes to persistent incidence of poverty (FAO: 2007). Furthermore, the study (FAO) found that fertile arable soils were owned by men in most traditional societies and access by women is determined by their relationships with them. The study further found that in developing countries, women and girls spent most of their time collecting water and firewood.

Zambia is among many African countries experiencing high rate of deforestation with potential to cause many environmental, social and economic problems. One of the reasons

which led to introduction of users groups was the rise in incidences of water shortage and deforestation. This approach fell within the framework of Integrated Management of Natural resources (INRM) (UNCED: 2002). This is important because water and firewood are integral to rural women's household work.

1.1.1 Origin of Zambian water and forest resources policies.

The following global events and declarations informed the water and forest resources projects, policies and programmes in Zambia:

The Stockholm conference (1972)(UNCED) whose focus was on sustainable development contributed to the Zambian water and Forest resources policy framework. The conference brought to the fore the view that environmental problems including water and forest resources shortage were rooted in a coercive relationship between environment and development,

The World Charter on Nature signed on 28th October, 1982 recognised local communities as integral to nature, life and undisturbed functioning ecosystem. One of the important principles put forward was that water and forest resources should be used sustainably within natural carrying capacity for renewal,

Rio Declaration on Environment and Development (Rio Janeirio from 3-4th June 1992) reaffirmed the Declaration of the United Nations Conference on Human Development. It put people at the centre of sustainable development and that local communities were entitled to a healthy and productive life in harmony with nature. Principle 20 of Rio Declaration recognises the role of women in environmental management.

Beijing Platform for Action (1995), report on the Fourth World Conference on women, Beijing (4-15th September 1995) in its chapter on Women and the Environment

acknowledged the role women played as primary natural resource managers (UN World Report: 2012),

The Johannesburg Declaration on sustainable development held from 2 – 4 th September 2002 was based on sustainable development. One of its objectives was assuring women's empowerment, emancipation and gender equality,

In December 2003, the General Assembly of the United Nations (UN) proclaimed (resolution 58/217) the period 2005 as International Decade for Action, 'Water for life', and called for a focus on implementation of water-related programmes and projects, "whilst striving to involve women in water-related development efforts..."

The MDGs with same time frame as the 'water for life' decade included 2015 targets on gender equality and empowerment of women, as well as safe water and sanitation.

1.1.2 International Water policies:

The Global Consultation on Safe Water and Sanitation for the 1990s held in New Delhi, India, held between 10-14 th September 1990 discussed water management policies. The goal was consulting among developing countries on environmentally sound and sustainable water supply strategies. This was important for competing demands on water for agriculture and other development initiatives undermining social and economic development. These policies are in line with International Drinking Water Supply and Sanitation Decade (1981-1990)(Global Water supply:2009).

The Dublin Statement (1992), supported by over 100 countries including Zambia, recognised women as key players in the management of water. It called for acknowledgement of women as providers and users of water and thus reflecting it in institutional sustainable water management strategies. This was at the backdrop of scarcity and misuse of fresh water which

was presented as a serious and growing threat to sustainable development. The acceptance and implementation of the principle, required supportive policies which would address women's specific needs by equipping and empowering them with skills to participate at all levels of water management including decision making and implementation, in ways defined by them(UNDP:2012).

Earlier on, as supported by Nyambe (2010), at the World Summit for Sustainable Development (WSSD: 2002) the strategy of "Integrated Water Resources Management (IWRM) and Water efficiency plans by 2005" (Nyambe: 2010), was enhanced. This was a follow up to implement Integrated Water Resources Management strategies by stakeholder countries by 2005. Furthermore, the 2004 commission on sustainable Development focused on water and sanitation sector to follow up progress on developing countries and their development partners.

1.1.3 Zambian Water policies

The management of water in Zambia reflected global management policies. The fifth National Development plan (FNDP) and the Integrated Water Resources Management (IWRM)(1997) aimed at bringing effectiveness in water management. The key feature of these sectoral reforms was provision for full participation of all stakeholders including women through the decentralisation framework.

As a result, problems of water shortage, protection and management could only be addressed by sustainable development approaches. One of the policies aimed at mitigating such problems was the Integrated Water Resource Management (IWRM), an approach which looks at the role of women as 'carers' and 'managers' who are well informed of water related problems.

The above policies informed the Zambian water management legislations whose intended outcome was gender equality (GIDD: 2000). Consequently, Zambia adopted integrated management approaches in 1997 which lead to emergence of users groups. As a monitoring tool, the Government (GRZ: 2001) developed a gender mainstreaming tracking framework to analyse the participation of men and women. This was aimed at promoting sustainable utilisation and management of water.

1.1.4 Relevant Global Forest resources policies

The following events influenced International forest policies:

The Convention on International Trade in Endangered Species of wild fauna and flora (CITES) (1975) aimed at protecting plant and animal diversity,

The Convention to Combat Desertification(UNCCED), adopted in Paris on 17 th June, 1994 by the United Nations General Assembly, aimed at promoting effective action to protect dry lands through innovative local programmes and supportive international partnerships. The introduction of the National Action Programme (NAPs) in Zambia was enhanced by this convention. The approach was adopted earlier in 1992(ECZ: 2000),

Reducing Emissions from Degradation and Deforestation (REDD+) policy under the United Nations Framework Convention on Climate Change (UNFCC) aimed at enhancing forest carbon stocks in developing countries with restrictive measures on access by local communities. The REDD+ approach aimed at preserving forest stocks as carbon sinks under UNFCC for the purpose of mitigating climate change (UNCED: 2010).

1.1.5 Zambian forest resources policies

The forest Act of 1999 provided for the establishment of National Forests, Local Forests and Joint Forest Management (JFM) committees.

Furthermore, the Act provided for participation of local communities, traditional institutions, Non-Government Organisations (NGOs), government agencies and other stakeholders in promoting sustainable forest management.

The Forest Department (FD) embarked on implementation of JFM through Provincial Forestry Action Programme (PFAP) with technical and financial support from the government of Finland. The programme developed a model for joint forest management with local communities in line with national forestry policy. The programme was implemented in three (3) provinces of Luapula, Copperbelt and Southern (PFAP, 2005).

However, management of forests in Zambia before 1999 was based on government policy and legislation which restricted access by local communities to forests except with special permits(GRZ,1973;GRZ,1998;PFAP,2005). Local people had no power over forests and as such did not have meaningful incentives to conserve and manage. The government also failed to effectively manage forests due to financial constraints and inadequate manpower (ZFAP,1998). The lack of local participation led to communities to have a negative attitude towards conservation efforts and enforcement of conservation-related regulations.

The management of forests through a government agency was a common approach in most African and Asian countries. This approach however did not consider the needs of local communities as it was more concerned with conservation of forests from human exploitation (Vandergeest: 1996). For example, in Uganda as reported by Obua et al. (1998), local people did not value sustainable forest produce from Budongo Forest Reserve.

As a result of the pressure within the country for sustainable natural resource management and the events around the globe, such as the United Nations Conference on Environment and Development (UNCED) also referred to as the earth Summit held in Rio de Janeiro in Brazil in 1992, there was recognition of the role of local communities in forest management and policies in Zambia(ZFAP,1998;GRZ,1998;Jumbe and Angelsen,2007).The information available and the lessons learnt from within and outside the country provided evidence of potential for Joint Forest Management (JFM) to contribute positively to the improvement of forest status and rural livelihoods (PFAP,2006).This was the root of water and forest resources users groups.

1.2 Water and Forest resource users groups in Sinazongwe.

Sinazongwe has scant vegetation which is ecologically fragile with semi arid District. The place is comparable to Nabwalya in Northern, Luano valley in central and Sesheke in Western provinces of Zambia. Despite this environmental condition, Siamwiza (2009) described the 'water and forest resources in the area as the 'granary'. This was because livelihoods of men and women were centred on water and forest resources. However, women's participation was not taken seriously by the local community (World Vision: 2012). As a result, NGOs, Government Departments and local communities started involving both men and women in users groups in 2010 introduced in 1997 but then lapsed.

1.3 Statement of the problem.

Despite international consensus on the need to involve women in water and forest resources management, research continues to show that fewer women than men are participating. A study of Water Users Associations in rural China found that less than 30 percent of rural users who participated were women and 70 percent were men (Lu: 2008).Nozibele's(2009) study of gender in integrated water resources management in South Africa revealed that 10 percent of the participants were women while 90 percent were men. Argawal (2007) argues that worldwide, the chronic low participation of women is a problem.

FAO (2007) reported that in Zambia, there was almost no information or data available on the participation of women in the utilisation and management of water and forest resources.

In Sinazongwe District, various stakeholders such as NGOs (World Vision and KDF: 2010) and Government agencies have been trying to involve women in conservation programmes. This is because in the area both men and women are involved in charcoal burning and shifting cultivation. These unsustainable practices lead to degradation of such resources and eventually loss of livelihoods of local people. Since women depend on water and firewood on daily basis they are also well informed on problems about such resources thus required to participate equally. Therefore, it is important that both men and women are involved in conservation efforts to ensure sustainable utilisation. The extent to which women are participating in the Water and Forest resources users groups in Sinazongwe is unknown hence this study.

1.4 Aim or purpose of the study

The study aimed at analysing the participation of men and women in the Water and Forest resources users groups in Sinazongwe District of Southern Zambia from 2010 -2014.

1.5 Objectives

1.5.1 General objective

The overall objective of the study was to analyse the participation of men and women in the Water and Forest resources users groups from 2010 -2014.

1.5.2 Specific objectives:

1.5.2.1: To analyse representation of men and women in the Water and Forest resources users Groups,

1.5.2.2 : To examine roles played by men and women in the Water and Forest resources users groups,

1.5.2.3 : To identify factors affecting the participation of men and women in the Water and Forest resources users groups,

1.5.3 Research questions

1.5.3.1: What is the representation of men and women in the Water and Forests resources users groups?,

1.5.3.2 : What roles do men and women play in the Water and Forest resources users groups?,

1.5.3.3 : What factors affect the participation of men and women in the Water and Forests resources?,

1.6 Significance of the study

The participation of women in all spheres of life have been treated with contempt .This study uses the gender lens to analyse the involvement of women in the management and utilisation of water and forest resources. The findings of this study will inform new practices and policies which will in turn support sustainable management practices. This is aimed at promoting gender equality.

1.7 Scope of the study

The study looks at participation of men and women in the water and forest resources users groups. It looks at representation at different hierarchies of water and forest resources users groups. Furthermore the study also looks at roles played by men and women in users groups. Finally the factors which undermine the participation of women are also identified.

1.8 Definition of terms:

Participation

availability of opportunities for individuals, groups and organisations to provide input in making of decisions which have, or are likely to have, an impact on the environment, their livelihoods, communities including in enactment of bye laws, enforcement of national laws, policies and guidelines and Environment Impact Assessment(EIA) procedures. (International law: 2002).

Sustainable environmental management and utilisation

Rules, Practices, policies and institutions that shape how people interact with the water and forest resources arising from a regime of international agreements, conventions, protocols international laws, legislations, policies formulated by communities including enactment of bye laws and all interventions aimed at managing the environment to ensure sustainable development.(International law).

Users group

Water Forest resources committee, association, conservative group dealing with water or forest resources elected by the stakeholders aimed at equal participation of men and women in the utilisation and management of water and forest resources.

CHAPTER TWO: LITERATURE REVIEW.

Besides theoretical framework, this chapter provides relevant literature on management of water and forest resources. It is presented from the global, regional (Africa) and Zambian perspectives under the following themes: representation, roles played by men and women and factors affecting them in users groups. This is based on study objectives.

2.1 Theoretical Framework

This study uses the ecofeminist, socioecological theories and Moser's Frameworks to analyse the participation of men and women in the water and forest resources users groups.

The ecofeminist theory asserts that women, water and forest resources suffer common oppression from male domination. Therefore, to address water and forest resources degradation, women should share control over such resources. The socioecological theory argue that oppression and the degradation of the environment is rooted in societal problems such as poverty and gender inequality. This weakens the social and economical position of women in society. Finally Moser's Framework focuses on roles played by men and women.

2.2.1. Ecofeminist theory.

The relationship between women, water and forest resources is rooted in gender (Adams: 2003). As a result male dominance ultimately leads to degradation of water and forest resources (the other). Using this theory, Shiva (1993) links women and the degradation of water and forest resources. She argues that water and forest resources problems are due to over overexploitation. This is because they are viewed as raw materials for economic development by men who control them as they control women. But women are aware that water and forest resources must be preserved for future use and subsistence. Ecofeminists aim at correcting men's perceptions of water and forest resources. Therefore, this theory informs the current study that male dominated public policy is rooted in patriarchy.

This is the basis of the ecofeminist thought which support the notion that "prevailing market systems", oriented towards unending growth and profit, cannot be sustained unless it continuously exploited water and forest resources. Therefore, the degradation of these resources arises from unsustainable utilisation and management. This affects women as they use these resources daily.

2.2.2 Socioecological theory

According to socioecologists, degradation of water and forest resources is rooted in unsustainable practices such as charcoal burning and shifting cultivation which are societal problems (Zimmerman: 1993). As a result, water and forest resource shortage are "socially created". These problems include gender inequality and poverty. This forces men and women to engage in charcoal burning and shifting cultivation to earn livelihoods. Therefore, scarcity of water and forest resources has the capacity to worsen the negative effects of degradation such as climate change. This is inextricably complex and cannot be clearly understood, much less resolved, without dealing with gender inequality which contributes to a coercive relationship between users, water and forests resources.

As a result, gendered inequalities in society undermine the participation of women in the water and forest resources users groups. As a consequence users group policies are not informed by women's experiences

2.2.3 Moser's Framework

Moser's Framework (1993) argue that reproductive, productive and community roles determine gender roles assigned to men and women in the community. This is based on the household division of labour. Reproductive roles revolve around childbearing/rearing responsibilities and domestic duties usually undertaken by women. This is required to maintain and reproduce the labour force. These include not only biological reproduction but

also the care and maintenance of the work force (working husband and children) and the future workforce (infants and school- going children).

Mosser argues that reproductive roles bring women into direct contact with water and forest resources. This is 'normally' seen as an extension of women's reproductive work. As a consequence women suffer negative effects of degradation. As a result they have a better understanding, knowledge and experience in the management and utiliisation of such resources.

2.3 Studies on the management and utilization of water and forest resources.

Various studies have been done on participation of men and women in the utilisation and management of water and forest resources. This literature review is informed by the theories discussed above.

2.3.1 Global studies

Around the world many studies on the involvement of men and women in the management and utilisation of water and forest resources have been done. The findings informed the analysis of users groups in Sinazongwe.

A study by Cloughesy (2005) on Family Land Owner on capacity building for sustainable use of water and forest resources in the United States (US) found little information. He argued that this was different when compared to countries. It was found that traditional and rigid perceptions of gender roles in the management of water and forest resources were problematic to women. This was despite evidence of an overall shift towards a more gender-inclusive forest resource management approach.

According to this study women who went through training were effective. Furthermore there was an increase in number of women involvement. On barriers faced by women, lack of

access to information weakened women's participation. Cloughesy viewed NGOs as provided social net works. This is because women's participation in the management of such resources signify a broader social shift as it provided opportunities. This was because efforts focused on "underserved" and underrepresented sections of the community with the aim of ultimately empowering and strengthening them.

Furthermore, a study done by Office of National Statistics of the United Kingdom (UK) (2011) on Mainstreaming gender in the UK forest sector: livelihoods and equality of access to forest benefits reported that there was only 16 percent of female employees in the forestry sector. This was due to traditional gender roles which perceived such sectors as male dominated. The study revealed that such views had negative outcomes in management and utilisation of forest resources.

An earlier study by Tiwary(2004) on Joint Forest Management Committees(JFMCs) in rural India also reported similar findings where law required one-third of JFMC to be women.However, men still dominated in meetings and made important decisions. Women on the other hand remained non-vocal and inactive.

Another study by Lu (2008) on Difficulties in Tackling Gender in Water Users Associations in rural China reported that less than 30 percent of women participated. The study revealed that the majority of women who participated were widowed, single, and those with migrant working husbands. The study further revealed that women who took part in users group activities complained of having less time due to various livelihood demands. Furthermore, Lu argued that the scenario led to low representation of women which ultimately affected their roles. It was reported that few women were elected as chairpersons and secretaries, the roles

which were seen to be influential. Instead, it was found that portfolios that were considered less influential such as that of being treasurer and committee member were taken by women. This is supported by an earlier study by FAO (2007) who reported that women in positions merely provided cheap labour as influential positions were usually held by men. This suggest that the low profile portfolios positions were seen to be a preserve of women. Lu argued that roles by women reflected 'stereotyped' gender roles at household level. As a result women had no influence to change policies in users association.

Furthermore, Lu's study further reported that women participated in agricultural activities (as did men) except for ploughing (which was considered men's work). The study revealed that men's outmigration led to changes in gender roles as women could repair wells, build and maintain canals. However men reportedly dominated in decision making in users groups in the area.

According to Lu, marital status and lack of proper organization of meetings, low level of education, long distance to meetings were some constraining barriers to participation of women in users groups. The study concluded that less than 30 percent of women took part in users groups.

In supporting these findings Besten(2011) argued that assumptions of policy makers and practioners are rooted in stereotyped views of male donminance, a practice which undermines women's effectiveness. As earlier argued, participation of women is affected by low representation and the roles which they play (Bookchin:2003).

The representation and roles of men and women in the management of water and forests resources, the constraining factors are integrated with gender roles. Therefore, analysis of gender roles of men and women in users groups in Sinazongwe is important in determining the extent to which women were participating. Since gender roles are not universal, so is their implication on representation, roles and factors affecting the participation of women differ.

2.3.2 Studies in Africa.

Across Africa, various studies have discussed participation of men and women in the utilisation and management of water and forest resources.

A study in Tanzania on Assessment of Management Practices of small holder Woodlots involved in marketing of trees with special attention to gender roles was carried by Rugumamu(2006).It was found that the selling of the woodlot was done by the head of househooold(usually the father). Furthermore, the mother and children (sometimes as young as 10 years) headloaded raw timber to the road side for transportation to market points.

Rugumamu's study found that male children had more rights than their female siblings in 80 percent of householdsA study in Tanzania on Assessment of Management Practices of Small holder Woodlots involved in marketing of trees with special attention to gender roles was carried out by Rugumamu(2006). It was found that the selling of the woodlot was done by the head of the household. As a result of these findings, programme designers repackaged woodlot management best practices into a set of guidelines. This was done by involving men, women, boys and girls by empowering them with information on tree species selection, source of planting material, land preparation and woodlot tending activities. The study further reported that development of guidelines utilised both the local knowledge of farmers and technical recommendations of forest staff. These findings are also

supported by Adams(2003) who argues that gender mainstreaming strategies should be informed by experiences of both men and women. This is useful in widening knowledge on the management of water and forest resources for sustainable utilisation.

This study informed the current study that roles played by men and women, boys and girls in the managemenrt of forest resources were gendered. As reported by these findings the best practices provided tools which empower the disadvantaged groups such as women and girls.

A study by Nyapeye (2006), on the Evaluation of the Extent of Mainstreaming gender into community forestry in Eastern Cameroon found that the fight against poverty involved rural women in rural communities. This was a result of community fight against poverty (FCCP) strategy in conjunction with the Catholic Relief Services (CRS), an NGO which developed a gender mainstreaming strategy to allow for the youth to have a voice in forest resource management and utilisation.

It was found that there was an increase in the number of women participating in users groups since the FCCP was implemented. According to female community members, women had started having the right to sit with men and discussing village development issues with them and were involved in the implementation of community projects. The women further attributed these changes to the impact of the project activities. Three quarters of men reported that women played an important role in the management of financial resources derived from forest exploitation. This in turn contributes to an increase in the status of women as respected and valued members.

This study informed the current study that an NGO was important in building capacity for disadvantaged communities so as to sustain the availability of water and forest resources.

Nozibele (2009)reported on South Africa on the Assessment of Water Equity in Water User Associations that few women held positions in institutions managing water resources. The study found that female elected committee members were not effective due to lack of leadership skills arising from inadequate or innappropriate training opportunities.

Nozibele's study attributed men's dominance to patriarchal perceptions that men unlike women were endowed with decision making powers. These views on leadership and committees about empowerment or lack of it were important in understanding how committees work.

A study of Gendered Knowledge of the Shea tree (*vitellaria paradoxa*) in Burkinafaso (Elias:2010) reported that though men and women recognised common environmental factors influencing productivity of the Shea trees, their ecological knowledge was gendered. It was found that while women also possessed the same kind of information access to and control remained in the hands of men as it was determined by the gender roles. The study further revealed that other differences such as age, wealth, or origin operated in gender-differentiated ways. The study found that gendered knowledge systems mediated the management and conservation of *shea* trees. Therefore any appropriate conservation programmes depended on recognizing the gender- specific ways in which local people relate to and manage species.

This finding is important for the current study as ecological knowledge informs participation and has capacity to change gender roles. This is important because water and forest resource degradation was experienced differently by men and women.

A study by Gurung(2011), a Food and Agricultural (FAO) study on gender in forestry in ten (10) African countries concluded that gender inequality in forestry organisations in Africa was striking. The study found that the language of global REDD policies for instance refered to the need to engage indegeneous peoples and local communities but did not recognise differentiated needs of women within communities. This signified an assumption that community participation would ensure their representation and giving a 'gender blind' and therefore erroneous view of reality.The study found that there was low representation of women in REDD+ related activities.

According to Brown(2011) on Gender, Climate Change and REED+ in Congo Basin forests of Central Africa climate change was going to have a strong impact on natural resource – dependent communities through a multitude of primary and secondary effects in both natural and social systems. The paper revealed that the poor and the marginalised were potential victims and would experience climate change most acutely.

A study in Liberia by Weah(2012)on Women and Forests in Liberia reported that though men and women had same rights under the constitution and statutory law on water and forest resources, the participation of women remained a problem. This was despite so much rhetoric by policy makers to include women.The study found that decision makers did not conduct gender analysis prior to their projects, programmes, and policies hence gender impacts were barely addressed.

The study revealed that it was unacceptable for women to openly disagree with their male counterparts, be it husband, uncle or elder. As a result efforts to promote gender equality by involving both men and women in public forums failed to create a conducive environment for women because the presence of men served as an intimidating factor.

The study concluded that lack of gender analysis at project planning stage contributed to ill-informed policies which negatively affect women. Further more, it was found that men were barely organised to support women's participation or provide space for women in decision making. Therefore women were not seen by men as partners with legitimate, albeit different, needs for participating in users groups.

Takang(2012) in Mali on Women and Forests resources reported a myriad of conflicting policies.The study found that there was a conflict between customary law rooted in traditional beliefs and practices and the statutory law premised on foreign legal concepts and mechanisms. This led to many socio economic problems in local communitues. The study found that reconciling customary practices with legal provisions inherited from colonial period, and the one followed since independence was problematic to decentralisation agenda since 1991. Therefore, the low participation of women in management of forest resources management continued in Mali. This was despite government's acknowledgement of women's role in the utilisation and management of water and forest resources as an important and essential element of womens's political, economic and social autonomy.

This study therefore brings to the fore that decentralisation strategies did not work in Mali and thus stakeholders needed to rethink their approach.This is important for the study in Sinazongwe.

Takang's study further revealed that laws regulating water and forest resources utilisation and management were unknown to women hence their rights could not be safeguarded. Since rights were linked to control, it meant that women had no leverage in water and forest

resources management due to limited rigthts which b affected their participation. As earlier argued, despite rhetoric in public policies, in practice, women did not effectively participate in the management of such natural resources.

These studies were important in informing this study the representation, roles and factors that affect the participation of men and women in the Water and Forest resources users groups in Sinazongwe. It can be also be concluded that more work was done on forests than water.

2.3.3 Studies in Zambia.

A study by World Bank (2004) on gender mainstreaming in Zambia revealed that gender equality efforts lagged behind other countries. This was despite the importance in achieving sustainable water and forest resources development. The study found that as a consequence, gender gaps cut across all development sectors, and all levels of society and government. As a result the study argued that pervasive gender-based inequality and discrimination against women persisted in Zambia, with socio cultural norms favouring males.

The study further revealed that in Zambia women contributed at least 80 percent of agricultural production, even though government policy had not effectively supported women farmers. This is also in addition to agricultural marketing policy and interventions not supporting women in terms of marketing their crops. Similarly, women engaged in forestry and non-timber forestry activities had been overlooked in both policies and programmes.

The study further reported that patriarchy remained the dominant socio-cultural norm in Zambia, and cut across ethnic groups, livelihoods, rural and urban communities, educated and non-educated people. It was found male dominance influenced personal relationships, intra-

household interactions, and guided responses to poverty, including informing national strategies and policies. The pervasiveness of patriarchy determines daily interactions between male and female government officials at all levels, and their interactions with rural women and men.

The report concluded that in such a climate, gender issues and concerns were trivialized in key policy discussions and negotiations. Such was commonly seen in the environmental resources sector (water and forest sector) as it had been a male-dominated profession typified for example by uniformed (and sometimes armed) men perceived as enforcers of forest laws.

The study further found that customary gender roles in Zambia were based upon deeply held socially constructed attitudes, beliefs and practices that governed all aspects of life. With respect to forests, gender roles reflected both codified and customary laws and traditions, which determined how men and women used water and forest resources. In particular, customary rights of access and property rights tend to favour males for water and forest resources in Zambia. As result gender gaps contribute to Zambia's slow economic growth and poverty reduction, and that human development, critical to productivity, is hard to achieve without gender equality which was earlier supported by World Bank. This is reflected in the utilisation and management of water and forest resources in the country.

The report revealed that gender relations were rooted in the discriminatory ownership of productive resources, so that women were deprived of property and rights of access. These relations also inhibited opportunities for women to organize, and to petition successfully for information and services (such as extension and credit).It was also found that regardless of land ownership rights, trees remained public government property.

The report further found that apart from subsistence agriculture, collection of non-wood forest products such as mushrooms, fruits, vines and honey was an important activity for food security and rural livelihoods. Livelihoods have traditionally been based upon the consumption and trade of non-timber forest products (Neaps). Most are traded locally, due to the poor road and transport network. Even in urban areas, high unemployment and poverty created high dependence on Neaps. As reported by Njovu(2004),Non Wood forest products are usually collected free of charge by women and men.

Another report by CIFOR (2007) on Women's Access to Forest Resources in Zambia reported that women healers often refer to a spirit guiding them to medicinal plants, which they collected and prepared. As a result, the report asserted that "Spiritual forests" were Zambian critical forest resources. This was because seeds, cuttings and tubers of medicinal plants were cared for. It was further found that traditional healers had received donor assistance to be organized on a national basis, and 60 percent of registered healers were women. The number of women healers is said to be growing in response to the increasing number of HIV-AIDS patients, now affecting about one-fifth of the adult population of Zambia. CIFOR further revealed that Ministry of Tourism, Environment and Natural Resources had integrated traditional healers as part of the Technical Committee on Natural Remedies for HIV and other Related Diseases.

Another study by Izumi (2006) on Participation on Land Ownership rights in Zambia revealed that women had limited land ownership rights and consequently had gendered negative experiences in utilisation and management of forest resources. As a result of forest exploitation, as well as protection and policy measures, add to hardships of rural women by denying them access to forest resources. As a result there is particular concern by various stakeholders (GRZ: 2012, UNDP: 2000, World Bank: 2004) about the impacts of forest

privatization and market-based conservation policies. This in respect of carbon trade where women might potentially lose rights of access to forests. Izumi concluded that focus on poverty alleviation and local management, combined with capacity building, can provide women with opportunities to engage with forestry initiatives and institutions in Zambia on a more equitable basis.

A report by GRZ(2012) on the Impact of customary Practices on Gender Equality in Zambia revealed that despite donor interest, gender mainstreaming remains grossly insufficient and under-funded, and therefore ineffective in Zambia. It was reported that neither the NGP nor GIDD structure contained a specific strategy for gender mainstreaming. Since water and forest resources sector cut across many sectors it is difficult to attain gender equality. This makes gender mainstreaming difficult to achieve. Even though GIDD, the NGP and 1998 Forestry Act gave opportunity for incorporation of gender issues, this has not been transformed into reality (MENR: 2007).

A State of the Environment (2000) report in Zambia revealed that though endowed with a wealth of natural resources, the country faces a number of challenges of water and forest resource degradation. The report revealed that the incidence of deforestation was at the rate of 250-300 thousand ha/per year. This was attributed to uncontrolled forest product exploitation, illegal settlement, encroachment, traditional agricultural practices like *Chitemene*. It was further found that the need for fuel wood further worsened the situation. Water pollution was also another reported form of environmental degradation common in the country and was caused by mining activities such as disposal of sediment into drainage system and natural waters. The report informs the current study that water and forest resources in Zambia are undergoing degradation and thus highly contested.

A review of the Zambia Forestry Action Programme (ZFAP) (2000-2020) supported by FAO and other donors reported significant gender gaps. It was found that though policy initiatives such as Environmental Management Programme (1998-2003) made efforts to ensure women representation, practices on the ground were different. This was despite environmental sub-sector policies and the wildlife and forestry policies of 1998 in place which provided for such strategies. The report argued that such policies could have been taken advantage of to bring women on board (GIDD 2004).

The review showed that the main obstacle to gender integration in ZFAP programme was lack of gender disaggregated information and the staff's lack of skills on gender analysis.

The report revealed the success of the Forestry Act of 1999 in establishing JFMCs depended on the involvement NGOs and local communities. This initiative was supported by the Finnish Government and FAO by involving the Zambian Forestry Department to develop a replicable model of joint forest management. This programme was aimed at building the capacity of Forestry Department staff by supporting the active involvement of forest-adjacent communities in eight pilot areas. The JFM initiative was intended to allow the sharing of forest-based revenues between local communities (70 percent) and the Forestry Department (30percent).

A gender review of JFM (Wonani:2004) noted that women lacked access to information concerning JFMCs, and were discouraged from participating because their spouses did not see immediate benefits. It was further revealed that JFMC field staff had very limited skills in gender sensitization, analysis and mainstreaming, and that there was a lack of female staff and role models in the forestry sector. Women's participation in all JFM decision making

bodies was very low, with of none of headed by women. As a result women saw JFM mainly as a conduit for the formation of women's clubs in their communities (Wonani :2004).The report further revealed that while the Finnish Government and FAO had noted gender inadequacies in existing implementation, there was no sufficient attention paid to effectively incorporating women in JFM. Future programming and donor investments were uncertain (WWF 2005).

A study by Milupi (2008) on Effects of Degradation of Water and Forest resources on women in Chongwe revealed that loss of forest resources was closely linked to loss of water. The study revealed that the loss of such resources increased women's domestic burden in terms of meeting their reproductive roles. These findings are important as they inform the current study on how gender roles are changed by the condition of the water and forest resources.

Furthermore the United Nations Human Rights Report for Zambia on the Environment (2010) found that vulnerable groups who included women were left out in decision making process regarding the use of water and forest resources. This was inspite of women being the most hit by the negative impacts of agriculture, mining, construction, timber processing and tourism sectors. Furthermore the study revealed that environmental health impacts were felt more by women who are exposed to pollutants and unsanitary living conditions though their concerns remain unaddressed. Therefore it should be underscored that in environmentally fragile areas women would be more vulnerable to the effects of degradation. Sinazongwe is ecologically a vulnerable area (Siamwiza: 2009).

Another study was by Mvula (2010) who analysed Gender Mainstreaming in Integrated Water Resource Management (IWRM) in Kafue. It was reported that there was low representation of women in decision making on various committees. This is in contrast to rhetoric on equal participation of men and women by politicians. Women did not occupy

influential positions in the department as technical work was done by men and women did "softer" jobs such as secretarial and personel relations.These jobs by women are stereotypted.

A study by Phiri(2010) on Evaluation of Joint Forest Management (JFM) of Dambwa Forest Reserve in Livingstone reported low participation of women. It was found that even if women attended meetings they were not active in meetings and allowed men take central position in articulating important issues. It was reported that men appeared more informed than men based on training they went through. The study concluded that though women considered themselves active participants, their position was of low profile. While Phiri did not specifically discuss the implication of gender roles, it would be interesting to identify the roles played by men and women as they have potential to undermine the participatory process.

Sakala (2006) in his evaluation Change Worldwide Programme, a study of Farmers Association in Mongu District found that 61 percent of female headed households had food shortages due to water scarcity compared to 52 percent (CSO 2003) of male headed households. This suggests that water shortage caused food shortage with gendered outcomes on men and women.

2.4 Conclusion of literature review.

This chapter shows that men have control in the management and utilisation of water and forest resources. Various scholars further argue that male dominated local and international environmental management policies reinforce subordination of women. In this sense projects aimed at conservation efforts can contribute to marginalisation and oppression of women. Therefore gender concerns should take a central position in the management of water and forest resources if sustainability is to be achieved. This should involve both men and women at all levels of the participation.

CHAPTER THREE: METHODOLOGY

This chapter focuses on the following topics; research design, research site, research instruments, study population, study sample, sampling procedures, limitations and problems the researcher encountered during field work.

3.1 Research Design

A descriptive case study design was used. Yin (2003) in Msabila (2013) argues that in a descriptive study, findings are described and summarized. Furthermore this design seeks to describe in detail a unit which can be a person, concept, theory or programme. The aim is to bring a deeper insight and better understanding of the problem prevailing. It is descriptive in nature because the researcher describes experiences of a population or subset. Both quantitative and qualitative data was collected.

3. 2 Research site.

Sinazongwe District is found in Southern province of Zambia. The area is rural, hilly, arid and has a scanty rainfall pattern often experiencing drought. As a result agricultural activities are difficult for local people. The community use borehole water and forests are the major source of firewood. The people in the area are also involved in soil conservation efforts by planting seedlings of *Faidherbia Abida*(soil enriching plant) in their fields of cultivation. The seedlings are raised by the community with the help of NGOs and Government agencies.

This makes it suitable for analysing the participation of men and women in user groups. The research sites are users groups in the area monitored by World Vision, KDF and government agencies in the six (6) purposively sampled wards. The sampled wards were Mwezya, Mweemba, Maamba, Sinazongwe, Nkandabbwe and Muchekwa.

3.3 Research instruments

Research instruments were a household questionnaire, semi-structured interview guide, Focus Group Discussion guide (FGDs), and in-depth interview guide (see appendices).

3.3.1 Reasons for using specific data collecting instruments.

The questionnaire was administered to householders who were primary users of water and forest resources. The household questionnaire was administered to both males and females.

The semi- structured interview guide was used to get information from chairpersons of users group committees, village headpersons, and heads of primary schools. The closed ended questions in the semi-structured interview guide were used to standardise responses while the open ended questions allowed for free expression on the topic.

Chairpersons deal with day to day activities in users groups and as such they have direct experience with the community. Village headpersons have traditional authority over the use of water and forest resources. In the same context primary school headteachers are directly involved with host communities in various other programmes. Hence chairpersons, village headpersons and primary school headteachers were interviewed as key informants.

In-depth interviews were conducted with Government and Non Governmental Organisation (NGOs) Officers involved in water and forestry projects, programmes and policies. This was for the purpose of getting their views on the participation of men and women in the water and forest resources users groups.

In addition three (3) Focus Group Discussions (FGDs) were conducted with committee members. These were one (1) all women participants and two (2) mixed which had five (5) men and five (5) women committee members. These were held to get a broader view of what happened in users groups as they worked closely with men and women in users groups.

3.4 Study Population

The study population included all household heads, all primary school head teachers and all chairpersons of users group committees and headpersons spread in six wards, who had stayed in the area between 2010-2014. It also included officials in relevant government ministries and NGOs.

3.5 Target population

3.5.1 Household respondents

The households were principal users of water and forest resources. This is the population which is informed as far as practical experience in users group is concerned.

3.5.2 Chairpersons of water and forest resources users groups

The chairpersons of committees execute decisions and always work with men and women in users groups. As a result, they have critical information on participation in the sustainable utilisation and management of such resources.

3.5.3 Village Headpersons

In rural areas traditional leaders are important to the success of programmes including water and forest resources users groups. Government and NGOs work with traditional authorities. It was important that they were consulted.

3.5.4 Primary school Head teachers

In rural areas headteachers work closely with local people in many areas including in the water and forest resources users groups. They are consulted by development agencies. Thus it is necessary to find out their views.

3.5.5 Government and NGO Officials

These are respondents who were involved in programmes, projects and policies in sustainable utilisation and management of water and forest resources. They provided in-depth information about the participation of men and women.

3.6 Study sample.

120 household respondents, fourteen(14)primary school head teacher, sixteen(16) chairpersons of users group committees, fourteen(14)headpersons spread in six(6) wards, that were sampled and had participated or had experience of users group activities from 2010-2014.

The fourteen (14) headpersons and headteachers were purposively sampled because they were trained by world vision and KDF on the operations of users groups. Thus they were well informed and could represent other traditional leaders and other headteachers in the area.

In addition one (1) officer from water department at Sinazongwe council, world vision officer, Kaluli Development foundation(KDF), from Ministry of agriculture, Forest Department (FD) were also sampled as key informants. This was because their work revolved around water and forest resources.

3.7 Sampling procedure

3.7.1 Systematic random sampling

In the area there were 1600 households who were active in the water and forest resources users groups. 160 households which was a representation of 10 percent was determined as the sample size. However only fifty two (52) men and sixty eighty (68) women were sampled giving a total of 120 respondents drawn from 120 households. The households were initially

mapped and subsequently every 5 th household was sampled in a users group. A total of 120 household respondents were sampled.

3.7.2 Purposive sampling

Sixteen (16) Headpersons, fourteen (14) head teachers and sixteen (16) chairpersons of committees were purposively sampled as they resided in the area where users group committees were active and supported by World Vision and KDF. In a similar way Government and NGO officers were also purposively sampled because they were custodians of Government policies and were instrumental in implementation. Only Government officials whose policies had implications on the water and forest resources utilisation and management were sampled. Table 1 below shows a summary of population and sampled respondents.

Table 1: population of sampled respondents:

Respondents	Population	Female	Male	Total
Primary school Head teachers	85	4	10	14
Headpersons	98	0	16	16
Committee chairpersons	16	2	14	16
Householders	1600	68	52	120
Government Officers	40	2	3	5
World vision Officers	1	0	1	1
Kaluli development foundation(KDF)	1	0	1	1
TOTAL	1841	76	97	173

Field data: 2015

The table shows that there were few female Head teachers in rural wards of Sinazongwe, all headpersons were male, a few committee chairpersons were women. More women answered the household questionnaire.

3.8. Data Analysis

The statistics from the tables were used to analyse quantitative data. On the other hand analysis by theme was done on qualitative data.

3.9 Ethical consideration, limitations and problems faced during the study.

3.9.1 Ethical considerations

The respondents were assured that their responses would be treated confidentially and that their identity would not be revealed to anyone. Permission was given by village headpersons.

3.9.2 Limitations of the study

A study of this nature should have covered the whole country or at least included a peri-urban sample. Limited time and financial resources, however, did not make it possible to conduct a big study that would cover the whole country. This study's findings may not reflect the situation pertaining to participation of men and women in Forest and Water user groups throughout the country.

3.9.3 Problems faced during the study

Sinazongwe is characterised by escarpments which make movement challenging. This made the work of the researcher difficult as bicycles and motorcycles were the only mode of transport. The other challenge was that in some cases some users groups faced difficulties in storing records of meetings

CHAPTER FOUR: FINDINGS AND DISCUSSIONS.

This chapter is divided into two sections. The first section presents background and socioeconomic variables of household respondents. The second part presents findings and discussions based on objectives on representation, roles played by men and women the factors which affected their participation in the resources users groups. This is for the period 2010-2014 in Sinazongwe District.

The discussion starts with background variables rather than socioeconomic variables. This is because variables such as livelihoods affect all aspects of life in Sinazongwe District.

4.1 Background variables

These are livelihoods, division of labour, impact of forest loss, water shortage and the period of stay of users in the area.

Finally this section discusses sex, age, marital status and level of education which were relevant demographic variables of household respondents.

4.1.1 Livelihoods of household respondents.

The livelihoods of most local people in Sinazongwe were based on water and forest resources. All 120 household respondents provided information on their livelihoods as shown in table 2.

Table 2: Livelihoods of household respondents:

Sex	Livelihoods					Total
	Employed	Subsistence Farming	Charcoal burning	Collection of Non-Timber Forest Products(NTFPs)	Others	
Male	6 (11.5%)	36(69.2%)	7(13.5%)	0(%)	3(5.8%)	52
Female	11(16.2%)	45(66.2%)	9(13.3%)	3(4%)	0(0%)	68
Total	17	81	16	3	3	120

Source: Field data 2015

Table 2 revealed that of the household respondents: 69.2 percent of men (36) compared to 66.2 percent of women(45) were subsistence farmers, 16.2 percent of women(11) compared to 11.5 percent of men(6) were employed by irrigation and kapenta fishing companies operating in the area, 13.5 percent of men(7) compared to 13.3 percent of women (9) were charcoal burners, 4 percent of women (3)collected Non Timber Forest Products (NTFPs) and 5.8 percent of men(3) were involved in other activities such as brick moulding.

This suggests that subsistence farming was the major source of livelihood in the area and most other livelihoods activities involved water and forest resources.

However, looking at these results critically reveals that there was no significant difference between men and women involved in subsistence farming and charcoal burning. Furthermore, more women were in employment (in fishing and irrigation).Lastly only men were involved in seasonal employment while only women collected NTFPs such as mushrooms, wild fruits etc.

Therefore, degradation of water and forest resources would not affect men and women differently as they both had their livelihoods centred around such resources. Therefore, it

would be expected that both men and women were concerned with the condition of water and forest resources.

4.1.1.2. Livelihoods and Participation of men and women in the Forest and Water users groups.

All the 120 household respondents provided information on their participation in users groups as tabulated in Table 3.

Table 3: Livelihoods and participation:

Participation and Livelihoods.			Sex		Total
			Male	Female	
yes	Livelihood source	Employed	5(83.3%)	9(81.8%)	14
		Farmer	33(91.7%)	40(88.9%)	73
		Charcoal burner	5(71.4%)	7(81.8%)	12
		Collecting and selling of wild forest products e.g. fruits	0(0%)	3(100%)	3
		Other livelihoods	2(66.2%)	0(0%)	2
	Total		45	59	104
No	Livelihood source	Employed	1(18.2%)	2(28.6%)	3
		Farmer	3(8.3%)	5(11.1%)	8
		Charcoal burner	2(28.6%)	2(18.2%)	4
		Other livelihoods	1(33.3%)	0(0%)	1
	Total		7	9	16

Source: Field data 2015

Table 3 revealed that of the household respondents: 91.7 percent of men (33) compared to 88.9 percent of women (40) involved in subsistence farming claimed to have participated in users groups. The Table also shows that 83.3 percent of men(5) compared to 81.8 percent of

women (9) employed in irrigation and kapenta fishing, 81.8 percent of women(7) compared to 71.4 percent of men(5) charcoal burners, 100 percent of women(3) compared to 0 percent of men(0) who collected NTFPs,66.7 percent of men (2) compared to 0 percent of women(0) involved in other livelihoods claimed they had participated in users groups,

Lastly, household respondents: 11.1 percent of women (5) compared to 8.3 percent of men (3) were involved in subsistence farming, 28.6 percent of men (2) compared to 18.2 percent of women (2) charcoal burners. In addition, 18.2 percent of women (2) compared to 16.6 percent of men (1) employed in irrigation schemes and kapenta fishing, 33.3 percent of men (1) compared to 0 percent of women(0) involved in other livelihoods claimed not to have participated in users groups.

As a result, Tables 3 suggests that most household respondents whose livelihoods revolved around water and forest resources claimed having participated in users groups. Furthermore, the table revealed that more men compared to women claimed to have participated. Since livelihoods of local people in the area were about water and forest resources, it was expected that degradation would affect them both. As a result, both men and women were expected to participate in the water and forest resources users groups.

4.1.1.2 Household division of labour.

In the traditional Tonga society of Sinazongwe, women collected water and firewood for domestic use (Siamwiza, 2010).

4.1.1.2.1 Collection of firewood at household level for domestic use.

All the 120 household respondents provided information on their perception of sex of persons who collected firewood at household level for domestic use. Results are shown in Table 4.

Table 4: Sex of persons who collected firewood:

Sex	Sex of person collecting firewood for household use.			Total
	Male	Female	Both males and females	
Male	16(30.7%)	27(51.9%)	9(13.2%)	52
Female	10(14.7%)	46(67.6%)	12(17.6%)	68
Total	26	73	21	120

Source: Field data2015

Table 4 revealed that of the household respondents: 67.6 percent of women (46) compared to 51.9 percent of men(27) viewed women as persons who collected firewood, 30.7percent of men (16) compared to 14.7 percent of women (10) perceived men as collectors of firewood, 17.6 percent of women(12) compared to 13.2 percent of men (9) had the perception that both men and women collected firewood for domestic use.

The results suggest that women were viewed as collectors of firewood by most men and women. The table also showed that few men and women shared the perception that both men and women collected firewood. In addition a significant minority reported that men were also collected firewood. In communities where scarcity of firewood was severe, ox-carts, sledges and bicycles were used by men (Personal observation).

Women were more affected because they collected most of the wood but men were also doing this hence the users group policies need to be informed by both.

4.1.2.1.2 Impact of forest reduction on households.

All the 120 household respondents provided information on the impact of forest resource reduction on households. The results are shown in Table 5.

Table 5: The impact of reduced forest resources:

Sex	Experienced Impact of reduced forest resources.			Total
	Reduced volume of firewood	Diminished fruit collections	Loss of biodiversity	
Male	49(94.2%)	2(3%)	1(1%)	52
Female	65(95.5%)	2(2%)	1(1%)	68
Total	114	4	2	120

Source: Field data: 2015

Table 5 revealed that of the household respondents: 95.5 percent of women(65) compared to 94.2 percent of men (49) experienced reduced volume of firewood, 3 percent of men (2) compared to 2 percent of women(2) experienced a decline in availability of wild fruits , 1 percent of men(1) compared to 1 percent of women(2) experienced loss of biodiversity. Since men did not collect wild fruits (Table 3), their perceptions were based on experiences of women and also their observations. This suggests that both men and women experienced a negative forest resource change which could have urged them to participate in users groups aimed at conservation efforts.

Table 6: the impact of reduced forest resources on participation:

Participation in users groups.			Impact of reduced forest at household level.			Total
			Reduced volume of firewood	Diminished fruit collections	Loss of biodiversity	
Yes	Sex	Male	42(85.5%)	2(100%)	1(100%)	45
		Female	57(87.7%)	1(50%)	1(50%)	59
	Total		99	3	2	104
No	Sex	Male	7(14.3%)	0(0%)	0(0%)	7
		Female	8(12.8%)	1(50%)	0(0%)	9
	Total		15	1	0	16

Source: Field data 2015

Table 6 revealed that of the household respondents: 87.7 percent of women(57) compared to 85.7 percent of men(42) experienced reduced volume of firewood, 100 percent of men (2) compared to 50 percent of women(1) experienced reduced volume of fruit collections, 100 percent of men(1) compared to 50 percent of women(1) experienced loss of biodiversity claimed to have participated in users groups.

The Table also shows that of the household respondents who experienced negative impacts at household level:14.3 percent of men (7) compared 12.3percent of women (8) who experienced reduced volume of firewood,50 percent of women (1) compared to 0.0 percent of men (0) experienced a decline in fruit collections claimed not to have participated in users groups.

Looking at Table 6 closely, reveals that most household respondents were negatively impacted by negative forest resource changes and claimed to have participated in users groups. The results of Table 6 also reveal that minority users who did not participate also

experienced negative impacts. This suggests that the negative impact motivated the majority of users to participate in users groups.

4.1.2.2 Collection of water.

Among the Tonga people of Sinazongwe, drawing water for household use was a task traditionally done by women but this was no longer the case as men were also involved. This is illustrated by the next section where household respondents provided information on their views of the sex of persons who collected water at household level for domestic use. The results are shown in Table 7:

Table 7: Sex of persons who collected water:

Gender of respondent	Sex of person who collected water.			Total
	Male	Female	Both male and female	
Male	10(19.2%)	12(23.1%)	30(57.7%)	52
Female	12(17.5%)	26(38.2%)	30(44.1%)	68
Total	22	38	70	120

Source: Field data 2015

Table 7 revealed that of the household respondents: 57.7 percent of men (30) compared to 44.1 percent of women (30) perceived both men and women as collectors of water at household level, 38.2 percent of women (26) compared to 23.1 percent of men (12) perceived women as collectors of water at household level, 19.2 percent of men (10) compared to 17.5% of women (12) who perceived men as collectors of water at household level.

The results of Table 7 imply that household respondents viewed both men and women as persons who collected water at household level. Secondly, the table further shows that there were as twice as many women as men who considered women as persons who collected water at household level. However, it was argued that collection of water by both men and

women was attributed to its scarcity in the area (FGDs and Headpersons). As a result, men mobilised ox-carts, sledges and bicycles to help out the women.

Table 8: Negative impact of water shortage:

Sex	Experienced impact by household respondents			Total
	Reduced volume of water	Increased time spent at the borehole	Increased distance to water source.	
Male	32(65.5%)	15(28.8%)	3(5.7%)	52
Female	50(73.5%)	17(25%)	1(1.4%)	68
Total	82	32	4	120

Source: Field data: 2015

Table 8 revealed that of the household respondents: 73.5 percent of women (50) compared to 61.5 percent of men (32) experienced reduced volume of water, 28.8 percent of men (15) compared to 25 percent of women experienced increased time spent at the water borehole as a result of water shortage. Table 8 also shows that 5.7 percent of men (3) compared to 1.4 percent of women (1) experienced increased distance to the water source.

The increased time spent at the borehole, distance to the water source and reduced volume of water collected, should be attributed to water shortage. This was because the area was dry and also some boreholes had either dried or broken down. As a result, there was reduced volume of water leading to shortages. This led to increased distance to source water for household use (Personal observation).

The results of Table 8 suggest that most men and women were negatively affected by water shortage and should have been motivated to participate in the Forest and Water users groups.

Table 9: Water shortage and participation:

Participation in users groups			Experience of water shortage		Total
			Yes	No	
Yes	Sex	Male	39(86.7%)	6(13.3%)	45
		Female	55(93.2%)	4(6.8%)	59
	Total		94	10	104
No	Sex	Male	6(85.5%)	1(4.3%)	7
		Female	7(77.8%)	2(22.2%)	9
	Total		13	3	16

Source: Field data 2015

Table 9 revealed that of the household respondents: 93.2 percent of women (55) compared to 86.7 percent of men (39) experienced water shortage claimed to have participated in users groups. These suggest that most men and women who experienced water shortage participated in users groups. Table 9 further revealed that the 13.3percent of men (6) compared 6.8 percent of women (4) who did not experience water shortage claimed to have participated in users groups.

The Table further revealed that of the household respondents: 85.7percent of men (6) compared to 77.8 percent of women (7), 14.3 percent of men (1) compared to 22.2 percent of women who did not experience water shortage, (2) claimed not to have participated in users groups.

This suggests that most men and women experienced water shortage. However, women experienced water shortage on daily basis as they drew water for drinking, cooking, bathing tasks considered as for women (Female chairperson).Men on the other hand drew water for their livestock. In a FGD, one female respondent said, "*maanzi amukaintu tabasiyani*", meaning that women were inseparable with water.

4.1.2 Period of stay in the area.

All the 120 household respondents provided information on the period of stay in the area. The results are shown in table 10.

Table 10: Period of stay in the area:

Sex	Responses		Total
	More than 5 years	Less than 5 years	
Male	46(88.5%)	6(13.0%)	52
Female	52(76.5%)	16(23.5%)	68
Total	98	22	120

Source: 2015 survey data.

Table 10 revealed that of the household respondents: 88.5 percent of men (46) compared to 76.5 percent (52) of women had stayed in the area for more than five (5) years, 13.0 percent of men (6) compared to 23.5percent of women had stayed in the area for less than 5 years.

The longer one stayed in the area, the better informed s/he will be about the state of the water and forest resources. Because women were married into the husbands' household, they were unfamiliar with the members and situation in the new village at the start of the marriage. Many women are called so and so wife in the village. This set barriers in their interactions with other villagers as they tried to access the forest and water resources. Women tended to have fewer assets as most assets belonged to the husband and this affected women's social status in the husband's villages and strengthened men's status as members of the household (Female chairpersons). Furthermore, based on the household as the primary social group and household heads, the difference in settlement patterns reflected power relations within marriage and households (Lu:2008).

4.1.2.1 Period of stay in the area and participation of men and women in the Forest and water users groups.

Table 11:Period of participation in users groups:

Participation in users groups			Length of stay in area		Total
			More than 5 years	Less than 5 years	
yes	Sex	Male	40(87.0%)	5(83.3%)	45
		Female	48(92.3%)	11(67.8%)	59
	Total		88	16	104
No	Sex	Male	6(13.0%)	1(16.7%)	7
		Female	4(7.7%)	5(31.3%)	9
	Total		10	6	16

Source: field data 2015

Table 11 revealed that of the household respondents: 87.0 percent of men (40) compared to 92.3 percent of women (48) who stayed more than 5 years claimed to have participated.

The table also revealed that 83.3 percent of men (5 of 6) compared to 67.8 percent women (11 of 16) who stayed less than 5 years claimed to have participated in users groups. This suggests that majority of men and rather fewer women who had stayed less than 5 years claimed participation in users groups.

On the other hand, Table 11 further revealed that of the household respondents who answered the household questionnaire: 13.0 percent of men (6) compared to 7.7 percent of women (4) who stayed for more than 5 years claimed not to have participated in users groups. This suggests that few men and women who had stayed for more than 5 years claimed not to have participated in users groups. Furthermore table 11 also revealed that 31.3 percent of women (5) compared to16.7 percent of men (1) who had not stayed in the area for 5 years claimed not to have participated in users groups. This suggests that over half the women who had

stayed for a period shorter than 5 years claimed not to have participated. This supports the view that wives had not yet fully been accepted in the 'husbands' area.

4.1.3 Demographic variables.

The following variables were considered for household respondents: sex, age, marital status and level of education.

4.1.3.1 Sex of household respondents.

All the 120 household respondents provided information as shown in table 12.

Table 12: Sex of household respondents:

Sex	Responses
Male	**52(43.3%)**
Female	**68(56.7%)**
Total	**120**

Source: field data 2015

Table 12 revealed that of the household respondents: 56.7 percent were women (68) compared to 43.3 percent men (52). Women were more likely to be found at home due to their household responsibilities

Table 13: Sex and participation in users groups:

Sex	Participation in User groups.		Total
	Yes	No	
Male	**45 (86.5%)**	**7(13.5%)**	**52**
Female	**59(86.8%)**	**9(13.2%)**	**68**
Total	**104**	**16**	**120**

Source: field data 2015

Table 13 revealed that the household respondents: 86.8 percent of women (59) compared to 86.5 percent of men (45) claimed to have participated in users groups. Table 13 further revealed that 13.5 percent of men (7) compared to 13.2 percent of women (9) claimed not to have participated in users groups.

4.1.3.2 Age

All the 120 household respondents provided information on age as tabulated in table 14.

Table 14: Age of household respondents:

Age range (years)	Male	Female	Total
18-45	**36(69.2%)**	**53(77.9%)**	**89**
46-70	**16(30.8%)**	**15(23.5%)**	**31**
Total	**52**	**68**	**120**

Source: Field data, 2015

Table 14 revealed that of the household respondents: 77.9 percent of women (53) compared to 69.2 percent of the men (36) were in the age group (18-45), 30.8 percent of men (15) compared to 23.5 percent of women (16) were in the age group (46-70).

Since age affected men and women differently, women in the reproductive age would be less effective in users groups because of domestic and reproductive responsibilities as they would have less time for users group activities.

Table 15: Age and participation in users groups:

Participation in users groups			Age range		
			18-45	46- 70	Total
Yes	Sex	Male	33(91.1%)	10(62.5%)	43
		Female	43(81.3%)	11(73.3%)	54
	Total		76	21	97
No	Sex	Male	3(8.3%)	6(37.5%)	9
		Female	10(18.9%)	4(26.7%)	14
	Total		13	10	120

Source: Field data 2015

Table 15 revealed that of the household respondents: 91.7 percent of men (33) compared to 81.3 percent of women (43) in the reproductive age (18-45), 73.3 percent of women(11) compared to 62.5 percent of men (10) in the age group (46-70) claimed to have participated in users groups.

The Table also revealed that of the household respondents who answered the household Questionnaire: 8.3 percent of men (3) compared 18.9 percent of women (10) in the age group (18-45), 37.5 percent of men (6) compared to 26.7 percent of women (4) aged (46-70) claimed not to have participated in users groups.

Table 15 revealed that more men compared to women in the reproductive age participated in users groups while older women than men participated in users groups. In addition table 15 revealed that of those who did not participate twice as many old men but less than half old women claimed not to have participated in users groups. The gender implications were that age had an effect on the participation of women as old women unlike those in reproductive age have more free time.

4.1.3.3 Marital status.

All the household respondents gave information on marital status as shown in Table 16.

Table 16: Marital status:

Sex	Responses				Total
	Single	Married	Divorced	Widowed	
Male	1(1.9%)	49(94.2%)	1(1.9%)	1(1.9)	52
Female	9(13.2%)	54(79.4%)	2(2.9%)	3(4.4%)	68
	10	103	3	4	120

Source: Field data 2015

Table 16 revealed that of the household respondents: 94. 2 percent of men (49) compared to 79.4 percent of women (54) were married, 1 percent of men (1) compared to 17 percent of women (9) were single, 1 percent of men (1) compared to 4 percent of women (2) were divorced, 1 percent of men (1) compared to 4.4 percent of women (3) were widowed.

Table 17: Marital status and participation in users groups:

Participation in user group activities			Marital status				Total
			Single	Married	Divorced	Widowed	
yes	Sex	Male	1(100%)	43(87.8%)	1(100%)	0(0%)	45
		Female	9(100%)	46(85.2%)	2(100%)	2(66.7%)	59
	Total		10	89	3	2	104
No	Sex	Male	0(0.0%)	6(12.2%)	0(0.0%)	1(100%)	7
		Female	0(0.0%)	8(14.8%)	0(0.0%)	1(13.0%)	9
	Total			14	0	2	16

Source: Field data 2015

Table 17 revealed that 100 percent of men (1) compared to 100 percent of women (9) who were single, 87.8 percent of married men(43) compared to 85.2 percent of women(46), 100

percent of women(2) compared to 100 percent of men(1) who were divorced, 66.7 percent of widows compared to 0 percent of widowers (0) claimed to have participated in users groups.

On the other hand, Table 17 shows that: 12.2 percent of men (6) compared to 14.8 percent of women (8) married, 100 percent of widowers (1) compared to 33.3 percent of widows claimed they did not participate in the users groups

The results of Table 17 reveals that all single men and women, more married men compared to women, all divorced men and women, more widowed women compared to men claimed to have participated in users groups. Further, Table 17 revealed that few of the married men and women and widows claimed that they did not participate in users groups.

4.1.3.4 Level of education.

All the household respondents gave information on their level of education as shown in table 18.

Table 18: Level of education:

Sex	Level of education of household respondent.					Total
	Not attended school	Primary incomplete	Primary complete	Secondary incomplete	Secondary complete	
Male	6(11.5%)	15(28.8%)	7(13.4%)	17(32.6%)	7(13.5%)	52
Female	24(35.3%)	13(19.1%)	13(19.1%)	15(28.8%)	3(28.8%)	68

Source: field data 2015

Table 18 revealed that of the household respondents: 35.3 percent of women (24) compared to 11.5 percent of men (6) did not attend school, 28.8 percent of men (15) had incomplete primary education compared to 19.1 percent of women (13),19.1percent of women(13)

compared to 13.4 percent of men (7) had complete primary education, 32.6 percent of men (17)compared to 28.8 percent of women(15) had incomplete secondary education and finally 13.5 percent of men (7) compared to 4.4 percent of women(3) completed secondary school.

Table 18 shows that more women were illiterate compared to men. This could have had negative implications on the participation of women in users groups. If completion of primary education meant being literate this suggests that there was low level of education in the area.

Table 19: Level of education and participation in users groups:

Participation in users groups			Level of education					Total
			Not attended school	Primary incomplete	Primary complete	Secondary incomplete	Secondary	
Yes	Sex	Male	5(83.3%)	14(93.3%)	6(85.7%)	14(83.4%)	6(85.4%)	45
		Female	21(87.5%)	11(84.6%)	11(84.6%)	13(86.7%)	3(100%)	59
	Total		26	25	17	27	9	104
No	Sex	Male	1(16.7%)	1(14.3%)	1(17.6%)	3(17.6%)	1(14.3%)	7
		Female	3(12.5%)	2(22.6%)	2(13.2%)	2(13.3%)	0(0.0%)	9
	Total		4	3	3	5	1	16

Source: field data 2015

Table 19 reveals that of the household respondents : 87.5 percent of women(21) compared to 83.3percent of men (5) who did not attend school, 93.3percent of men (14) compared to 84.6percent of women(11) with incomplete primary school, 84.6percent of women (11) compared to 85.7percent of men(6) completed primary school, 83.4 per of men (14) compared to 86.7 percent of women (13) had incomplete secondary school, 100 percent of

women (3) compared to 85.7 percent of men(6) completed secondary education claimed to have participated in users groups.

Table 19 also revealed that of the household respondents: 12.5 percent of women (3) compared to 16.7 percent of men (1) who did not attend school, 6.7 percent of men(3) compared to 15.4 percent of women (2) with primary education, 22.6 percent of women(2) compared to 14.3 percent of men(1) with primary education, 13.3percent of women(2) compared to 17.6 percent of men(3) with incomplete education level and 14.3 percent of men (1) compared to 0 percent of women(0) with secondary school education claimed did not participate in users groups. Looking at the level of education as illustrated by table 18, 87.1 percent of women (27) compared to 83.9 percent of men (26) with primary education and above participated claimed to have participated. On the other hand the table revealed that 13.5 percent of women (37) compared to 9.5 percent of men (2) with level of education less than primary claimed not to have participated in users groups.

In retrospect, the above section illustrates that most men and women were not negatively affected by age, education and marital status. However, women were affected by the period of stay in the area. Accordingly, most household respondent claimed to have participated in the Forest and Water users groups. However this could only be validated if their participation was measured at other levels of participation. This is addressed by the next section.

4.2 Representation of men and women in the Forest and Water users groups.

The first objective of the study was to analyse the representation of men and women in users groups in Sinazongwe from 2010 to 2014. The analysis applied Shaefer and UNICEF categorisation of levels of participation (1992). These were: attendance at meetings, decision making, access to skills and training. Applying these definitions of participation brings out rather a different result from claims of participation discussed above.

4.2.1 Attendance at meetings.

The users groups held a minimum of three meetings in a year. Other meetings were also called by users' group committees, Government agencies and NGOs. During meetings, users groups elected committee members and discussed utilisation and management of water and forest resources. This section gives analysis of attendance at meetings by men and women. It was conducted using data provided by household respondents on their views about the sex of persons who attended meetings and figures provided by World Vision. The results of the data are shown in table 20.

Table 20: Sex of persons who attended users group meetings:

Sex of household respondent	Responses.			Total
	Male	Female	Both	
Male	41(78.9%)	1(1.9%)	10(19.2%)	52
Female	46(67.6%)	7(10.3%)	15(22.1%)	68
Total	87	8	25	120

Source: field data 2014

Table 20 shows that of the household respondents: 78.9 percent of men (41) compared to 67.6 percent of women (46) thought men attended users group meetings. The Table also shows that 22.1 percent of women (15) compared to19.2 percent of men (10) thought both men and women attended. Lastly, Table 20 shows that 10.3 percent of women (7) compared to 1.9 percent of men (1) thought women attended.

The results suggest that majority of households thought more men compared to women attended meetings. Among those who thought women attended, the majority were women. This could have been because meetings were seen as preserve of men and men did not acknowledge that women could attend (male and female chairpersons).

The low attendance by women at meetings was due to their failure to endure long distances across escarpments typical of Sinazongwe District (Male, Female Chairpersons, headteachers and headpersons). Furthermore, they did not attend due to heavy household and livelihood work load such as headloading charcoal across the escarpment to sell in Maamba the main market (Headpersons). As a result women could not attend meetings held away from their locality due to limited time (Headpersons and headteachers).However, the situation was different with their male counterparts who cycled or even walked to meetings with less difficulties (Female chairpersons).These findings are different from those by World Vision which revealed that more women attended.

Table 21: Attendance of meetings as analysed by world vision (2014):

Users group area	Attendance by sex		Total
	Male	Female	
Chimonselo	79	62	141
Nkandabbwe	80	55	135
Sinazeze	82	42	124
Nkandabbwe	92	72	164
Mwezya	101	52	153
Mweemba	42	62	104
Sinazongwe	73	58	131
Sinankumbi	67	100	167
Maamba	81	93	174
Ngoma	54	92	146
Muchekwa	65	52	117
Sinankumbi	92	100	192
Munamazambwe	100	53	153
Total	1224	1007	2231

Source: World vision 2014

According to Table 21, there were 1,224 males and 1,007 females attended the users' group meetings organised by World Vision. However, meetings called by NGOs in the area were highly attended in anticipation of relief food (World Vision). This meant that high attendance at meetings could not be attributed only to interest in participating in users group meetings but was partly due to association with relief food. Furthermore, it was revealed that users group registers were in some cases used for recipients of food (Female and male chairpersons, headteachers and headpersons).

4.2.2 Speaking in meetings.

This section looks at speaking which is a higher level of participation in any given meeting. In order to assess this, household respondents provided information on sex of persons who spoke. The results are shown in Table 22

Table 22: Sex of persons who spoke in meetings:

Sex	Responses		Total
	Male	Female	
Male	50(96.2%)	2(3.8%)	52
Female	62(91.2%)	6(8.8%)	68
Total	112	8	120

Source: Field data/2015

Table 22 revealed that of the household respondents: 96.2 percent of men (50) compared to 91.2 percent of women (62) thought men spoke in meetings. The Table also shows that 8.8 percent of women (6) compared to 3.8 percent of men (2) thought women spoke in meetings.

This suggests that majority of household respondents thought men spoke in meetings while a minority who were mostly women thought women did. In response to a question about the contribution of women in meetings, a male Headperson said, "*Taata aba mbana kwiina ncebazi"*. This literally meant women were "children*"*, implying that they were compared to children. This suggests that when women did speak in meetings their views were not taken seriously by men in the utilisation and management of water and forest resources.

Furthermore, men knew before women when meetings were to be held (World Vision). As a result even if women showed up at meetings they were not effective because they were ill-informed or given information at the last minute. This gave men an advantage over them in meetings as they articulated issues better having had time to think about them.

In order to assess the sex of persons who were negatively affected by the way meetings were organised, the household respondents were asked about their perceptions and the results are shown in Table 23.

Table 23: Sex of persons negatively affected by way meetings were organised:

Sex of household respondent	Responses.		Total
	Male	Female	
Male	15(28.8%)	37(71.2%)	52
Female	14(20.5%)	54(79.4%)	68
Total	29	91	120

Source: Field data 2015

Table 23 revealed that of the household respondents: 79.4percent of women (54) compared to 71.2 percent of men (37) thought women were negatively affected, 28.8 percent of men (15) compared to 20.5 percent of women (14) thought men.

The results suggest that majority of respondents thought more women than men were negatively affected by the way meetings were organised. This undermined their effectiveness in meetings (FGDs). It was reported that men organised meetings (FGDs). However, few women were involved and this contributed to their failure to speak out as they were ill informed. In the majority cases, men disseminated information about holding of meetings in the area (headteachers).

Furthermore, it was reported that the coming of cell-phones, use of posters and social networks reinforced the negative effects of the way meetings were organised in the area (FGDs). As a result, men met and planned strategies and used cell phones for this. The lack of cell phones by most women and their confinement to their households as expected of "good wives" meant that they could not get information in time (Female Chairpersons).

However, despite challenges, women were passionate about problems of firewood and water (Female chairperson). This was illustrated by a respondent in an in–depth interview, *"Mukaintu ulila buya taata*" (Female chairperson). This literally meant that women did not just talk about water and forest resources but "complained". This shows that some women spoke in meetings and their participation could have been enhanced if the chairperson was female.

Therefore, though small in number women did speak in meetings against cultural expectations. Unlike their male counterparts, women were not expected to represent their households in meetings and were often ill prepared. The views of women were thus given less weight and this fed into the cycle of patriarchal subordination.

4.2.3 Decision making.

This section looks at representation of men and women on users group committees where decisions were taken.

According to Shaefer and UNICEF (1992), decision making is the highest level of representation. It involves decisions made by elected persons on the utilisation and management of water forest resources.

4.2.3.1. Committees of Forest and Water users groups.

Committee members were elected during AGM. The average number of households in a single users group was 250 households. Table 24 shows composition of sampled users group committees in Sinazongwe.

Table 24: Composed of sampled users groups:

Area committee	Number of men	Number of women
Mweezya	5	5
Muchekwa	7	3
Siabaswi	5	5
Kankuyu	4	5
Mweemba	3	2
Kanchindu	2	4
Maamba	6	4
Chisyabulungu	6	4
Cimonselo	3	4
Nkandabbwe	8	2
Simutema mbalo	3	2
Kabuyu	6	5
Suntwe	2	8
Sinazeze	6	4
Mwela	3	2
Muunga	6	4
Total	85	55

Field data: 2015

According to Table 24 there were 85 men compared to 55 women on the users group committees. This shows that there were more men than women. These findings are similar to those by World Vision shown by Table 25.

Table 25: users group committees (World vision: 2014):

User group Area	ADP Zone	Date Strengthened	Sex		Total
			Male	Female	
Community(user group)	Name	Date	#	#	#
Siankwazi	Malima	17/10/2013	2	1	3
Malima	Malima	17/10/ 2013	7	3	10
Chinkumbe B	Malima	17/10/ 2013	4	3	7
Mwanamwalu	Malima	17/10/2013	3	1	4
Bbune	Malima	17/10/2013	2	1	3
Siambane	Sinazongwe	14/01/2014	6	4	10
Siapaka	Nkandabbwe	19/03/2014	3	0	3
Siakabbila	Nkandabbwe	19/03/2014	3	2	5
Kabanda	Nkandabbwe	19/03/2014	3	0	3
Sinazeze	Nkandabbwe	19/03/2014	1	2	3
Kaluli school	Nkandabbwe	19/03/2014	0	2	2
Nkandabbwe School	Nkandabbwe	19/03/2014	2	2	4
Siakabamba C School	Nkandabbwe	19/03/2014	2	2	4
Katongo	Kanchindu	14/03/2014	3	2	5
Sikuteka	Kanchindu	14/03/2014	3	0	3
Kanyemba	Kanchindu	14/03/2014	2	3	5
Siapolo	Kanchindu	14/03/2014	3	3	6
Chimonselo school	Kanchindu	14/03/20/14	2	1	3
Sinakasikili	Sinakasikili	08/05/2014	2	4	6
Sinankalange	Sinakasikili	08/05/2014	0	4	4
Vwavwa	Sinakasikili	08/05/2014	1	2	3
Siluwe	Sinakasikili	08/05/2014	3	0	3
Siankwazi	Sinakasikili	08/05/2014	4	2	6
Ntalakululwa	Sinakasikili	08/05/2014	2	0	2
Total			66	44	110

Source: Field data 2015

The results of Tables 24 and 25 suggest that despite a larger number of men, there was a significant number of women on the water and forest resources users groups committees.

However, it was reported that presence of women on committees was due to insistence by NGOs who wanted 50 percent representation (Council water Co-ordinator). It was revealed that fulfilling this requirement was difficult because women were reluctant to stand for elections due to claims of low level of education among them (World Vision)(Chairpersons of committees). This is supported by my findings on education (table 18) which shows that 35.3 percent of women compared to 11.5 percent of men among the sampled household respondents were illiterate. Since education was a requirement for election on the committees more women than men were not eligible as thus creating an impression that committees were a preserve of educated people (World Vision). As result few women stood as they were poorly educated and they feared that they would not understand the issues discussed in meetings (Female and male chairpersons). This led to fewer women on the committees.

Besides low education, women's heavy reproductive and productive work load negatively affected their representation on committees. They were the ones who fetched water, collected firewood and also looked for food besides spending time in the fields. Therefore, women had no time for meetings (Headteacher). Furthermore, women were more afraid of witchcraft threats targeted against committee members who adopted unpopular policies than their male counterparts (Female chairperson). Women were generally afraid of antagonizing people. In Cimonselo area of Muchekwa ward, one female respondent said,"*balozi nkobali taata*", literally meaning that witchcraft was real (FGD).

Arising from this, most of them could not offer themselves to stand and also some men argued women would not be available for meetings due to household work.

Unlike men, those women who did serve on the committees faced a number of challenges which undermined their effectiveness. In the outset, some men including those on the committees thought women did not have independent thoughts as they feared what their husbands, in laws and men would say about them (male chairperson). This is supported by sentiments of a committee member in an answer to a question on the contribution of women on committees, "*Baamba kuti tulibanakazi*." This was literally interpreted as women being "children". This suggests that women were considered not to know a lot of things and thus could not have been taken seriously.

Furthermore, some men did not approve resolutions made by women until they were cross checked (Female chairperson). This suggests that women's views were not respected. This lack of respect of women's contributions was also reported by a female chairperson in Mweemba area who said, "*Baamba Kuti nangubo kwiina ncazi*." This implied that a person who put on a wrapper did not know anything. Therefore, stereotypes about contribution of women undermined their effectiveness on committees. Furthermore, it was reported that having women on the committees was viewed as a way of fulfilling requirements of NGOs in the area (World vision and female chairperson). As a result women's presence on committees was seen as an outside idea which the local people may not have completely accepted.

4.2.3.1 Chairpersons of committees.

Though discussed earlier, age, marital status and level of education needed to analysed in light of the chairperson's committees. This is because an elected person needed to understand, appreciate and provide guidance. As a result of chairperson's needed to have these attributes to be effective. As a result, chairpersons needed to be widely accepted so that their decisions could be effective and well informed.

Table 26: Age and marital status of chairpersons:

Marital status	Sex	Age range		
		18-45	46- 70	Total
Single	Male	0	0	0
	Female	0	0	0
Married	Male	8	5	13
	Female	0	1	1
Divorced	Male	0	0	0
	Female	0	2	2
Widowed	Male	0	0	0
	Female	0	0	0
Total		8	8	16

Source: field data 2015

Table 26 revealed that only male chairpersons were aged 18-45 years and all female chairpersons were aged 46-76 years. The table also revealed that all male chairpersons were married while two (2) out of the three (3) female chairpersons were divorced. According to a sample of sixteen (16) users group committees only three (3) chairpersons were women.

This suggests that the chance of women being elected as chairpersons was determined by age and marital status. As a result single older women stood a higher chance of being elected and were more likely to stand for election. The results further show that most chairpersons were men.

Table 27: Level of education of chairpersons:

Sex	Responses.					Total
	Not attended school	Primary incomplete	Primary	Secondary incomplete	Secondary	
Male	0	0	4(30.8%)	4(30.8%)	5(38.5%)	13
Female	0	0	0	0	3(100%)	3
Total	0	0	4	3	7	16

Source: 2015 Field data

Table 27 revealed that none of the chairpersons were illiterate, 30.8 percent of male chairpersons (4) attained primary education, 30.8 percent (4) of male chairpersons had attained junior secondary school (4) while 38.5 percent of men had attained secondary education. This was compared to 100 percent of female (3) chairs who all attained secondary education. In a sample of sixteen users groups, studied, all female chairpersons were educated. This suggests that women needed to be well educated to be elected to have the confidence to stand as chairpersons.

Furthermore, it was reported that users groups with female chairpersons were better managed compared to those chaired by their male counterparts (Headpersons, Headteachers and both male and female chairpersons).It was argued water points managed by women were cleaner as contrasted to those managed by their male counterparts.

In conclusion it can be argued though low in number women made decisions. This was despite challenges which led to their ineffectivenes.

4.2.4 Access to skills and training.

While the above section argues that the presence of men and women on committees meant that they participated at the highest level, access to skills and training is an important part of

the participation process because it helps to build capacity for transformation change. This is addressed by this section.

According to Shaefer, access to skills is one of the important categories of participation. In order to perform their roles well, men and women needed to be trained. This is important for sustaining projects, programmes and infrastructure such as boreholes and tree lots. In order to assess this, household respondents provided information on their views of sex of persons who had access to skills and training in the users groups. The results are shown in table 28:

Table 28: Access to skills and training:

Sex	Responses.		Total
	Males	Female	
Male	27(50.9%)	25(48.1%)	52
Female	46(67.6%)	22(32.3%)	68
Total	73	47	120

Source: Field data 2015

Table 28 revealed that of the household respondents: 67.6 percent of women (46) compared to 50.9 percent of men (27) thought men had access to skills and training while 48.1 percent of men (25) compared to 32.3 percent of women thought women had.

Therefore majority of respondents thought more men than women had access to skills and training.

However, the views of household respondents in Table 28 are not similar to the ones provided by World Vision shown in Table 29 which shows the trend from 2010 to 2014.

Table 29: Summary of trained users' groups committee (2010-2014):

Year	Male	Female	Total	Percent (%) of trained male committee members.	Percent (%) of trained female committee members.
2010	**41**	**57**	**98**	**41.8**	**60**
2011	**41**	**44**	**85**	**48.2**	**51.8**
2012	**76**	**54**	**130**	**58.5**	**41.5**
2013	**18**	**9**	**27**	**66.7**	**33.3**
2014	**`45**	**23**	**68**	**66.2**	**33.8**
Total	**221**	**187**	**408**	**54.1**	**45.8**

Source: World Vision Annual report

Table 29 revealed that access to skills and training by women in users groups in the first two years (2010-2011) was higher than in later years. The reduction in the number of women trained was due to declining donor funding which affected the work of users groups. It was reported that world Vision used to provide monetary incentives for participants in earlier years which later stopped (World Vision Officer). As a result, participants had to pay for their own transport and this had negative effects on participation of women as they were unable to pay (Head persons, head teachers and both male and female chairpersons). Therefore, more men were trained in users groups. This was also in addition to anticipated benefits such as social status which followed training which motivated more men who were willing to spend personal resources than women (FGDs). This contributed to men having more access to skills than women in later years.

This finding was different with the findings of Nozibele (2009) whose study of Water Users Associations in South Africa reported that women had low access to skills and training in Water resource management.

Training provides new capacities necessary in developing new practices that support sustainability of water and forest resources. As a result trained users are more effective. The roles played by men and women in users groups are discussed in the next section.

4. 3 Roles played by men and women in the Forest and Water users groups.

The second objective was aimed at analyzing the roles played by men and women in Water and Forest resources users Groups in Sinazongwe from 2010 to 2014. These were: collection/keeping of user fees, maintenance and policing of water and forest resources.

4.3.1 Collection and keeping of user fees.

The sustenance of users groups attracts financial costs. According to the decentralisation policy of 2009 (GRZ: 2009), the community has a role in maintaining and sustaining water and forest resources. In Sinazongwe, each household was required to pay ZMW5 per month for meeting the cost of running and maintaining infrastructure. To assess the views of the 120 household respondents were sought on the sex of persons who collected and kept users fees. The results are shown in Table 30.

Table 30: Sex of persons who collected and kept users groups:

Sex	Responses.		Total
	Male	Female	
Male	3(5.8%)	49(94.2%)	52
Female	8(11.7%)	60(88.2%)	68
Total	11	109	120

Source: field data-2015.

Table 30 revealed that of the household respondents: 94.2 percent of men (49) compared to 88.2 percent of women (60) viewed women as persons who collected and kept of user fees. The Table also shows that 11.7 percent of women (8) compared to 5.8 percent of men (3) thought men collected and kept users fees. This suggests that the collection and keeping of user fees was seen as the work of women. Furthermore, according to a sample of sixteen Water and Forest resources users groups committees, twelve women (75 percent) collected and kept money compared to four (4) men (25percent).

It was reported that though women collected users fees, they did not make most decisions about its use (FGDs). One woman in Ngoma area in a FGD said, "*Mbabambibuyo abo taata"* This meant that women were just keepers of money and not viewed as decision makers. Furthermore, it was reported that women were good as treasurers because they cared about what happened in communities concerning water and forests resources more than men (World vision).Therefore, the role of women as treasurers was attributed to their "good" reputation with money which led to their election (KDF and World Vision).As a result women earned the trust in communities which was different from their male counterparts who were seen to be corrupt and untrustworthy (head teachers,male and female chairpersons).

Therefore, women's role as treasurers was important in the management and utilisation of water and forest resources. This was because money needed to be readily available to buy seedlings and spare parts for boreholes (Personal observation).

The keeping of users fees by women was viewed differently by local people in Sinazongwe than those reported by Lu (2008) in his study of Water Users Associations who reported that female treasurers were timid. This study found that women's role as treasurers was appreciated because they prevented the abuse of money.

4.3.2 Maintenance roles in Forest and Water users groups.

In order to sustain forests and water, users were required to play maintenance roles. In Sinazongwe, men and women had to repair boreholes, clean and build fences around water points, water nurseries and plant *Faidherbia albida* lots (Soil enriching plants). In order to analyse the roles done by men and women, the views of household respondents were assessed and the results are shown in Table 31.

Table 31: Sex of persons involved in maintenance activities:

Sex	Responses		Total
	Male	Female	
Male	25(48.0%)	27(51.9%)	52
Female	22(32.4%)	46(67.6%)	68
Total	47	73	120

Source: field data: 2015

Table 31 revealed that of the household respondents : 67.6 percent of women (46) compared to 51.9 percent of men (27)thought women played maintenance roles in users groups, 48 percent of men (25) compared to 32.4 percent of women(22) who thought men played maintenance roles in users groups. This suggests that in the opinion of the women they did twice as much work as men.

It was reported that women maintained water point surroundings, watered the nursery for *Faidherbia abida* and planted seedlings (Head teachers, Chairpersons of committees and Headpersons). It was further revealed that men repaired boreholes and built wooden fences around water points. However, it was reported that the seedlings dried due to lack of water because boreholes broke down and were not repaired on time(World vision).This suggests that men did not take their roles seriously (personal observation).

The maintenance roles by women should be seen as part of what Moser (1993) termed reproductive roles of women which is an extension of domestic roles (cooking, cleaning, washing, fetching water, fuel and fodder collection). As a result, it was found that the water points with female chairpersons were cleaner compared to those of their male counterparts (Personal observation).

These findings are different from those of Zhang and Wang (2006) in Lu (2008) who reported that only 20 percent of women were involved in maintenance activities in the Water

Users Association in China. This study found that more women were involved in maintenance activities.

4.3.3 Policing of forests and water.

One of the reasons for involving men and women in local communities in the management of water and forest resources was to ensure continous availability. Therefore, policing of water and forest resources needed to be informed by experiences of both men and women. In order to assess the policing of water and forest resources, the perceptions of household respondents were sought. The results are shown in table 32.

Table 32: Sex of persons who policed water and forest resources:

Sex	Responses			Total
	Male	Female	Both male and female	
Male	25(48.1%)	18(34.6%)	9(17.3%)	52
Female	36(52.9%)	20(29.4%)	12(17.6%)	68
Total	61	38	21	120

Source: Field data 2015

Table 32 revealed that of the household respondents: 52.9 percent of women (36) compared to 48.1 percent of men (25) thought men policed water and forest resources. Furthermore, household respondents: 34.6 percent of men (18) compared to 29.4 percent of women (20) thought women policed water and forest resources. Finally, 17.6 percent of women (12) compared to 17.3 percent of women (9) thought both men and women policed water and forest resources.

The results suggest that majority of respondent thought men policed water and forest resources while a significant number thought women did. Furthermore, only a minority thought both men and women were involved.

Since policing was about access and control, men and women were affected differently. It was reported that sometimes persons in charge of locking the borehole did not open it at the time women wanted to use water (Female chairperson). This meant that they could not have it at the right time. Some men were reportedly not sensitive to different needs of men and women leading to conflicts in some users groups.

Locking boreholes negatively affected more female headed households than those headed by their male counterparts (KDF and World Vision).This was because unlike the female headed households they usually had ox-carts and bicycles which made drawing water in larger volumes possible (Personal observation).

In the case of forests, policing included patrols in the area to ensure that no one cut trees for charcoal burning without permit (Water co-ordinator at Sinazongwe District Council, Headpersons).It also involved inspection of the collection of firewood and charcoal burning. Furthermore, policing ensured that trees were cut at a height which could promote regrowth (Headpersons). However, policing of forests had different effects on men and women because women collected firewood thus experiencing more of such negative policy effects as they carry out their roles every day (Head teachers). This was different with men who used trees periodically for charcoal burning and sawmilling. This had potential for conflicts.

This finding is different from that of Tiwary (2004) on his study of Joint Forest Management Committees (JFMCs) in rural India who reported low presence of women in JFM activities. This study found that there was a significant number of women involved in policing.

4.4 Factors which affected participation.

The third objective of the study was based on the analysis of factors which affect the participation of men and women in the water and forest resources users groups in Sinazongwe from 2010 -2014. This section brings out other factors in addition to low level of

education among women, period of stay in the area, distance to meetings, men's patriarchal subordination, witchcraft threats, age, limited access and skills and training earlier discussed which affect the participation of women. The following themes were identified: Payment of user fees and traditional land ownership rights.

4.4.1 Payment of user fees.

The payment of one kwacha (ZMW1) per household per month for using water and forest resources had different outcomes on the participation of men and women. The views of household's respondents on sex of persons affected by the payment of user fees are shown in Table 33.

Table 33: Sex of persons affected by payment of users fees:

Sex of household respondent	Responses		Total
	Male	Female	
Male	6(11.5%)	46(88.5%)	52
Female	5(7.4%)	63(92.7%)	68
Total	11	109	120

Source: Field data

Table 33 revealed that of the household respondents: 92.7 percent of women (63) compared to 88.5 percent of men (46) thought women were negatively affected by payment of users fees. Table 33 also revealed that 11.5 percent of men (6) compared to 7.4 percent of women (5) thought men were negatively impacted by users fees. This suggests that majority of men and women thought women were negatively affected by payment of user fees. The Table also revealed that few men and women thought men were negatively affected.

It was reported that households which failed to pay were not allowed to draw water or had their access to such resources revoked (headpersons).This was more pronounced with water unlike forest resources. While most households had challenges in paying, female headed

households were the most severely affected (world vision and female chairpersons). This was due to low social and economic status as was the case in most rural areas.

Some households failed to pay due to other household demands such as food and children's school fees which were difficult to find in the area due to high poverty levels (In-depth interviews with KDF and World Vision). It was further reported that even when asked to pay in kind some households failed (FGDs).

4.4.2 Traditional land ownership rights.

In Sinazongwe, land is vested in the traditional authority which includes chiefs and headpersons (Headpersons).This system of land ownership is rooted in traditional patriarchal system. As men directly or indirectly control land based resources such as water and forest resources this has negative outcomes on the participation of women in users groups as it may be difficult to reconcile access and control. As a result, the traditional land tenure system has potential to weaken women's leverage in decision making. In order to explain the negative effects of traditional land ownership rights, the views of household respondents were sought on the sex of persons negatively affected by this practice. The results are shown by Table 34

Table 34: Sex of persons impacted by traditional land ownership rights:

Sex	Responses			Total
	Male	Female	Both male and female	
Male	18(34.6%)	25(48.1%)	9(17.3%)	52
Female	20(29.4%)	36(52.9%)	12(17.6%)	68
Total	38	61	21	120

Source: field data 2015

Table 34 revealed that of the household respondents: 52.9 percent of women (36) compared to 48.1 percent of men (25) thought women were negatively impacted by traditional land

ownership rights, 34.6 percent of men (18) compared to 29.4 percent of women (20) thought men were negatively impacted by men's control of water and forest resources, 17.6 percent of women (12) compared to 17.3 percent of men thought both men and women were negatively impacted by men's land ownership rights.

As a result, men's traditional land ownership rights affected women's participation in users groups. This was because of local traditions which favoured men over women (Headteachers). Men's ownership of land gives them control of the use of water and forest resources thus restricting women's social and economic space. As a result even if women had access to water and forest resources, they did not control activities such as farming which is key to livelihoods. This is supported by findings in Table 2 which shows that livelihoods were integrated with water and forest resources.

4.5 Conclusion.

While men had control in the management and use of water and forest resources, women also had some contribution. Women were represented at all levels, played various roles. This was despite many gender related socioeconomical factors rooted in patriarchal subordination.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS.

The purpose of this chapter is to present the conclusion and recommendation of the research. It focuses on a summary of findings and suggests solutions to challenges faced by women. In addition, the chapter also proposes areas for further research.

5.1 Conclusion:

The general objective of the study was to analyse the participation of men and women in the Water and Forest resources users groups in Sinazongwe District for the period 2010-2014.This was done by answering the following research questions: what is the representation of men and women, roles they play and the factors which affect their participation in the Water and Forests resources users groups.

The study revealed that livelihoods of men and women in Sinazongwe District were based on water and forest resources. The unsustainable management and utilisation of water and forest resources leading to degradation affected women more than men. This was because they were the main collectors and carriers of water and firewood at household level.

The Shaefer's relevant levels of participation which are attendance at meetings, speaking and decision making, was used in the analysis of the representation of men and women in users groups.

On attendance at meetings there were more men than women. The study revealed that some women could not attend the meetings held away from their households due to lack of financial resources. This was different with men who used bicycles, motor cycles or simply walked to places where meetings took place. This undermined women's attendance at meetings in users groups in the area. However, although men predominated, some women also represented their households in meetings.

When it came to speaking in meetings, the research found that while men dominated, a minority of women also spoke. Women were found to be passionate about water and forest resources though their views were often not taken seriously. Men had an advantage over women because they had earlier notice of meetings and could discuss issues in advance.

On decision making, the majority of committee members were men. As a result majority chairpersons were men. However, a minority of women were elected committee chairpersons.

On the roles, many women were elected as treasurers. This was because they were trusted with money unlike their male counterparts. A minority were also elected as chairpersons. Infact it was found that users groups managed by women were better run than those by men. Furthermore, women maintained water point surroundings and planted *Faidherbia abida* in their fields of cultivation. Men repaired boreholes and protected water points by building wooden fences around. The research further revealed that though both men and women policed water and forest resources, they were affected differently. Women unlike men needed such resources daily due to their household work which involved collection of firewood and drawing of water.

The research found that the factors that affected the participation of women were the low levels of education; length of period of stay in the area; distance to meetings; patriarchal subordination which made it difficult for women to speak in meetings; witchcraft threats which were often made against committee members were particularly frightening for women; limited access to skills and training. This was in addition to other factors such as payment of user fees and traditional land ownership rights.

The study concluded that although women were underrepresented in users groups they played their roles as treasurers and chairpersons well. Infact women raised hygiene levels both at households and water points. They were also able to prevent misuse of financial resources in

users groups in addition to effectively planting *Faidherbia abida* in their fields of cultivation. This was despite the various socioeconomic factors working against them.

5.2 Recommendations

(i) The NGOs and other stakeholders such as Government agencies should ensure that both men and women are empowered with information about users groups for effective participation in meetings,

(ii) There is need to localize training programmes so that more women can have access to skills as they would not be disadvantaged by distance to meetings. This will enhance women's participation in users groups in Sinazongwe,

(iii) NGO s and Government agencies should ensure projects, policies and programmes should be informed by gender analysis in the order to understand the implications on boys and girls, men and women in Sinazongwe,

(iv) Education of girls should be supported by all stakeholders in order to realize optimal literacy levels in the Sinazongwe,

(v) Adult education for women, workshops around what women can do on water and forests should be conducted in the area.

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APPENDICES

Appendix 1

Researcher.....Date.....

Questionaire (household respondents)

TOPIC:

An analysis of the participation of men and women in water and forest resources users groups in sinazongwe district from 2010-2014

Date of interview:.....

Place of Interview.....

Name of Interviewer.....

Serial number (of respondent).....

Instructions to the interviewer.

Explain the reason for the interview.

Assure the respondent of confidentiality and voluntary participation

Write only the serial number and not the name of the respondent on the schedule

Clearly tick the response to the question or fill in the blank spaces provided

Thank the respondent at the end of the Interview.

Provide time to the respondent to ask questions at the end of the Interview.

SECTION A: DEMOCRAHIC DATA

1. Sex: Male [] Female [].

2. Age at last birth day.....

3. Marital status

(i) Single []

(ii) Married []

(iii) Divorced []

(iv) Separated []

(v) Widowed []

(vi) Others specify..... []

6. Religious Domination.

a. Catholic []

b. Brethren in Christ church []

c. SDA []

d .UCZ []

e. Others specify.....

7. Have you ever attended school?

a. Yes []

b. No []

8. If yes to Q 7, what level of education did you attain?

a. Primary complete [],

B.Primary incomplete, []

c. Secondary complete, []

d. Secondary incomplete, []

9. What is the source of your livelihood?

a.employed []

b.Farmer []

C.Charcoal burner []

d. Collecting and selling of wild forest products e.g. fruits []

e. Others specify..... []

10. How long have you lived in this area?

a. more than 5 years, []

b. less than 5 years, []

11. Indicate number of people in your household below:

a. Men.....

b.Women.....

c. Boys.....

d. Girls.....

Section B: Participation in Forest resources users groups.

12. In your household what is the gender of the collector of forest products for:

Sale M [] F [] both []

Building M [] F [] both []

Domestic use M[] F[] both []

13. Have you experienced any negative forest resource changes in the last five years?

Yes [] No []

14. If yes to Q13 what are these?

Reduced volume of firewood [] diminished fruit collections []

Loss of biodiversity [] loss of forest habitat []

15. Have you been sensitized on conservation of forest resources?

Yes [] No []

16. If your answer to 15 is yes? Do you participate in these forest user groups?

Yes [] No []

17. If yes to Q.16 what conservation activities are you involved in?

Agro forestry [] Education awareness []

Bee keeping [] guarding forests []

18.Is there a forest user group in your area?

Yes [] No []

19. If yes to Q 18, when was it formed?

a. Last year [] b. two years ago [] c. 5 years ago []

d.Others .....specify []

20. Have you attended any meetings in your forest user group?

Yes [] No []

21.If yes to Q20 what language is used during training/meetings in forest user group?

a. Tonga [] b. English [] c. Others specify..... []

22 .In your forest user group who holds the following positions?

a. Chairperson M [] F[] b. Treasurer M[] F[]

c. Vice chairperson M[]F[] d. Committee member M []F[]

23. What is the criterion for selection of the committee member in your forest user group?

a. Education [] Economic status [] Sex [] Social status []

24. Do you have challenges attending meetings in your forest user group?

Yes [] No []

25. If your answer to Q 24 above is yes, which factor affects you the most?

a. Lack of transport [] b. Meeting time [] c. Level of education [] d. Culture []

e.Others specify..... []

Section C: water resources user groups

26. In your household what is the gender of the person who collects water for:

a. domestic use: M [] F []both []

b. Irrigation purposes

M [] F [] both []

c.Others .....,

27. What is the source of your drinking water?

a. Bore hole [] b.Others specify..... []

28. Were you consulted on the location of the water source?

Yes[] No []

29 .Were you consulted on the location of the water point?

Yes [] No []

30 .If No to Q.29 above whose views were considered?

Male[] Female []

32. Have you experienced any water shortages in the last 5 years?

a.Yes []

b.No []

33. If yes to Q.32 who was affected most?

a. Men [] b. women [] both[]

34. Do you have a water user group in your area?

Yes [] No []

35. Have you ever attended water user group meeting?

Yes [ ] No [ ]

36. Who represents your household in the water user group?

Male [] Female [] both []

37. Who is involved in the closure and opening of the water point in your users group area?

Man [] woman [] both []

38 .In your user groups who holds the following positions?

a. Chairperson M [] F[] b. Treasurer F [] M[]

c.Vice chairperson M [] F[] d. Committee member M []F []

39. Are there challenges faced by men and women on their participation in water and forest resources user groups?

Yes [] No []

40. Which of the following do you consider as the most important challenge in your water and forest users groups,

a. maintainance costs [] b. Drying up of water sources []

c.time of meeting [] d.distance [] Lack of sensitisation []

41.Are you trained in the repair of wells? Yes [] No[]

42. Have you experienced or witnessed any form of gender based violence in water and forest resources users groups? Yes[] No []

43. Is the water point in your area user friendly to both men and men? Yes [] No []

44. What should be done to increase the effectiveness of the water forest resources users groups? Involve men [] involve women [] Involve both men and women []

Thank you for answering my questions

Appendix II

Focus Group Discussion Guide

Number of respondents/participants.....

Composition of respondents/participants men [] women []

Language used during discussion.....

Date.....

Duration.....

Place.....

INSTRUCTIONS TO THE RESEARCHER

Welcome the respondents (participants)

Self introduction of researcher and recorder to the group.

Request the participants to introduce themselves.

Obtain verbal consent from the group to conduct the discussion.

Explain the purpose of the discussion

Assure the group of confidentiality and voluntary discussion

a) What is the background to this user group in this area?

b) What group of people are members of this user group?

c) What different roles do men and women play in this user group?

d) What are the achievements of this user group?

e) What challenges do you face in this user group?

f) What is the response of the community to this user group?

Thank you for answering my questions

APPENDIX III

Researcher.....Date.....

Semi structured interview guide(headmen, chairpersons and primary school head teachers)

TOPIC:

ANALYSIS OF THE PARTICIPATION OF MEN AND WOMEN IN FOREST AND WATER USERS GROUPS IN SINAZONGWE FROM 2010-2014

Date of interview:.....

Place of Interview.....village/ward.....

Name of Interviewer.....

Designation of respondent tick where appropriate below

Head person [] Chairperson [] and Headteacher []

Instructions to the interviewer.

Explain the reason for the interview.

Assure the respondent of confidentiality and voluntary participation

Write only the serial number and not the name of the respondent on the schedule

Clearly tick the response to the question or fill in the blank spaces provided

Thank the respondent at the end of the Interview.

Provide time to the respondent to ask questions at the end of the Interview.

Section A : Background information

Sex....M [] F []

1. How old were you at your last birth day.....

2. Level of education.....

a) Non [] b).Primary [] c).Secondary []

d). University and college []

d) .Others specify..... []

3. Religious domination.....

4. Number of years in the current position.....

Section B:

Representation, roles affecting the participation of men and women in the water and forest resource users groups.

5. Is there equal number of men and women in your forest user group committee? Yes[] No[]

6. If No, what have you done about it?

.....

.....

7. Do both and women attend executive forest user group meetings?Yes [] No []

8. If yes to Q.7 explain how often men and women attend the executive meetings.

Men.....

Women.....

.....

9.If No to Q.7 what are the challenges

.....

.....

.....

.....

10. Have you experienced incidences of absentism in your user committee Yes[]No []

11. If yes to Q.10 above, which sex is most affected by absentism? M [] F[]

12 .Which of the following would you attribute to absentism? Distance [] Time of meeting []

Communication [] lack of Transport [] Sicknesses [] Others specify..... []

13. What have you done to overcome the challenge you have noted in Q.11 above

.....
.....
.....

14. Are there specific roles done by men and women in forest user group committees? Yes[]No []

15. If yes to Q.14 explain briefly what roles men and women play in forest water user group?

Men.....
.....

Women.....
.....

16. In your forest user group which policies are informed by men and women?

Agroforestry M[] F[] both []

Restriction of charcoal burning M[ ] F[] both[]

Forestry products collection M[] F [] both[]

Firewood M[]F[]both []

17. Are both men and women trained in forest management in your forest user group?

Executive committee.Yes []No[]

18. Which of the following cultural beliefs affect participation of men and women in the

forest user executive committee:

Marriage[] taboos[] religion[] marital status[] ethnic backgound

19. Explain how the government and traditional authority are working to mitigate the effects of these beliefs.

.....
.....
.....
.....

20. Have you witnessed any gender based violence in your forest user committee?

Yes[]No[]

21. If yes to Q20 above who were the perpetrators?

M []F [] Both []

22 . Explain briefly how gender based violence is mitigated .

.....
.....

Section c:

Representation, roles and challenges of men and women in the Forest and Water users groups?

23. Is there equal number of men and women in your water user group committee?

Yes[] No[]

24. If No, what have you done to equalise the numbers?

.....
.....

25. Do both men and women attend executive water user group meetings?

Yes[] No[]

26.If yes to Q.25 explain how often men and women attend the executive meetings.

Men.....

Women.....

.....

27. Have you experienced incidences of absentism in your user committee?

Yes[]No []

28. Which gender is most affected by absentism?

M[] F[]

29 .Which of the following would you attribute to absentism?

Distance and transport [] Time of meeting []

Communication [] lack of Transport

[] sicknesses [] Others specify..... []

30. What have you done to overcome the challenge you have noted in Q.29 above

.....

.....

.....

31. Are there specific roles done by men and women in water user group committees?

Yes[] No[]

32. If yes to Q.29 explain briefly what roles men and women play in water user group.

Men.....

.....

Women.....

.....

33.In your water user committee which policies are informed by men and women?

Gardening M [] F [] both [] Agroforestry M []F[] both[]

Domestic water use M [] F [] both []

34. Are both men and women trained in integrated water management in your users group?

Yes [] No []

35. Which of the following influences of cultural beliefs affect participation of men and women in your water user executive committee:

Marriage M[] F[]Taboos M[]F[]

Religion M[] F[] marital status[]

Ethnic background M[]F[]

36. Explain how the government and traditional authority are working to mitigate the effects gender based violence.

.....
.....
.....
.....

37. Have you witnessed any gender based violence in your users group committee?

Yes[] No[]

38. If yes to Q35 above who were the perpetrators?

Men [] Women [] Both []

39 . Explain briefly how gender based violence is mitigated .

.....
.....

Thank you for answering questions

Appendix V

Interview guide for key informants (district forest officer, world vision area manager, district council water co-ordinator)

Topic: An analysis of the participation of men and women in Forest and Water user groups: a case of Sinazongwe from2010-2014

Date of interview.....

Place of interview:.....

Interviewee: ..... (e.g. world vision manager etc)

INSTRUCTIONS TO THE INTERVIEWER

Introduce yourself to the respondent.

Explain the reason for the interview.

Assure the respondent of confidentiality and voluntary participation.

Thank the respondent at the end of the interview.

Provide time to the respondent to ask questions at the end of the interview.

1). Age from your birthday.....

2). Marital status.....

a) Single [ ]

b) Married [ ]

c) Divorced [ ]

d) Others specify.....

2). Religious denomination.....

3).How long have you been working in this area.....

4). Give the background to establishment of Forest and Water users groups in this area.

5).Is the representation of men and women in the Forest and Water user groups equitable?

6).Are all groups represented in the Forest and Water user groups

7). Describe the roles played by men and women in the Forest and Water user groups.

8). Are there certain roles done by men and women?

9). To what extent are men and women influence policy of the Forest and Water user groups.

10). what challenges do men and women face in participating in the Forest and Water users groups?

11). How has your organisations been dealing with such challenges?

12).What policy changes would you recommend to enhance equal participation of men and women in the Forest and Water user groups?

Thank you for my answering my questions.