GENDER RELATIONS IN THE MANAGEMENT OF COMMUNITY WATER PROJECTS. THE CASE OF MBIUNI LOCATION. MACHAKOS DISTRICT.

By Titus Mutia Kithome.

A project submitted to the Institute of African Studies in partial fulfilment for the requirements of the Masters Degree in Gender and Development of the University of Nairobi.

DECLARATION.

ihis project Is my original work and has not been presented for a degree in any other University.

Titus Mutia Kithomeo

This project has been submitted for examination with my approval as University supervisor.

. . . *m m* . . ..

Dr. W. K. Subbo.

Universrfy supervisor.

DEDICATION.

DEDICATION TO THE LATE FRANK MULONZYA FOR

MANY YEARS OF OUR FRIENDSHIP.

^ftnoWLEDGEMENTfi

1 wish to express lily lllimllle llUUlk'S tO fill those wlio in one-way pi 111? Other facilitated this study.

Specific thanks therefore first go to Hie Provincial Administration Mbiuni Location and The Water Officer for helping in the **identification** of the water programs. 1 also thank Sammy Mutuku and the others who helped **in the data collection.**

Special thanks goes to my supervisor **Dr. W. Subbo for** taking **KCOfl interest in reading tfty work ^it) fgf l]X]]7U]]JIO tjtWljlflce**

This project wonia lwYtf ITiatCrml 1 S6C1 without tile help of the residents of Mbiuni who gave information either US UldiVidll&lS or as a **g:roup.**

bm\iy$ 1 *mW* to thank my tannly for prayers and encouragement

TABLE OF CONTENTS PAGE

LIST OF TABLES AIND MAPS.

LIST OF ABBREVIATIONS AND ACRONYMS

UN- United Nations

UNDP- United Nations Development Programme

UNICEF- United Nations Children Fund

SPSS- Statistical Package for Social Sciences

IPAR- Institute of Policy Analysis and Research

CCF- Christian Children's Fund

ABSTRACT

This study discusses the gender relations in the management of community water projects in Mbiuni Location of Machakos District. The main objective of the study is to explore the various socio- cultural factors that influence participation and decision- making of both men and women in water projects management.

The study was guided by the social relations approach that recommends social analysis of different institutions in order to understand how these social differences and irregularities in roles, responsibilities, claims and power are reproduced and reinforced by the same institutions.

A total of 111 projects participants were randomly sampled and interviewed using structured questionnaire. Further, 10 key informants were interviewed using unstructured questionnaire.

The analysis showed that the management of water projects in Mbiuni Location of Machakos District is not given a gendered approach due to rigid cultural practises that leads to Male dominance in the water management committee. This has constantly continued to undermine the women's ability to access, use and participate effectively in the management of water resources.

It is then recommended in this study that, there is need for the policy makers to mainstream > : gender in all stages of water project management. A complete re-thinking of the underlying social structures especially those, which discriminate against women at both the family and community levels, needs to be done.

CHAPTER ONE
INTRODUCTION AND BACKGROUND

1:1 INTRODUCTION.

Safe, adequate and sustainable water supply is a fundamental basic human need. Globally, the demand for adequate clean water supply continue to increase due to constant population growth, rapid industrial development and diversification of water use to the agricultural sector. Despite unprecedented attention towards provision of safe water during the United Nations Drinking water supply and sanitation decade (UN water decade) from 1980-1990, one quarter of the developing world's population still lack clean water while one million die annually from water related diseases. Fitzgibbon (1999).

In Africa particularly, many countries have continued to experience water shortage despite heavy investments from both International and local donors. According to Rathgeber (1996), by early 1990's nine African countries namely, Algeria, Botswana, Burundi, Egypt, Kenya, Libya, Rwanda, Mauritania and Tunisia had their per capita renewable water supply less that 1000 cubic meters annually and so were categorised to have inadequate water supply. Past research show that in many African countries, water systems are misused, not well repaired, and so fail to provide reliable water supply services. Failure of water systems could be attributed to lack of sustainable water management and negligence of repair and maintenance of the existing infrastructure. Manignin (1991) cited in Fitzgibbon (1999).

Governments and donors are now realising that centralised ways of water projects management are no longer suitable and are encouraging joint management systems involving all stakeholders including local communities. However, according to Maharaj (1999), frill community participation is faced with many challenges. Different competing groups within the community

experience differences in terms of their needs, how they express them, power sharing, concerns and lights. The scarcity of water as a resource attracts a lot of competition in different levels, which leaves the weak, and the disadvantaged often missing their share.

Power imbalances in many African societies places women at a veiy disadvantaged position. Lack of ability to access formal power adversely affects their negotiating capacity to get water supply as required. In order to ensure that there is equitable access to basic needs like water, there is need for a gendered approach in the community water projects management which in turn calls for proper gender analysis to understand fully the existing gender relations within the community.

"As in the context of international human rights, the concept of gender equality is enshrined in the Universal Declaration of Human Rights as well in the 1979 United Nations Convention on the Eliminations of all forms of Discrimination Against Women. "UNDP, 2001. The systematic insubordination of women caused by institutional practises clearly undermines the efforts towards gender equity, which is essential in addressing sustainable, and people centred development.

1:2 STATEMENT OF THE PROBLEM

Issues of water scarcity have generally motivated governments and donors in Africa into focussing their attention towards provision of clean water to the community. However, despite much attention being directed towards increased water accessibility through 1970's and 1980's, little attention was made to fully address the roles of women in water resource management as noted by Rathgeber (1996).

Past research indicates that in many parts of Africa, little efforts have been made to factor in the issue of gender into community water management. Women have been generally perceived as passive recipients of water resource with no significant role to play in decision-making on water sourcing, use, and maintenance of the water infrastructure. UNDP, (2003). The deep-rooted patriarchal nature of most African societies continue to guide the resources allocation decisions. The desire for men to maintain the status quo has for long continued to undermine the ability of women to meet their specific gender needs. The imbalances in power sharing in these societies has constantly led to conflicts in resource sharing and proper management of the same resources because the contribution of women in development is generally overlooked.

Since 1985, when the Third World Conference on Women was held in Nairobi Kenya, many water programs now try to focus on women's involvement. However, according to Maharaj (1999), "*such programs only seek to alter women's conditions and positions without taking into account the larger societal picture, and the entrenched and dynamic power relations that are capable of negating any gains women may achieve* ". Other interventions focus on general expansion of water supply programs with the assumption that populations will certainly have equitable sharing mechanism for all groups involved.

Paring gcndcr-ted division of labour in many developing countries usually determine different roles men and W0IHCI1 play ill the community water projects management. The women's productive roles that includes provision of domestic water is usually not given economic valuation by the society and development planners. This further strengthens the status quo of power sharing which continue to undermine the women contribution in development.

Women being prime drawers of water need to be fully involved in water management issues at all levels. Household decisions on who has access and Control of resources also determine to a greater extend the maintenance of the water facilities. World Bank reports in the recent years indicates that water committees have been unable to collect funds from individual members especially women in the rural areas who usually lack their own income or control on how it is used. Green and Baden (1995) as cited in Rathgeber (1996) notes that "*Though women in Tanzania and Haiti are willing to pay for the access of water in public taps, their limited decision making influence over household finances makes them reluctant*".

Prevailing cultural patterns in any given community for both men and women play a major role in water management. Communities consist of different sets of groups with divergent interests and priorities based on Age, Religion and gender. These power differences usually make it hard for some groups to voice their ideas. Women and girls might find it hard to speak in front of their husbands and fathers in public gatherings in fear of contradicting the others views. Due to this situation, women's access to water is greatly influenced by their husbands as well as it is influenced by existing cultural norms and practices.

Differences in gender roles and workloads leave women with very little time for any activities outside their households. The venue and time allocated in

community water projects meetings may greatly affect women's participation in the top leadership of these projects. Other societal gender biases like accessibility to education may put men at a head start when it comes to elections of water committee officials.

The purpose of this study was to explore how gender relations influence the management of water project in Mbiuni Location, Machakos District.

In investigating this problem, the following research questions were raised.

i) How do power imbalance at the community level impact on the ability to participation of men and women in the management of community water project?

ii) How do the entrenched cultural patterns influence women and men's level of access and control processes of water as a resource?

iii) How does domestic gender roles and responsibility affect men and women's ability to participate in the community water management?

iv) Is there a relationship between education attainment and leadership positions in the community water projects?

1:3 OBJECTIVES

1:3:1 OVERALL OBJECTIVES

To explore gender relations in the management of community water project in Mbiuni location, Machakos District.

1:3:2 SPECIFIC OBJECTIVES

(1) To identify factors influencing decision making process in the Management of water community project

(2) To determine how community based division of labour- influence different levels of participation among men and women in water Project management

(3) To determine how traditions and culture influence the capacity of Women to participate in water management committees.

(4) To examine the relationship between education attainment and the Leadership positions in water management committees.

1:3:3 STUDY HYPOTHESIS

The following hypotheses were tested,

(1) Cultural bias against women influences their full participation in the water project management in Mbiuni Location.

(2) Heavy domestic roles and responsibilities among women influence then-levels of participation in key decision making practises of the water committees in Mbiuni Location.

(3) There is a positive relationship between education attainment and leadership positions in water committees in Mbiuni location.

1:4 JUSTIFICATION OF THE STUDY

It is quite vital that management issues in the water sector are user oriented. Despite women and girls in the developing countries spending many hours daily on water provision, imbalance in power issues and decision-making processes impact negatively on their ability to access and negotiate on water resource matters. In order to attain sustainable means of managing community water resources, there is need for a more democratic way of decision making and power sharing to ensure fairness and equity in the utilization of water resources and benefits.

This study is essential in helping men and women in re- evaluating then- position in order to improve the balance between their work and access and control to resources and benefits. The study is important in fostering a more participatory management and decision-making process for a long-term sustainable water resources management. Any social relations study is quite vital in helping the development workers to focus in gender relations and not on women in isolation. "*Projects and programmes that work towards changing the positions of women must take into account the points of resistance and flexibility in social systems in which men and women live*" UNDP (2001).

This study is aimed at filling the gaps on existing literature on gender and water resource management. The study also seeks to enrich the data bank on water management that can help the policy markers and donor agencies in ensuring that water resources are equitably shared among different groups of people in the society. The study is quite useful for academic purpose especially for students of gender studies.

1:5 SCOPE OF THE STUDY

Many studies have been done on water resources management in the past but this study, specifically limited itself to the socio- cultural factors that influence gender participation in the management of water projects. The main target group of the study was the beneficiaries of the projects, both men and women in the rural setting of Mbiuni Location. The study was guided by specific objectives with the aim of examining the gender relations and how they influence the participation and decision making process of both men and women in the water management.

The District was selected for the study mainly due to its arid and semi-arid weather conditions. However, other factors like sand scooping along the river beds and unequal participation in the decision making process by all the project beneficiaries place Machakos District as one of the Districts whose water resources needs careful and proper management.

Despite the need for exploring the whole area, the study was limited to Mbiuni Location due to limited time and funds to cover a larger area. In the efforts to gather the necessary information and data, the studies observed all the ethics of social science research.

CHAPTER TWO

2.0 LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 GENDER AND DECISION MAKING PROCESS

Water management entails the planning, design, implementation and maintenance of a water project to ensure that the community effectively and efficiently uses water resources. Existing literature show that safe, adequate and sustainable water supplies remain a key objective for governments both globally and at regional levels. According to the World Bank report of 1994, more than a billion people mostly the poor still have no access to clean water while almost 1.7 billion are without adequate sanitation. Population growth and increased usage of water on economic activities like agriculture and livestock place water as a scarce and vulnerable resource.

For sustainable water resource usage, there is need for a careful and proper management. UNDP (2003) indicates that forums like International Drinking Water Supplies and Sanitation Decade review in 1990, The Dublin Conference of 1992, The World Summit on Sustainable Development in 1992, The Beijing Conference of 1995, and lately, The World Bank Conference of the year 2000, have all endorsed the new concept of integrated water resource management which recommends among other things, the importance of women's role in water management. Central to this approach is the decentralization of water services by the state, which initially had the monopoly on all water management issues.

Community based water management has become a catch phrase especially in the developing countries. MaharaJ (1999) notes that Governments and development planners are now stressing on the participatory development approach whose main theme is equitable resource sharing and allocation.

Guiji and Shah (1989) argues that increased community **involvement in** development issues is important in giving the people especially lll tllC rUTOl area SkiUs to improve their living conditions.

However, literature in the 1990's on community water management show that emphasis was on general issues of community participation without special reference to the important role played by women. Despite these intentions on social inclusion and community action in water management, veiy little has been done on understanding the internal social dynamics and differences as related to water issues before the implementation of water projects. Kathina (1991) decries the issue of ignoring women in the decision-making mechanism. She points out that in African countries, women form more than half of the population yet they are not included in the development decision-making processes and specifically, water management.

Marilee (1995) argues that for a long time, African women have been victims rather than beneficiaries of development due to the underlying cultural biases. Development planners have been lumping women together with the other target groups with no special considerations. Marilee says that there is need for the development planners to do a social analysis to understand the underlying socio-cultural factors in a given community.

Despite the United Nations and the World Bank resolutions on acknowledging the role of women in water management, gender issues in water management in Kenya have been ignored as the case in other African countries. Manundu (1997) as cited in the UNDP report (2003), cites unequal women participation in family decision-making as one way on how women are disadvantaged in comparison to men on water issues. Razavi and Miller (1995), agrees with Manundu that to ensure fairness and equality in resource sharing,

there is need for mainstreaming gender in development planning and examining social structures, processes and relations that may give way to further women subordination in a given community.

According to a study done by UNICEF (1992) as cited by Rathgeber (1996:56), there is clear evidence in many Kenyan communities that prevailing cultural role expectations for both men and women greatly influence attitudes towards water management" *There is evidence that in some communities men will give Precedence to the building of a corrugated iron roofed house, Purchase of a bicycle or marry a second wife over the Supply of basic household necessities such as food and water" UNICEF (1992).* Another UNICEF report (1992) notes that despite women working from light until after dark in order to meet the family's needs, the reward they get in return is generally, less food, less education and training, and less basic rights.

Razavi and Miller (1995) appreciate the important role played by social - cultural factors in determining the process of power- sharing. They argue that in order to have equity in gender power sharing, there is need to consider renegotiating power relations. A social relations analysis would ensure equity in redistribution of resources and increase women's bargaining power within the decision-making processes.

Maharaj (1996) says that under representation of women in key decision making processes undermines their valuable contribution in water resource management as noted in Tanzania. *"In Tanzania, most villages have established what are Generally known as village water committee.... Women are greatly under- represented in these Committee with an argument that they lack self confidence and education to compete with men " (Maharaj, 1996)*

Maharaj continue to argue that cultural bias is a serious barrier to women participation in water management even in situations where women have more experience and expertise than men. In support of this view, Rathgeber, (1996) discusses a case in Kenya where a hand pump project developed by PROWWESS and UNDP in collaboration with the Kenya's Ministry of Water development emphasized on female participation in pump repair and maintenance. However, due to culture stereotype, the women themselves requested their replacement by men even after the successful completion of the training arguing that young women would get married and move to other communities.

Full participation of women in water management is further hampered by prevailing cultural nonns of male dominance. Men domination in community meetings is a common trait in Africa and Asia. During the community meetings, men sit in front, while women sit at the back where they hardly hear. Numerous studies show that even though women may be willing to contribute during the discussion, prevailing cultural norms greatly influence their participation. In most cases, women may shy off to stand and speak in front of their husbands or community elders. Maharaj (1996).

Cleaver (1998:345) as cited in the UNDP report, (2003:11) cites a case in Zimbabwe where women are under represented in the water committees due to cultural bias. "*Poor women in rural Zimbabwe are less likely to be elected in water points management committees because the main criteria for election is somebody 'respected' by the community and somebody with a resource like a bicycle or cash so they could represent the village at the district headquarters "(. Cleaver, 1998)*

The ability of men and women to make valuable contributions either in leadership positions or in making monetary contributions has a lot to do with power relations in a given community. An access and control process on who makes decisions on the family expenditure greatly contributes towards management of water resources. Rathgeber (1996). Continued acceptance by the society that men represent the interest of the whole community, has contributed greatly towards failure of many water projects in Africa. Adams and Castle, (1994) discusses the importance of empowering women to be able to play a major role in decisions concerning their productive and reproductive roles. They argue that many development programs have failed because development planners have failed to recognize the importance of understanding gender relations in a community. Adams and Castle feel that women's ability to have authority over material resources in the household has a lot of influence on their overall welfare and that of the entire community. In the patriarchal societies, men have control over all household resources including women's labor, which leaves them with little time to engage in other development activities outside their household.

Rathageber, (1996: 55) draws a parallel between sustainability of water and sanitation systems with the women's domestic roles. To save time for other money domestic chores, women may be tempted to use closer sources of water even if the water quality is not guaranteed. This aspect could determine women's participation in a water project especially when the process is time consuming.

2:2 GENDER DIVISION OF LABOUR

Gender division of labour in Kenya show more men than women in the public domain with women mostly in the domestic sphere. Governments and development workers in Africa have for a long time connected women's productive roles with their reproductive responsibilities like provision of water to the family. Suda (1987) notes that existing structure of gender division of labour in Kenya could be well traced to cultural norms, and further reinforced by institutional structural arrangements.

Suda argues that different roles played by men and women in production and reproduction works and the rewards and benefits received from such roles form the basis of gender inequality and subordination. In Africa, especially in the rural areas, domestic roles are culturally defined and it's tie women who perform 90% of these tasks. Women have the responsibility to provide water, clean the house, prepare food, childcare and nurse the sick. Suda notes that such activities are veiy tedious, labour intensive and time consuming and therefore greatly impact on women's participation on development programs.

Despite these vital contributions in the productive and reproductive roles, women in Kenya are not involved in the cenire ©f development processes and decision-making. According to Getechah (1980), a study carried by United Nations of Economic Commission for Africa found that carrying of water is the most strenuous physical burden of all tasks performed by African women. The study noted that in estimation, one-sixth of all energy used by women in rural areas is in carrying water, and in many cases, four trips in a single day!

Getechah decries the imbalances in educational opportunities among boys and girls and the attitudes in many societies as a key determinant in

women's involvement in water projects management and maintenance tasks. In view of the prevailing norms and lack of technical know-how among the rural women, the women tend to leave the more technical tasks such as maintenance of machinery to men whereas they women do the bulky of manual work like digging trenches and carrying building materials. Training on pumps maintenance and piping systems are given mostly to men. Getechah feels that such trainings should be extended to women also.

Adeyinka (2001) traces the societal discrimination of women to the male authority at home, rigid gender roles and definition of masculinity that are linked to male honour and economic inequalities. Despite the women subordination and sidelining in development issues for a long time, Adeyinka feels that it is time for the development planners to ensure gender mainstreaming in development issues because of the important role played by both men and women.

Several scholar, Rodda (1993), Manundu, (1997) and Moser (1987) all recognise the important role played by women in the third world development. However, they argue that this has not caught the attention of development planners and government. Moser (1987) clearly outlines the need to have a planning approach that incorporates gender and recognizes the triple roles played by women. In order to do effective development planning, Moser cautions on the assumptions that within a household, there exists a natural order of division of labour that determines automatically who should do what task.

In supporting the idea of gender aware programming, Maharaj (1999) notes that gender approach in water management will reduce overburdening women and ensure the strategic and practical needs for both men and women are effectively addressed.

13 PRACTICAL AND STRATF.GIP OFMHFpj^pppg

Existing literature portrays a shift in thinking among development workers and governments on the recognition of the important roles *played by* women m development. However, the concept of gender planning is still lacking in the developing countries. A gender planning approach is an important element for it provides room for a careful analysis and consideration of both strategic and practical gender needs in the society

The United Nations Decade for Women (1976 - 3985) piayed a crucial role on this shift, which marked the beginning of a more focused attention towards the plight of women. However, several scholars and development planners are now recognising the limitations of focusing on women in isolation.

In the 1989 study, Moser discussed the importance of gender planning and insisted on the need for disaggregating household and families within the community on the basis of their gender needs. " *When planners are blind to the triple role of women, and the fact that women's needs are not always the same as men's they fail to recognise the necessity of relating planning policy to womens specific requirements* [v] *(Moser, 1989:1802)*

In over looking the reality that women play a key role in the development process and not just passive recipients, development planners in African have significantly contributed towards loss of water resources. Rathgeber (196:50) argues that a gender approach would help in minimising controversies around allocation and management of water resources.

Moser (1986) discuses the importance of drawing distinction between strategic and practical gender needs during the planning. She describes the strategic gender needs as those identified to remove the women's subordinations like the abolition of sexual divisions of labour, alleviation of the burden of domestic labour as well as the removal of all institutionalised forms of discriminations. Unlike the strategic gender needs, practical gender needs are usually based on immediate perceived needs without necessarily challenging the prevailing forms of subordination.

Kabonesa and Happy (2003) notes that the prevailing gender division of labour in many African societies has women and children responsible for domestic water supply while men participate mostly in collection of water for commercial purposes. Kabonesa and happy argues that active participation by both men and women is greatly influenced by their perceived needs which are based on their positions in this society.

Studies show that water supply target groups are generally defined as the 'local population'. Jorgenser (1982) argues such definition is too broad and is not based on the specific needs of different groups in the target population. Jorgenser recommends that needs analysis on the local population is essential to get a clear picture on who primarily will benefit from an improved water supply.

In supporting the idea of gender aware planning in project design, Kabeer (1995) underscores the importance of understanding specific gender roles and needs. Planners must take into consideration both shared interests, separate interest and opposing interests during program design. Social cultural patterns in Africa show varied gender

needs among men and women and so Involvement on equal basis of both men and women at all levels of water management could be die solution towards an effective, efficient and sustainable water resource management Jorgemser (1982)

2 4

THEORETICAL FRAME WORK

THE SOCIAL RELATIONS APPROACH

Naila Kabeer is proponent of the social relations approach, which she developed at The Institute of Development Studies, Sussex University in collaboration with policy markers and academics. The idea of social relations approach is adapted from her book *The Reversed Realities* in 1994 and a paper written by Kabeer and Subrahmanian in 1996 entitled *Institutions, Relations and Outcomes.* The aim of the social relations approach is to empower the women to be agents of their own development. The approach is also intended to help development planners in analysing the distribution of resources responsibilities and power.

A UNDP report of 2001 on Gender analysis cites that the approach uses concepts rather than tools in order to focus on the relations between people, resources and activities. The framework could be further used in analysing how relationships between people are reworked through other institutions like the state.

As cited by March, et- al. (1999), Kabeer use social relations approach to explain the structure that determine systematic differences in positioning different groups of people like men and women. Kabeer indicates that structural social relations as guided by ones positions in the hierarchy of the society detennine rights and Control over resources and benefits.

Social relations could detennine what tangible and intangible resources are available to the groups cum individuals. March, et, al. (1999) argue that people don't start at the same point in the social systems and as a consequence have Afferent capacities to take advantage of change especially % Poor people in general and the poor women in parttcnlar.

Another important concept of social relations approach is the institutional analysis. Kabeer defines an institution as a framework of rules for achieving particular economic and social goals. Kabeer urges that social differences and irregularities are created and perpetuated by institutions. In order to understand how these Social differences and inequalities in roles, responsibilities, claims and power are produced, reinforced and reproduced through institutions, we must go beyond the official ideology of bureaucratic neutrality and scrutinise the actual rules and practices of institutions to uncover their core values and assumptions. March, et al (1999)

The social relations approach states that institutions have five interrelated dimensions: - rules, resources, people, activities and power. Analysing the society 011 the basis of these dimensions helps one to understand who gains and who loses what, who performs what activity and to whose benefit. Social relations approach is veiy dynamic and could allow the aspect of community empowerment.

RELAVANCE OF THE SOCIAL RELATIONS APPROACH IN THE STUDY

The social relationship approach is relevant to my study because it places gender analysis as a priority. Tlie approach emphases on gender relations rather than the inclusion approach which plans for women separately.

Gender analysis in all stages of a project cycle as recommended in the social relations approach is a majui jor component in the management of the community water projects. Undei standing gender relations of any community helps m explaining how men and women are involved directly in all stages of development projects especially decision makrng level,

Despite The women's Equality and Empowerment (Longwe) Framework sharing common aspects with the social relations approach like enabling women to take equal places with men in the development process, it does not take into account important aspects like how situations change with time. It only examines the relationship between men and women at equality perspective and fails to take into account other aspects like the systems of rights, claims and responsibilities that exist between them. By not considering these other fonns of gender relations may portray women as a homogenous group.

The social relations approach recommends the analysis of different institutions, which helps one to understand how social relations guide people's day-to-day life. The social relations approach could be used in planning and Policy development because it aims at giving a full picture of the society by ^cognising and highlighting the interacting and crosscutting inequalities of class, gender and race. It concentrates on structural analysis on how material poverty, marginalisation, and powerlessness evolve within the social systems.

2:5 DEFINITIONS OF KEY TERMS

GENDER: This refers to the roles and responsibilities of men and women that are socially determined. Gender is the social construction of men's and women's roles in a given culture and location.

GENDER RELATIONS: Refers to the influence of social factors like religion, economic and culture on the relationship between men and women and the socially determined roles they play.

GENDER ROLES: These are the socially perceived differences between men and women on how they should act.

GENDER DIVISION OF LABOUR: Refers to different work that men and women do as a result of their socially determined patterns of work.

POWER RELATIONS: The capacity of indtviduals to determine outcomes of the existing social, political and economic systems and nonns.

PRACTICAL NEEDS'. This is linked to women's condition and material state i.e. access to food and clean water.

STRATEGIC NEEDS (INTERESTS)

This is linked to women's status and position in *A* nnsifion in the society. Refers to women s social and economic status in relation to men.

CHAPTER THREE
STUDY IVTETHODOT ONV

3J ^.PROFILE OF MAruA^s *DISTRICT.*

The study was *carried* in Machakos District, which is one of the twelve Districts of Eastern Province, Kenya. The District borders Kitui and Mwingi Districts to the East, Makueni District to the South, Kajiado District to the West, Nairobi City and Thika District to the North West, Murang'a and Kirinyaga Districts to the North and Mbeere District to the North East. The Kamba ethnic community are the main inhabitants of Machakos District. However, traces of °tner communities could be found *in the* urban centres like Machakos town Athi River town, Tala, Kangundo, Matuu and Masii markets.

The *District has eleven* Divisional administrative areas with a *total* of 6051 sq.km. As per the population census of 1999, the population of Machakos District was projected to stand at *1,025,190 by* the year 2004.

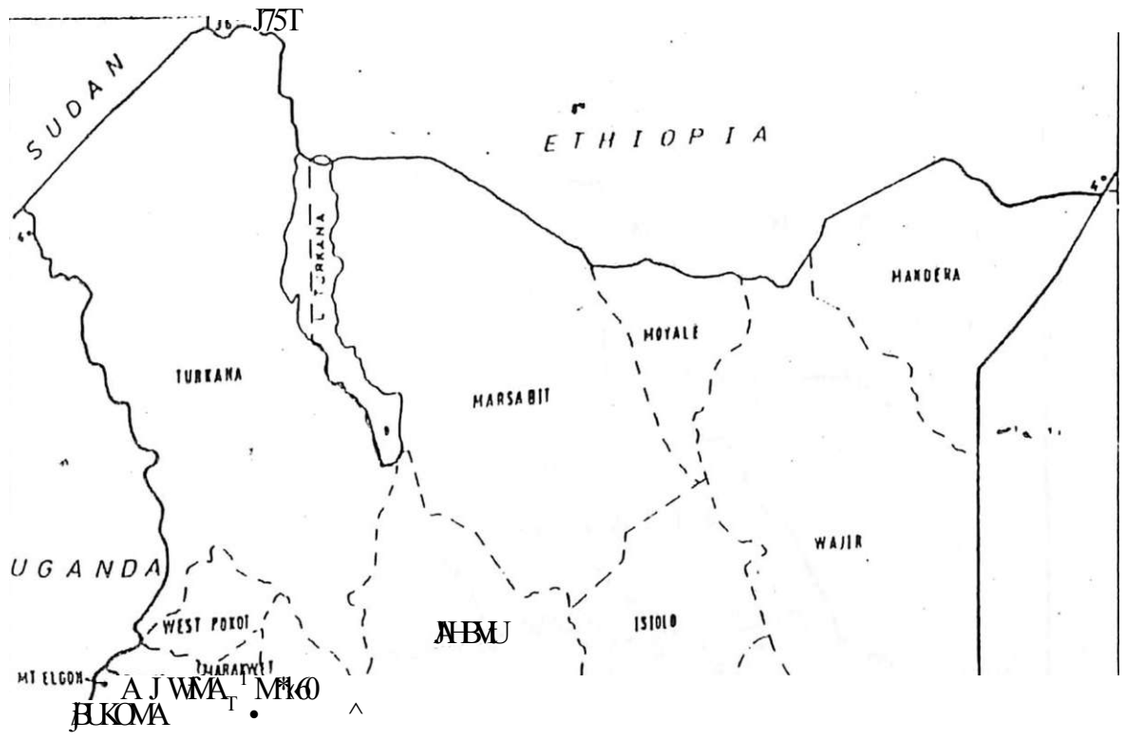
32 TOPOLOGY, CLIMATE AND SOIL.

The District is largely covered by a plateau, which rises from 700m to 1700tn above sea level. To the Western part of the District is Kapiti and Athi P^ins. However, the central *part* of *the* District is mostly covered by several ^ls like Kiima Kimwe, Iveti, Oldonyo Sabuk, Kanzalu ranges, Kangundo, Mua and Mitamboni hills.

Most of Machakos *District can* oc l rvo^rt ran *be* classified as *arid or semi* arid. *The* ^ snOmm with a mean annual rainfall of
[illegible]mfall ranges between 200mm - 800mm w its rainfall in two seasons. The long
7796mm. Machakos District experiences anc l the short rains in October to
Ia,»s come between March and June s

Map No 1

U)CAnON~OF THE DISTRICT L



._____jnlernationol boundary

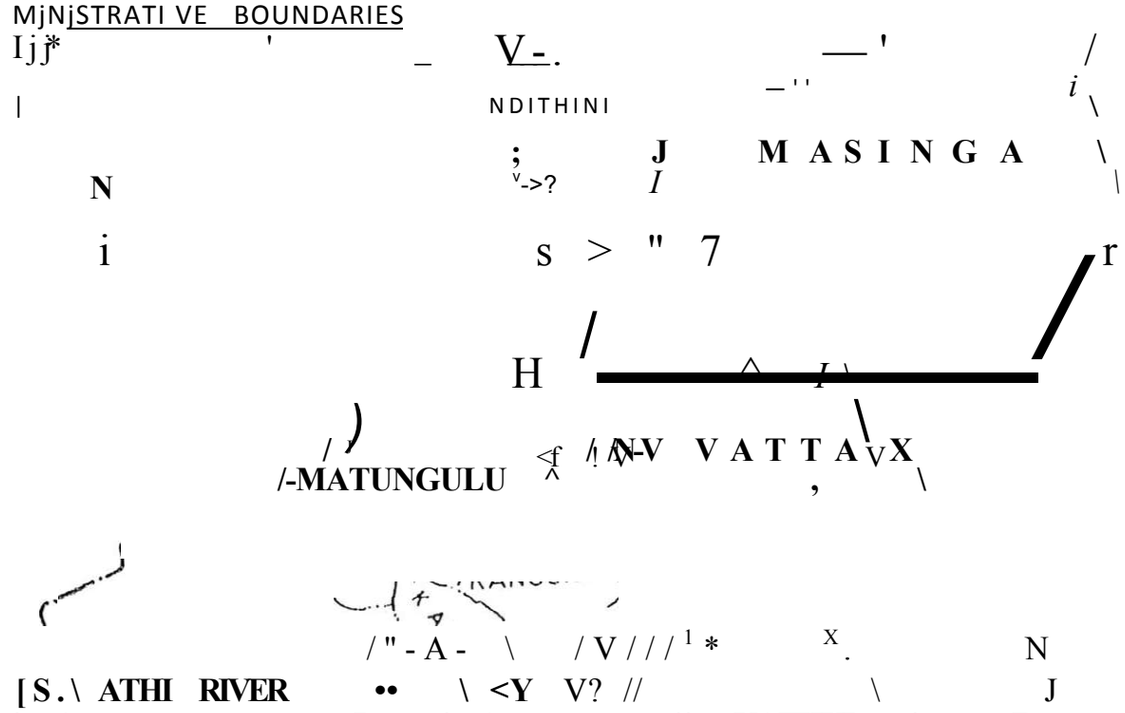
Diilric I boundary

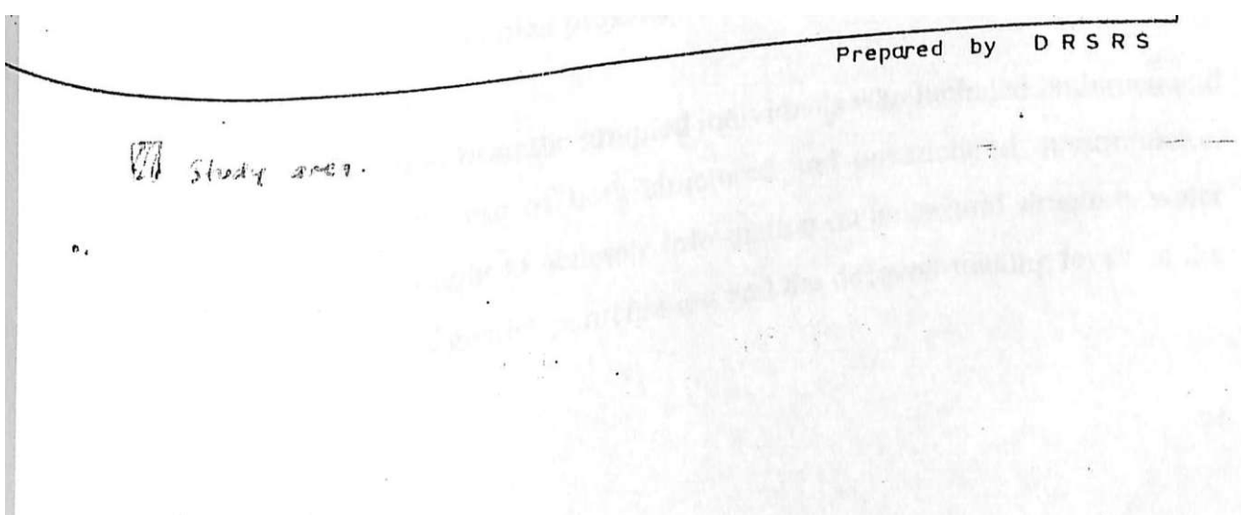
Scale ^1:5 000 000

Prepared by DRSRS

^o. 2

kCHAKOS DISTRICT
MjNjSTRATI VE BOUNDARIES





December. The District is generally hot and dry with temperatures varying between 18°c and 25°c.

Despite the vast geographical area, only 26% of the District is agriculturally productive. Soil fertility, land size and rainfall distribution are the key determinants towards land use. The District has varied soil fertility zones with the foot of the hills having the larger portions of fertile soils. However, main economic activities of Kamba people in Machakos District still remain agriculture and livestock production. Maize and beans are the main food crops grown in the District while main animals kept include cows, goats and sheep.

3.3 DATA sounrF, AND *s A M n j m i s c m m m*

Mbiuni Location in Mwala Division was selected purposively for the study due to its semi-arid environment and considerable variation in available water source, THe number of water projects in the Location was established with the help of Hie Water Officer in charge of Mbiuni Location.

Sampling was done using both purposive and simple random techniques. A total of five water projects in Mbiuni Market was the frame from which the respondents were drawn. After the main criteria for the purposive sampling was established, simple random sampling was used in the selection of die projects, simple random sampling was used to select the interviewers from the sampled projects.

Data collection from the sampled individuals who included both men and women was done by use of both structured and unstructured questionnaire. The questionnaire sought to obtain information on household structure, water accessibility, level of gender participation on decision-making levels in the

community water projects. The study was done in the month of August, which is one of the driest months of the year in the District.

By the time of the study, active members of the five water projects in Mbiuni were 540 and this was used as the sample frame. A 20.5% of this number was picked as the sample, which total 111 respondents. Both men and women were interviewed and this explains the 23.4% of total men in the sample.

To supplement the data collected from the water project beneficiaries, key informants such as The Chief, Water Officer, Assistant Clnefs, and Village Headmen were interviewed using unstructured questionnaire in order to establish the government's attitude towards gender and water management. In total, ten key infonnants were **interviewed.** Two focus group discussion sessions with a total membership of eleven weie also held ma* g oicn hpld making the total the sample to be 133.

Secondary data that included books, **development** plans and policy **papers** dealing with gender and water management w ant was also reviewed,

3-4 STUDY LIMITATIONS-

Unwillingness of the women n to talk in presence of their spouses was one of the limitations of this study. However, ^ ^ countered by making prior ^angements to interview women sepa < during the focus group discussions. To ensure that we ge t all respondent « home, prior arrangements Wei'e also made for the date and tune mtervieWS.

3,5 £1HICAL CONSIDERATIONS

Hie study observed all codes of ethics in social science research/The Purpose of the study was well shared with the respondents. Before the interviews, we sought the consent of the respondents and we also ensured confidentiality of the infonnation they shared with us.

3-6 DATA ANALYSIS METHODS,

Both qualitative and Quantitative methods were used to analyse the data collected. Statistical package for social sciences (SPSS) computer package was used to analyse recorded infonnation from the field. Secondary data, ^formation from interviews, questionnaires and focus groups discussions were analysed and reported descriptively.

CHAPTER FOUR

RESULTS AND DISCUSIONS.

41 ACCESS TO CLEAN WATER IN KENYA

The National water master plan of 1974 aimed at ensuring that clean water is made available to all households by year 2000.This was to be achieved through the establishment of water schemes, construction of catclnnents, dams, sinking of boreholes and development of other water related infrastructure like Pipes and furrows. However, as per the Sessional Paper number one of 1999 on Water Resource Management and Development, clean water supply in Kenya is °nly 74 per cent and 50 per cent for urban and rural population respectively.

With most of the Kenyans living in the rural areas, it is evident that majority of the rural households hardly have access to clean water. An Institute of Policy Analysis and Research occasional paper 01 naner of 1998 on water sources and use in Semi Arid Africa indicates that for the last thirty years, water accessibility in Kenya has drastically reduced due to increasing population densities, inadequate environmental conservation and lack of proper water projects management.

As per the National Water Master plan study between 1990 and 1992, the Surface and ground water resources are not distributed due to regional variation in climatic condition, This is aimed at accessing quality water supply for proper as well as effective decision making regarding management

The National Water Master Plan is household by the year 2000. With a radius of four kilometres of this goal are found in the however, bigger challenges towards achieving potential water sources and semi-arid lands like consistent climatic conditions are greatly influenced by unreliable rainfall in general.

4 2 THE WATER SITUATION IN MACHAKOS

Machakos District receives a mean annual rainfall of 796 mm and so is classified as on of the Districts with poor moisture conditions. This condition together with human activities like sand harvesting from the riverbeds has greatly reduced the water retentipn capacities in the seasonal rivers within the ^strict. Due to its challenges in accessing clean water, the District experiences great variation in water sources that includes; springs, ground water wells, communal water schemes as well as roof catchments.

Despite the combined efforts by the Government, Non Governmental organisations operating in the District and other key water actors like Ute Catholic Diocese of Machakos, the few developed water projects still fall short of accessing sufficient water in the district.

Athi River is the man. source f water for the Mbiuni Location immunity. Other sources include spnng ^^ Fund, ^us study done underground water wells funded by Chnsftan ^ ^^ establjshed that many m August which is one of the driest months in ^ A±i Rivcr as tile 0f the wells and springs diy "P duriflg ^ main source of water for the whole popular •

The study indicated a strong a need for water in **Mbiuni**'Of the III total res Pondents interviewed, 46.84% P^ . priority to food. Tliose who Kr basic need, while 27.93% p e ^ * ^^ agreed that" food security C,10°se food as a priority number one 0f water.

^ c l e d directly or indirectly on ^ ^

^mrce: own survey

^ Hiough distance taken *in* accessing water could *be* considered a key-[1J]niniiig factor *in water accessibility, this* was not tlie case *for Mbiuni. The* [U(ly esla]*blished that despite 82.88% of the* total respondents interviewed *living* [less] *than a kilometre from the* water projects, *only 36.04% take less than* [^ 11 ,10Ur] in *accessing water.* 40.54% of the *respondents said that they spend* [Ctw]ee„ *0J1C ajJ(j twQ Jjouvs per frip whiJe 23* 42o/0 *take over two* hours in [c etehi"]8 water. Based on *this background*, the water *projects in* Mbiuni Location [C0U,Ci] be considered as not accessing sufficient water for the *population*

Table 2. *Time taken per trip iu accessing water to the households.*

Time taken per water	*trip in accessing* **No.oi *respondents***	**i**
1-60 minutes	*40*	***36. 04***
60-120 minutes	*45*	*1(154*
Over 120 minutes		*1^42*
Total	*111*	*Ioojoo*

Source: own survey

4.3 GENDER WATER RESOUPPF MANAGEMENT.

Water being one of most important resources for human survival needs a careful and proper management, ims • . hnHstic and participatory approach by all stakeholders , w.rer ^ ^ community participation efforts in 7 women in water management.

This study sought to esta 1 ^^ ^ ^^ water and the socio-^e; the role-played by both men an wo ^ ^ water projects cultural factors influencing ^pcision making F • implementation and Management which revolves around planning, designs ^e maintenance of the water facilities.

Table 3: Gender analysis m '^r^T^thyS^veety o

Position	Kyambusya Water project	jylbika Water project	Water	Wendano Water Project	Muunzu Water project
Chairman	Male	Male	Male	Male	Male
Treasurer	Female	Male	Female	Female	Male
Secretary	Male	Male	Male	Male	Female

Sn rce: ***survey.***

rkers havi ng a consensus

f ke rs and ^ by women on water

Despite PoUcy ^ ^ o r t a * & ^ a l i z e d in key °n the need for r e c o g n ^ 1,1 c0ntin«6 m Mbiuni

H Acshov^1" ec ision-making positions. ^

location particularly, despite women and children being prime drawers of domestic water, they are rarely involved in the planning, designing and implementation of the water projects. Men dominate key positions in the water committees. In the five water projects sampled, women hold only four positions <n the executive committees as compared to eleven for men.

When we sought to establish why men are the majority in the key decision "wfcng processes in the water committees, 45.95% of the 111 respondents said women are too busy with their domestic work and so shy-off in seeking ^ t i v e position 16 95% indicated that women fail to seek elective positions fearing that they may contradict their spouses opinions, While 33.33% gave ^a rying reasons which mdicated male domination in leadership positions as a res"'t of cultural bias ^t discriminate against women. This , a clear co»&mation of the hypothesis in this study that « rnltural bias against women f e n c e s their full involvement in water projects management.

^ *nmiects leadership positions,*

Tabl * « *Reasons for nmle domnance in water projects*

Reason<T for male~dominance in water		Percentage
Management		**45. 95**
^omen are too busy with domestic work		
Women fear husbands when s e e k m g j ^ ^		
^e n are more educated ntimidation		**13.51**
Men use campaigns & "leaders	15	**X50**
^Tmajonty		Toooo
^oldSTit just happenslhat men	111	
Total		

°*Ur e:* ***survey.***

I Ills study also established that women are active participants in the water Projects but only in provision of manual labour like *carrying* of the water pipes while the technical jobs like repairs are mainly done by the men .The planning 311 d implementation process was not given a gender perspective in the five vvater projects sampled. Fewer women as compared to men were involved in the Projects citing and design. 57.33% of the total 75 women interviewed indicated ftat they did not take part in the projects citing and design because they were either busy with their domestic works or their husbands were the ones involved. lt is evident that despite women in Mbiuni being key water drawers, their ^olvement in the decision-making is veiy passive with no real powers *to* determine the day-to-day running of the water projects even when thca the w*er systems don't meet the demands of the members. Tins is confimied by the that of 75 women respondents interviewed, 81.33% feel that the project Sl*s and design do not ensure sufficient water for the beneficianes.

U e T ofVVOme,, Participation on project*		Percentage
not participate in citing and designing of water	43	57.33
with *nt water ~~		81.33
^^S hiHBber of women samEiea. ~		100.00

S ^ ^ n survey

^ s community is one of the factors noted

Gender power imbalance . ^ decisJ0ii-making in the water

by ^s study as affecting equal participation^ ^ ^ proposed candidate is

Ejects management. Election by raising ^ mJght fear contradicting

,Jnfa«- mode of election especially for ^ ^^ m decis10• malang

s view m public. The ^ ^- • access to top pasraw® within the

% ^ r e s is not only a barner towards the ^ ^ ^ practlcaJ

***** is not only a barrier towards the ^ ^ ^ practlcaJ

*** projects but aiso in their ^ ^ w0lBen's domestic water needs

§ender needs. It is evident from this sto ^ leadetship.

not given a priority by the male o°

4:4 THE INFLUENCE OF SOCIO-CULTURAL FACTORS ON WATER MANAGEMENT.

In tiying to understand the management of community water projects, study *sought* to know the gender differences and inequalities in terms of activities, control of resources and access to decision-making. In most of Kenyan communities as in other African countries, there is a clearly marked fender division of labour. However, men and women tend to have different responsibilities and workload, with women doing many of the domestic responsibilities like: water collection, cooking, collection of firewood and working for long hours in the gardens.

7[1]L 6: ***Households activity profile.***

Household gender roles	% Male	% Female	% Both
Land clearing	32. 43	39. 64	27. 93
Planting	4. 50	67. 57	27. 93
Care livestock	22. 52	49. 55	27. 93
Harvesting	6. 31	54. 95	38. 74
Child care	1. 80	90. 10	8. 10
[J^ater collection	1.80	77. 48	20. 72
(food processing	0. 90	93. 69	5. 41
Attending water J Meeting	43. 24	46. 85	9. 91
Attending fund raising	11. 71	45. 05	43. 24
lending Political rallies	30. 63	31. 53	37. 84
Total	100%	100%	100%

^tr^rr— ***Wvn survey***

"»»«ko,d , J ″ ,SS0 ″″ » f » « » „ „ „ for ””—

resp0 < Bmd ed

—•* ^° ϒ ″, TM ″ —

As j *S PCr t3ble ft is evident that wo TM n are basically responsible for family but only when their wives are sick.*

assist • *UtleS Uke ChUd Care, Water C0lleCtl0n md g00d* Passing .Men may m some seasonal activity activities *like land clearing which is not as* *inV oJv «8* as *child care. While this study revealed that women as well as men* community meetings *like water meetings and fund raisings, it is clear that* ^IS *T1* 0 equal *representation when it comes to leadership positions. Women* p0 end general water *meetings but often shy-off* from the elected *ons-* *Reasons given for this imbalance clearly indicated that domestic* W , ^ is a key *determinant on equal gender participation in the water* oJeCts management.

Cultural attitude of a *community is* a big constraint towards *equal* *f n d e r Pupation m water projects management. Such* barriers include; ^ discrimination against women, Jack of time due to heavy workload, ^ -WtUdo that ^ are better i e a t e to* ^ 611 9S la<* ofgainful benefits from *the Wat* **projects.**

w many ***African*** *societies, men ndv control* over resources *like; land,* *M* e< W- *J* ^^ . . . . *on domestic* roles. *This study* sb Catl° « of chiJdreil as we„ as decision *making on* 0v^ed * *in key decision making positions is* , that low women j * * * * "< ngld cuto ral attitude that ci)Sc . 35 a result ofmale domination x ^ fjj resp0Ildents interviewed, 9 t0(^,riate ^ s t women. As per table O ^^ shanng is as a resuit of al of49.54% indicated that unequal gen er sal(j *that heavy* ^ *pos,,ons ,n »* ″ ′

reSPOnSlb,litieS ded by cultural gender expectations is also a ^ y etemnnant of women's role in water management. This confine the JPothesis in this study that heavy domestic roles and responsibilities among oomen Influence levels of participation in key decision making processes °f the water committees.

e 7: Education

Education attainment by percentage				
1otaj Sa^pled Ivle n36 UaIt—— J	% None j	% Primary	% Secondary	College
	5.55	)-	88. 89	5.55
	6. 67	. 84. 0	5. 33	4. 00

*So*Urce;^**HTZ** *survey*

Another gender inequality issue that came up during the study as a key dete«*nant in power shanng was unequal access to education. Low education atta»"»ent could as weI] have a lot of influence on women's level of Nation on mamtenance and technical skrlled task, In a male d < — d ^ these^e not regarded as women's activities because ^ey lac the reU A * • • .in rlecision-makwg levels in J'"""' 1 * * capacity .» » ~ „ ^ _ vvatPr a bt\/ their low expvsw

Management is greatly hampered by tn ^ ^^ fflaJfes it hard for ^icaj skills Hig(l illiteracy prevalence this study did not J*® t0 fu'Iy participate in water leadership po* ° ^^ heavy domestic J iflt0 depth of exploring school ^^ kept awa.y &om school to a Abilities for women could result to gtrls ^ ^ 5 33% have * household chore, Of ** 75 «**> ^ ^ ofther factors c > d secondary as compared to 88** ^^^ women is ;n^tofeWerwomen^eadershI,^ h water promts ; ** -portant factor tn detent "J ^ (1993) «

™s study c * * - ^

So

argaining power in resource sharing is greatly undermined when men influence decision making on distribution of resources like; land, cash and access to education. Knowledge acquired and many years spend in school puts one at an advantage. The educated have better sills and are regarded with esteem by the society when it comes to community leadership. Findings in this study confirm the hypothesis that there is a positive relation ship between education attainment and leadership positions in the water committees.

A study on gender relauonsj rpiations in community water resources management may be .ncomplete activitieS) needs, priorities inequalities among men and women in term explore gender and access to power. Main objective of e s Location study relations in the management of water p10J * m relation to division of sought to understand men and women's expen®° that influence the *A cnClO-CUltUl[111]* . labour, the power sharing sta.cU.re and of Solving Suitable d,str.but.cn of water resources, c different levels 0f both men and women in key gender into w developments, there is still ve,y little evrdenc a • nf actors W w r,nate in water resources management. Majority ot wofflen participat w*er gendered management approach a s ftheffl U[1111] C i t i e s and mcludmg a few of* careful , in Obiuni that n is a priority[n] water committees tT„S study revealed that water water by women are Proper management. * * * * * o of both me Wou l<l mean that the strategic and prac met. panon uifarrray fference[461015] C s and workloads Men and women e x p e resPon,l> household. on - m a k m , Gender less time for women t o P J , w . c h t u d y noted high women P f r o f l l elected P o n of manual labour but sW Uch of their time.

(2) Women are under represented in the water committees and so are unable to have their water related issues addressed. As in the case of water projects in Mbiuni location. 81.33% of women mterviewed said that they were not satrsfie facilities Key decision makers m terns with the sites and design of the water facilities, N y • „f water projects basically determines of planning, design and implementation of water p j efficiency and sustainability of such programs.

, .factors like sexual division of labour, (3) This study noted that socio-culturai ms titutionalised and other torms ui he avy domestic workloads for womei ^ ^ ma i e dominance m discrimination against women have greatly ^ ^^ A r i g i d cultural P^er and decision makrng in water ^^ ,e J ers is a major constraint be'ief that women are inferior, weak and poo ^ ^ fflanagement. towards mamstreaxning gender into cultura l practices that Elimination of this together with other tep ^ ensurulg ec.ua. H- aisc riminate against women win 'll be a major r

Th Of resources bene® ^ „ „ ^ J c nf water fa clAU . h planning ana »on,e„ are major UK'S d „ r « « ^ ^ o ,

P'eotentation of the projects- A otK r Key ,ltfc rs and The Water O f f i - L o «tton like ,he „„„„-go»cr.W®,a' *W" comfortable with the ,Uo' difference l" „ , „ , a « « . « <«*" ,»c unequal > . s s M y further ^ *e » ^ - * * to participate t» —

> .0 e d u c a t M , Due to - O • £ „ .esptte £

. -cnt policy on <=4— ion. . » Tb. ton attain higher levels of e^

aft ained SLc ondary am, ,, ,,

0J bein

Pro Per manage'' " reS0UrCe M W „ h * D t o * needs a carefi„ ^

M a r i o n r ^ ^^ ^ ^ ^ envkonm TM*>

^ SUst *nabW o CnSUre effhCtiVe „Se of ^ ^ diffeKnt ge„der Sr oUpS and

Seider ; ' o f the water Projects, there is a great need of mainstreamin°

n water rp

"J7p0^ esource management. Gender mainstreaming in any project is

ba/ajj changing socio-cultural irregularities and securing a greater

for o/i i

res Pon • . D y taking into account the needs, attitudes, roles and

OJTV.

es °fboth men and women.

a°tors like the Government and Development agencies should

®th

3t Wa ter projects meet the needs ofmembers especiaJiy the women by

S i e § t,,af tf)e y are part ofdecision making process in planning, designmg,

and management of water projects. The government should

ail lender inequalities at the community level.

L (3) p activities. It should go

\H r ^streaming is not about addwg women acm

Ntf ^ der mainstreaming in water resource tn ^ ^ ^ creari o,

V e„SUre tilaf diere is intensive m o b ^ 0 " „

c Oiv. 9fl,ge °f socio- cultural

attitude towards equ

water projects.

(4) There should be a deliberate effort by all water actors in support of gender mainstreaming through clear policies, procedures and use of trained personnel to train and create awareness on gender equity in the society. To correct the ^balances in the leadership positions in the water committees, special train,ng Programs on water management should target potential women leaders identified by pMw wpm?n, ruts would help to bring more women m the leadership positions.

should also be put in place to (S) A well-designed approach on girl education s^ ^ ^^ CorTective COrrect the unbalance, especially towards equa acce ^ ^ colleges ^d Measures like affirmative action on entry grades o^ ^^ chances for Pub'ic university should be put in place to ensure ^ ^ medicine and 8»Is are enhanced especially hi the male domina

Peering

***TAAMIDAT.ONS FQEJUIIB ^**

productive and reproductive orTiically W
r;n2 women eco
Possibilities of empowering ^ on hoW
®hibitive cultural traits? ieW of e*150*8 w0ffl en's &11
Another area for further r e s e ^ ^ to ha
We can have government 111st,W
acoess and control of water

BIBLIOGRAPHY

1- Adeyinke. Aderinto.

,. Vnl ' io number 2, 2Wi.

Nordic Journal of

a an djnfluenc^^

Byers, Bruce. A. (1996)

, „„rce manageffleSt ""

Sonservarion and NaturaLlSSS^J^----^^

no. 4. Washington D.C, ^odiversit^!^

3' Fitegbon, E. (1990)

aacLwetlands in Easternandsoutherq^

rural vvater develoEiaeatja

(IDRC)BuraU3£er

• Qetechah, W. (1980) JhS- ^ ^ ^ onrCh Ce«tre

^saya. *In International* *Deveroprn*r _ 167e, 0

SHfiElyjnjieyeloging coudS32S

i23 oX^

5 I. and Shah, M- (eds) Intend

lSsu^s in participatory Develop unefIt,

I °ndon.

K j *0ere have the*

°r§ensen Kirsten (1982) African Rural water supplies.

H>'°men *gone*? Center for Development Research, CDR project paper A.82.9.

Presegltgdat a seminal 'another development with women' on 21-26 June

1982 ^akar, Senegal- *in dev<elop^nent*

*Oender hier*arc

7

% erNaila(1995)E§^^

ugh. Verso, London.

3. Kabonesa Console »nd Happy Ma.^e,

i , 7003 Kyoto, Japan.
basmjnjt^ ~ ' ^

„ ^orriciDationiniural

Kathina, M. (1991) Pfilifeali^S^ ^supply-
District rii'^
development. *The case of kM'* • ^ ^ (Unpublished)
Department of Government, University o

^•Kimunyu, Peter. Wateuource^^ n Semija^S : Institute of
Shakos District, Kenya, **
Policy Analysis and Research (IPAR),
'998.

in Resource
^ndtTQ^O < the v'on0 vision proce^
UMaharaj, Niala. ^Z^ndpaP^
Qianagement: why and How, bad 0 ^paOS
Water Vision and World Water
^nri IS
Ar r C
a A G
12 Mundu, M., (2003)
^OageinentL Southofil^1^ ^ ^ ^ "
(IDRC), People *** ^ A P
^^streamvn, GendgLJI^ ""
lability, UNDP.

13
'V c, Smith, I., M****'
T4Qis5vorks, Oxfam, Ox ford-
HM>IHee· Karl. (1995)

A guide to Gender Analysis

Women and Development, Zed Books, London

tt.M''oser (^q j-

P ^ Z Z J l 9 8 r 9) ^ ^ ^ ^ Mee»ng
PP1799 ^ r n M D m i m m v o l . 17,n0.ii
'825' Pergamon Press,Oxford.

J6.IV/Ufaf g ^ ^
timr,/ ' 0,1 t0 write qualify research pmp™„! ^ cmd
1 P'ernenteH
0e(, . Thelley Publications Edinburgh, Hong Kong, New

17

geber;– E.(/9%j Women men and water Resource Management in Ofrjca •
ty"""""""""',n Rached, E. Radigeber and 0. B. Brooks (eds), Water
^4?13gglBs BlilL Africa and The Middle East, Ottar, IRDC.

'8

9V'' S. and Miller C (1995) fiomMDtoGAD Conceptual shifts in the °men ' United Nations Research Institute for Development Discourse,
c'a/ oev elopment (UNRISD), Geneva.

19

^ A - (1993) Women and t e f l t t t o B * * * ^

30,•sen> G . (eds} (1994)
. ' Geumain, A. Chen, Lincoh Harvard University Press,
^ Health, Environment and Rig

21.Sessional Paper no. I of 1999, O l U ^ ^ ^ of Water
Management nt of '
Development Md_Deyelommt- G°venBB

2?,^ d

Sod

Vol. V.

^Public nfk'

r/J/(f Kenya, Machakos District development plan 1997-K

°fPlanning and national development.

^ United M •

c^. iN/afrons Children's Fund (UNICEF) (1992) the state of the world's

oXford University press.

Jo,, UNDP (2°03) MawstreammgJJ^^ ApMcUctd

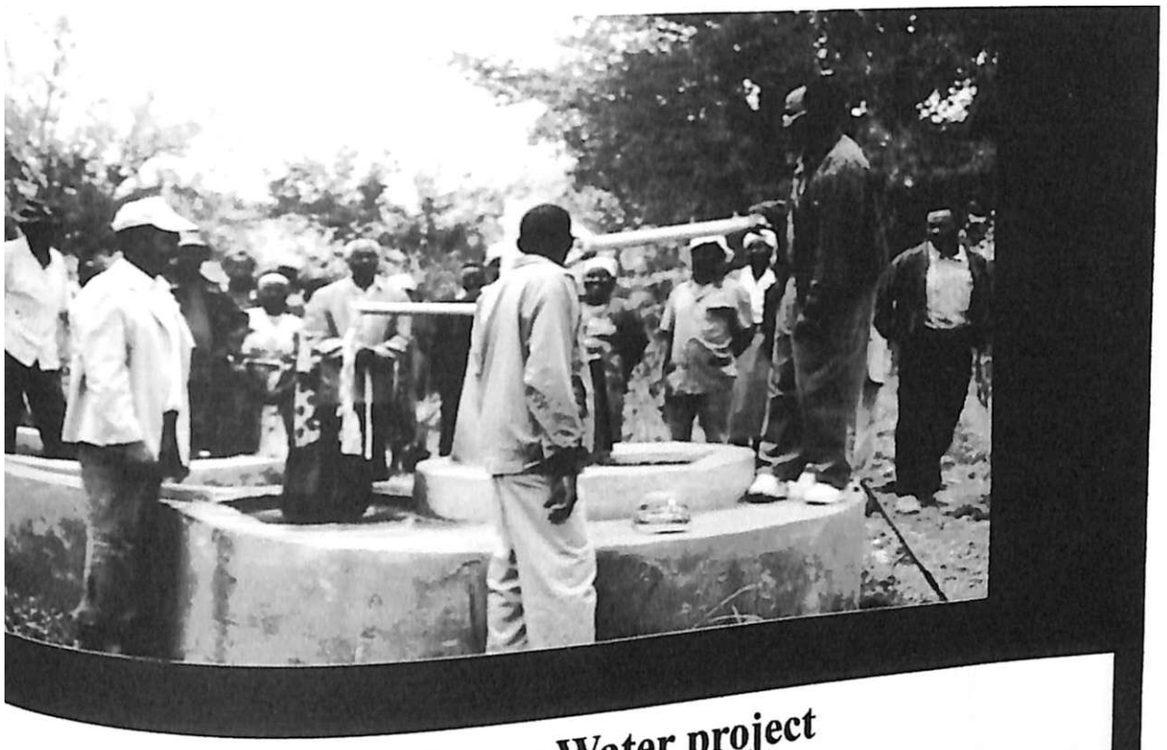
y to v, s^tainabdtty: A resource Guide, UNDP. New York.

, '(i%p r? ^ . P/ick And Information Pack,

{2°0l) GendeLAnalysis, Learning Pac/c ^n

'Ne * York.

Shallow wells **protected and fitted with hand pumps**



Kyambusya Water project

Muunzu Water project

Greetings

My name is I/---'.a, & • the manage®-hwi ilbetrea^
jy os - *Aa.r* relations ll- c ^c^ioft,
study or tne g ^ f i n g i n f e r * * l 0
I'm requesting
Thank you.

SECTION A

RESPONDENTS 10 *TJ*^ L M ® *

Date of interview_

^ame 01 Water project

Sex _ m/f

Marital status

Age_

^ Education level *fxlva^J*

rsity

spouse occupation

&[1]

cupatiom

^ Q N B

TER IS

ACCESSIBI m to *t w*

In order of priority, what are your n

Food

9- Do all member*TR*oi your family participate in drawing domestic water? Y/N

'O.IfNc, why

r

^.For how long have you participated in this

" "re you involved in choosing ^ the ^\e.ct site? Y/N.

tfNo, Why?

13.Does the site/ design ensure enough water?

If No, why?

14.Are you satisfied with the site and design of the water project? Y/N

15. If No. Why?

16.Are you involved in the project implementation? Y/N

a) None
b) Executive committee member
c) Committee member
d) Member

If none, Why?

PROJECTS MANAGEMENTS STRUCTURE

18. Who holds the *following positions in the committee?*

Position Occupied	Sex	
	F	M
Chairperson		
Secretary		
Treasurer		

19. What criteria do members use in electing the committee?

20. What position do you hold in the committee?
a) Chairperson
Vice chairperson
Secretary
Treasurer
None

If none, would you prefer to be a committee member?

SECTION D

TO ASCERTAIN THE LEVEL Uk

. the household? (Male or female?)

22. Who cerforms the following activities

(a) Agriculture

Land clearing

Care of livestock

Harvesting

(b) House hold production

^ater collection

rOCrj

pending water meeting

fading fondraisings fits in th

tending political ralli®

'^controls the foll^ingr"

-ash income-

(s -rater uti'

^ Education /