

**FACTORS INFLUENCING CONFLICT WITHIN MANAGEMENT DURING  
IMPLEMENTATION OF IRRIGATION PROJECTS IN MUKURWEINI  
CONSTITUENCY, NYERI COUNTY- KENYA**

**BY**

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**DECLARATION**

This research project report is my original work and has not been presented for award of degree in any other University or institution.

Signature.....Date.....

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This research project report has been submitted for examination with my approval as the University Supervisor.

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## **DEDICATION**

This work is dedicated to parents, Mr. Dancun Muigai and Mrs. Esther Nyokabi, for the efforts, guidance and support they put into my education: I remain indebted to them. To my lovely wife, Ann Wothaya, daughter, Vivian Nyokabi, and sons, Victor Muigai and Kevin Kamotho, thank you for the encouragement and overwhelming support.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

<b>CKDAP</b>	Central Kenya Dry Area Project
<b>CDF</b>	Community Development Fund
<b>FAO</b>	Food Agriculture organization
<b>GOK</b>	Government of Kenya
<b>IFAD</b>	International Fund for Agricultural Development
<b>NGO</b>	Non- Governmental Organization
<b>SHG</b>	Self Help Group
<b>WUA</b>	Water Users Association
<b>SPSS</b>	Statistical Package for Social Scientist

## ABSTRACT

All over the world implementation of the community based irrigation projects involve execution of activities by team leaders elected from the self-help group whose composition is not based on professionalism but by membership and therefore faced with conflict challenges. Effectively managed conflicts can have positive outcomes while unresolved conflict undermines projects and relationships, as well as the morale and reputations of stakeholders. In Kenya the number of irrigation projects by small holders has increased as a result of heavy funding by donors and the government for the last ten years. Despite the huge funding of kshs.165 millions from the Government and Donors, small holder's irrigation projects in Mukurweini constituency have experience conflict challenges among the management and this have resulted to insufficiently realisation of their objectives. The views that project managers have on resource allocation, management structure, personal differences and communication styles influences successful implementation of irrigation projects. Where project managers have managed to identify, analyze, and evaluate these positive and negative factors influencing conflict within management, successful stimulation and use of conflict to increase the performance of project team members and productivity of the project have been realised. This study aimed at investigating the factors that influence conflict within management at irrigation projects during implementation stage. To achieve this objective, the study was carried out through a descriptive survey method. The selected irrigation projects that were studied are Thiha Sagana, Thiha Micro, Gikondi and Karia irrigation projects. The sample was drawn purposively and entailed the entire management committee managing small holders' irrigation projects comprising of 52 participants who occupied different leadership positions in the four projects. Data was collected using questionnaire with both open-ended and closed-ended questions. Means, percentages and standard deviations were used to describe the demographic variables of the participants. The study inferred that indeed resource allocation was the biggest influence on conflict within management during the implementation of irrigation projects. However, it was concluded that management structure, personal difference and communication style had no major influence on conflict within management during the implementation of irrigation projects. The study recommends that management committees must allocate resources equitably, sparingly and accountably to minimize conflict within management as result of resources allocation and to maximize performance and production in irrigation projects.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the Study

Irrigation projects are workplace scenarios that involve interaction among many different participants such as the project team as a unit, as individuals and also interact with units outside the project team (Morardet, Merrey, Seshoka, Sally, 2005). In view of the composition and interactions that take place in irrigation project during coordination of resources, time and information, participants form a society with a complex set of interrelated relationships and diversity of goals, values and interests (Hart,2000). According to Galtung (2000), conflict occurs when incompatibility or diversity of values, goals and interests arises. Pinto (1998), postulate three distinct views that have evolved about conflict within management in projects and organizations. He noted traditional view of conflict which was dominant from the late nineteenth century until the mid-1940s which assumed that conflict was bad, had negative impact and lead to declines in performance as the level of conflict increased. He also identified the behavioural or contemporary approach as the second view which emerged in the late 1940s and held its way through the 1970s. The view postulated that conflict was natural and inevitable in all organizations and that it may result to either a positive or a negative effect, depending on how it's handled. The latest conflict perspective that he noted was the interactionist view which assumed conflict as necessary to increase performance. Bresmen and Haslan, (1991) agreed with the last view by stating that, management conflicts are meaningful and produce beneficial results to a project. Loosemore, (2000) argue that, meaningful or what is termed as functional conflicts give a doorway of opportunities to organizational learning and creativity.

Renowned irrigation projects such as the Arabian peninsula at Yemen, which dates back to 2000 years (FAO, 2009) and Negev Desert irrigation project built by the Israeli and the Nabataean and Roman Byzantian projects which extends between 1300 years and 2900 years ago acknowledged the existence of conflict during project implementation and therefore the management designed elaborate conflict mechanisms to address factors that influenced conflicts within management such as water allocation, leadership, personal values and communication (Uphoff, 1991).

In Africa, the implementation of irrigation systems has been followed with environmental conflicts and increasing tension among different stakeholders (Matlick, 2002). Many projects in the past were designed and implemented in a top-down fashion, with little or no real participation of the supposed beneficiaries in designing and implementing projects. This led to lack of capacity by the community and the project team to address conflict effectively and sustainably (Ngigi, 2002). According to Morardet *et al* (2005) conflict noted during implementation of project are influenced by the number and complexity of components, the number of actors involved in the process, the quality of their relationships, communication and the clarity of roles and responsibilities assigned to each of the project leading actors. In projects composed of several sub-projects like the IFAD-funded projects of Dombolidenje project in Zimbabwe, Ethiopia and Tanzania, problems are compounded by the increased levels of conflict during selection of sub-projects (Morardet *et al*, 2005). In Ghana traditional authority referred as Gumbrungu Naaba were used to address conflict by the management at irrigation projects and this influenced successfully enforcement of rules and resolving conflicts. This was crucial in managing project resources, especially access to water and land which were central to the sustainability of community based irrigation projects (Derbile, 2012).

Kenya has relatively limited irrigation tradition and the majority of existing irrigated land was developed between 1960 and 1980 though evidence shows that traditional communities practiced irrigation for the last 500 years. The trend of irrigation development in Kenya was on decline since 1980 as the area under irrigation had remained at 84,000 hectares compared with the potential irrigable area estimated at 1.3 million hectares of land (Ngigi, 1999). However the last three years has experienced increase in irrigated land through donor partnership especially by small holders. Of the 125,000 hectares currently under irrigation, Smallholders represent 43%, public at 18% while the private large scale farms represent 39 %. The number of small holders practicing irrigation has increased from 400,000 to an estimated 700,000 over the past two years. Gichuki, (2000) acknowledges the existence of deep seated conflict and competition over water resources in Kenya irrigation projects as the major factor for the decline of small holder irrigation project though the situation has been aggravated by social inequity, economic marginalization and poverty.

Mukurweini constituency lies within Upper Tana catchment's area that have benefited with irrigation projects owned and managed by the local community through self-help groups that are sponsored by the Government of Kenya (G.O.K.) and International Fund for Agricultural Development (IFAD). According to Ngigi (1999) the self-help irrigation projects consist of smallholder self-help managed group's scheme with individual plots of between half and 4 acres and growing highly diversified crops. The management of these irrigation projects in Mukurweini are faced with conflict challenges among groups' leadership during the implementation of the projects.

## **1.2 Statement of the Problem**

Irrigation projects play an important role in the economic development worldwide which elucidates attention and interest from the governments and multinational organisations. Farmers in Kenya are increasingly taking up small scale irrigation to increase yield. However the nature of conflict among the leaders of the small holders scheme comprising of leaders elected from the self-help groups by virtue of membership and not professionalism (International water Management Institute, 2012) has had an influence on the performance of irrigation projects. In addition to this, small holders' irrigation projects are managed through self-help groups or project teams that are established along village lines (Ngigi, 1999 and Karina and Mwaniki, 2011) with no training background on irrigation.

The engagement of I.F.A.D in development of small holder's irrigation project by contributing kshs105 Million and by the Government of Kenya who raised kshs 60 million through Community Development Fund (C.D.F) and the Ministry of Water and Irrigation for the last four years in Mukurweini (Department of Planning and Vision 2030-Mukurweini, 2012) has raised concern after insufficient performance have been registered compared with other similarly funded projects in Kirinyaga District due conflict within management committee of the projects (CKDAP, 2010). In this regard, not many empirical studies have been done to show the factors that influence conflict within management during implementation of irrigation projects and in particular Mukurweini Constituency, Nyeri County- Kenya. In light of this, the research study strives to establish the factors that influence conflict within management during implementation of irrigation projects in Mukurweini Constituency and therefore fill in that gap.



### **1.3 Purpose of the Study**

The purpose of this study was to establish the factors that influence conflict within management during implementation of irrigation projects at Mukurweini Constituency in Nyeri County.

### **1.4 Objectives of the Study**

The study was guided by the following objectives;

1. To establish how resources allocation influences conflict within management during implementation of irrigation projects in Mukurweini constituency in Nyeri County.
2. To determine how management structure influences conflict within management during the implementation of irrigation projects in Mukurweini constituency in Nyeri County.
3. To assess how personal differences influences conflict within management during implementation of irrigation projects in Mukurweini constituency in Nyeri County.
4. To assess how communication styles influences conflict within management during the implementation of irrigation projects in Mukurweini constituency in Nyeri County.

### **1.5 Research Questions**

The study was guided by the following research questions;

1. To what extent does resource allocation influence conflict within management during implementation of irrigation projects in Mukurweini constituency in Nyeri County?
2. In what way does management structure influence conflict within management during implementation of irrigation projects in Mukurweini constituency in Nyeri County?
3. How do personal differences influence conflict within management during implementation of irrigation projects in Mukurweini constituency in Nyeri County?
4. How do communication styles influence conflict within management during the implementation of irrigation projects in Mukurweini constituency in Nyeri County?

## **1.6 Significance of the Study**

From the study findings, the project team gains in identifying factors that influence conflict within management during implementation of irrigation projects. This study also helps stake holders and non-governmental organizations involved in funding during provision of technical advice, capacity building and in evaluation of the conflict within management of the projects.

The Government will also benefit from the study findings during policy formulation, improvement and implementation of irrigation projects especially on making informed conclusions on best practices. The findings could also form the basis of intervention in projects that are doing well yet they are threatened by possible conflicts related aspects.

The study will serve as a source of academic reference in areas of conflict within management.

## **1.7 Delimitation**

The research mainly focused on four irrigation projects in Mukurweini Constituency that had reached implementation stage and were community owned and managed through self-help groups. These are projects that were sponsored by IFAD and the Government in support of local farming initiative. The SHG projects comprised of small holders who owned between half an acre and 4 acres. The study targeted the 52 members who comprise of the management committees of the four irrigation projects that had reached implementation stage.

## **1.8 Limitation of the Study**

The study was limited by time as the researcher was engaged in other duties and also by financial resources required to facilitate coverage of the scope. The terrain also proved a challenge as it comprise of many ridges with poor roads and poor connectivity. However, through the engagement of research assistants, constant telephone calls and personal involvement by the researcher, the situation was ameliorated.

## **1.9 Assumptions of the Study**

The study examined the leadership of the four small holder irrigation projects that serve the population in Mukurweini. It was assumed that the respondents would be available, cooperative, truthful, correct and sincere. With the response rate of 96% as shown by Table 4.1 the respondent were not only available but very cooperative during the survey.

## 1.10 Definition of Significant Terms

The following are the significant terms of this study:

**Communication styles:** This refers to passing of information between and among the small farm holders, group leaders and stake holders which may be formal or informal, direct or indirect and use of local language.

**Conflicts within management:** These involves events expressed in form of demonstration, sabotage and fighting by the self-help group's (SHGs) leaders who compose of management committee of the irrigation projects.

**Implementation of irrigation project:** This refers to a period or phase of project cycle which involves the execution of the plans, budget, planting of crops, distribution of water and the marketing of produce.

**Irrigation project:** These are crops production enterprises conducted independently on land between the size of ½ acre and 4 acres at the same locality by different farmers and managed by autonomous family work force.

**Management structure:** This refers to spread of authority or distribution of power within the group, gender composition of committees and frequency of elections.

**Personal differences:** This refers to commitment to ethical issues like religion, personal goals including influence of education and generational incompatibility where the team members have deferring ages from 16-60 and beyond.

**Resource allocation:** This refers to is the sharing and allocation of water and finances to individual members of the irrigation project.

## **1.11 Organization of the Study**

This research project report consists of five chapters. Chapter One outlined the background to the research, statement of the problem, objectives of the study, research questions, relevance of the study and definition of terms.

Chapter Two reviewed the relevant literature on factors that influence conflict within management at small holders irrigation project from a global, African and local perspectives. The chapter also presented a theoretical framework and a conceptual framework.

Chapter Three described the research methodology that was used in the study. The chapter discussed the research design, target population, sampling procedure, as well as the data collection and data analysis method that the study used. The last part of the chapter presents a table on operational definitions of variables.

Chapter Four described data analysis, presentation and interpretation. The chapter reported on the main results obtained from analysis of data, interpretation and presentation of results. The presentation was done using tables, percentages, frequencies and a brief explanation.

Chapter Five presented a summary of findings, discussions, conclusions and recommendations based on the stipulated objectives in a bid to answer the research questions.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The researcher reviews literature related to factors influencing conflict within the management during implementation of irrigation projects and any other organization signifying workplace. Both theoretical and empirical literatures are reviewed to shed light on universal causes of conflict across all organizations in different economic sectors. The conceptual framework is also discussed.

#### **2.2 Theoretical Framework**

A theory is a set of interrelated concepts, assumptions and generalizations that systematically describe and explain regularities of behaviour. A theory therefore has principles, assumptions, generalizations, basic concepts and application (Dahrendorf, 1976). Conflict theory shall used in the analysis of factors influencing management conflicts during implementation of irrigation projects in Mukurweini.

Conflict theory is a collection of multiple theories from different fields including sociology, psychology, and economics that attempts to understand how humans begin, maintain and end conflicts (Bartos & Wehr, 2002). The origin of conflict theory can be traced to Karl Marx (1818-1883) and Max Weber (1864-1920) who both agreed that economics plays a central role in power distinction. Modern Conflict Theory which developed from ideas of Marx and Weber resurfaced in America in the 1950's through two German Sociologists Lewis Coser and Ralph Dahrendorf. Lewis Coser (1913-2003) defined conflict theory on the basis of struggle over values and claims to scarce status, power and resources in which the aims of the opponents are to neutralize, injure, or eliminate their rivals. Coser viewed conflicts between intragroups and intergroups as part of social life and relationships and not necessarily a sign of instability. According to Dahrendorf (1976) social order is maintained by force from the top and that conflict cannot exist unless some degree of consensus has already been established. Modern conflict theory agrees with the research objectives which

basis the factors influencing conflict on struggle over values and claims to scarce status, power and resources as described by Coser and Dahrendorf. (Deutsch, 1990)

### **2.3 Conflict within management during implementation of irrigation projects.**

Anstey (1999) describe conflict within management to be existing in a relationship where leaders believe that their aspirations cannot be achieved simultaneously, or perceive a divergence in their values, needs or interests and purposefully employ their power in an effort to eliminate, defeat, neutralise or change each other to protect or further their interests in the interaction. Conflict within management usually involves an emotional reaction such as fear, anger, sadness, sabotage, fighting or a combination of these, but it is not always necessary for both parties to experience the reaction or to be aware of the problem (Mayer, 2000).

The expression of management conflict depends on the presence and influence of numerous variables that may aggravate or moderate the behaviour of those involved (Anstey, 1999). This behaviour may be destructive, conciliatory, constructive or friendly but, regardless of its tone, the objective is to express the conflict and attempt to persuade the other party to meet one's needs (Mayer, 2000). Constructive controversy occurs when one party's ideas, information, conclusions, theories or opinions are incompatible with those of another, but the two attempts to reach an agreement. Considerable research has been conducted into variables influencing competitive and constructive conflict (Deutsch 2000).

Scholars like Thamhain and Wilemon (1975) identified several major factors influencing conflict in project management based on their research conducted in a private manufacturing company. The factors noted include conflict over project priorities, conflict over administration procedures, conflict over technical opinions, conflict over human resources and personality conflict (Thamhain & Wilemon, 1975).

In a research study conducted by Psychometrics Canada, (2009), certain triggers were found as common causes of conflict at workplace. Employees reported that personality; leadership, communication and the work environment played considerable roles in causing conflict. Top of the list were personality clashes and warring egos, which 86% of respondents saw as playing a frequent

role in conflict. Leadership, or the lack of it, was the second most commonly mentioned cause of conflict. 73% of respondents indicated that poor leadership from the top of the organization played a significant role in generating conflict at work. Issues related to communication and the work environment followed closely. 67% reported that the lack of honesty and openness frequently caused conflict, and 64% indicated that work stress was a main reason. More than half of the respondents (59%) identified the clash of values as the main cause of conflict (Psychometrics Canada, 2009).

Havenga (2002) agrees to the above perspective on factors influencing conflict at the organizational level by identifying resource availability, affirmative action programs, the scope and content of work, the introduction of new management techniques and differences of a cultural and racial nature as crucial in determining conflict among the employees. A typology that further categorizes conflict is offered by Nelson & Quick (2001) and noted by Havenga (2002) who distinguished conflict between structural factors that develop from within the organization and originate from the manner in which work is organized, and the personal factors, which emerge as a result of individual differences among project managers.

In Africa, the implementation of irrigation systems has been followed with environmental conflicts and increasing tension among different stakeholders (Matlick, 2002). Many projects in the past were designed and implemented in a top-down fashion, with little or no real participation of the supposed beneficiaries in designing and implementing projects. Projects in Tanzania, Zimbabwe and Ethiopia experience conflicts during implementation that are related to the number and complexity of components, the number of actors involved in the process, the quality of their relationships, communication and the clarity of roles and responsibilities assigned to each of the project actors. In projects composed of several sub-projects like the IFAD-funded projects of Dombolidenje project in Zimbabwe, Ethiopia and Tanzania, problems were compounded by the increased levels of conflict during selection of sub-projects (Morardet *et al.*, 2005).

In Ghana traditional authorities in Northern eastern irrigation projects were directly involved in managing conflict of the community irrigation projects in support of the functioning of WUAs. The factors that influenced conflicts within management involved land allocation at irrigation sites, monitoring and management of water use from reservoirs, mobilization of resources for



maintaining irrigation infrastructure and conservation of the reservoir and irrigation infrastructure (Derbile, 2012).

Tonder, *et al.* (2010) identified a multitude of potential factors of conflict in their research on causes of conflict in public and private sector organization in South Africa. Accordingly, to their findings, the factors that influenced conflict included differences in knowledge, beliefs or basic values; competition for position, power or recognition; a need for tension release; a drive for autonomy; personal dislikes; and differing perceptions or attributes brought about by the organizational structure, different role structures, heterogeneity of the workforce, environmental changes, differences in goals, diverse economic interests, loyalties of groups and value discrepancies. Their research finding indicated that factors such as the heterogeneity of the workforce, loyalties of groups, diverse economic interests were among the relevant sources of workplace conflict. The findings of their study also indicated that management was not the source conflict, but management that was predisposed to act in a racially-informed manner and which manifested managerial practices that were perceived as abuses of power (Tonder *et al.*, 2008).

In a research conducted by Karina *et al* (2012) it was found that smallholder farmers in Kenya experienced conflict which were influenced by; inadequacy of resources, governance, high farm input prices, infrastructure, non supportive land tenure systems, lack of effective farmers' organizational structures and low technology adoption. The study also found that gender issues, favouritism by the Water Users Association (WUA) in their water sharing, cost for registering, inappropriateness of the legal environment and contradictions posed by legislations some of which are too outdated to support modern management and coordination systems as some of the factors that influenced implementation of irrigation projects.

Gichuki (2000) acknowledges deep seated latent conflict and competition over water resources and land resources in the Tana Basin between pastoralists and farmers. The Tana River crosses one of the driest areas of Kenya, and increased irrigation schemes had put a burden into the sustainability of pastoralist systems, especially during the dry seasons and the drought periods. In the late 1990s Degodia Somali from Wajir were invited by the Orma to help fight Ogaden Somali. The Degodia, however, refused to return and now occupy key water and grazing areas and important political

positions. This has led to fierce skirmishes where Orma now try to take over Pokomo lands. These factors have influenced peace and conflict in the middle basin of the Tana, where the conflict between expanding Somali pastoralists and Kamba livestock keepers has been on the increase.

In a house hold impact survey report by CKDAP, 2010 management conflict over water resources and the structure of management was identified as some of the factors that impacted negatively on the performance of projects in Mukurweini and made a difference with other projects funded in Kirinyaga and Thika districts.

## **2.4 Resources Allocation and Conflict within Management**

Time, money, space, materials, supplies and equipment are all valuable resources. Competition for any of these resources will inevitably lead to interpersonal and interdepartmental conflict (Ngigi, 1999). Anytime multiple parties share resources, there is potential for conflict which is enhanced when the shared resources become scarce. Nelson (2008) observes that in good times when resources are plentiful, the potential for conflict through competition for resources is reduced. In conditions of reducing profits or revenues and when redundancies are occurring, the potential for conflict over reduced resources rises. Resource scarcity therefore generates conflict because each person or unit that requires the same resource undermines the others who also need that resource to fulfil their goals (Nelson, 2008)

In Eritrea, conflict as a result of resource allocations at Wadi Liba irrigation project mostly occurred between the upstream and lower stream field units on the use of water. Conflict occurring between group of farmers, group leaders and Ministry of Agriculture was further aggravated by modernization of the scheme (IFAD, 1995). Land has also been a factor influencing conflict within household as specific members of the family continue holding the ownership and rights on its utilization.

Karina (2011) noted the cost for maintenance of irrigation schemes in small holder's projects was exorbitant which locked out many households from accessing irrigation water and therefore generate towards food production and food security.

According to Gichuki (2000) water scarcity and competition among small holders at irrigation projects increase as the demand for scarce water resource increases. Competition for water resource and rights over the use of the land has been an impediment to full utilization. Operation and maintenance costing and budgeting has also formed basis for conflict in irrigation projects.

## **2.5 Management Structure and Conflict within Management**

Power relations in an organization are affected by the structures and institutions of management that have evolved through the cumulative effects of history from the actions, decisions, wars, justices, injustices, class, gender and race relations of project managers as well as the roles that people assume within their institutions and societies. Although it is commonly believed that management conflict is facilitated by a more balanced distribution of power between parties, power relations usually fluctuate as circumstances and the attributes of the parties change (Coleman, 2000).

Within families, informal groups or formal ones and firms, are the laws, norms, customs, technical or production requirements and agreements that establish the structure of the relationship. The closer and safer people feel to one another, the more apt they are to raise annoying issues. A more intuitively clear effect comes from power imbalance. If structure creates power imbalances, and the weaker party resists the stronger influence, or sees conflict as a way of increasing power then conflict will probably result (Tolbize, 2008).

On the type of management, Kegley and Wittkopf (1994) postulated that when a leader has imbibed democratic values, it is less likely for him to resort to the use of force. Particularly, it is believed that democracy inhibits the frequency with which disputes are settled by force. Where the leaders uphold democratic values, he/she respect the opinions of others as well as democratic channels that exist for nonviolent resolution of differences, the chances for conflict diminishes. Moreover, in a democratic environment, rules and regulations limit leaders' freedom, and encourage active participation and liberties thereby reducing the tendency of using violent means to resolve differences

Management structure most often assures conflict when it establishes a distributive relationship; that is, one in which a party's gain comes at the expense of the other. In this condition, conflict

seems assured unless party or other is highly benevolent, resources are high, time frames differ, or party and other do not perceive the nature of the relationship. While some structures beget conflicts, others prevent or aid in its management (Nelson, 2008). Other structures that create collaborative incentives and conditions for joint success can also prevent conflict.

According to Karina (2011), inappropriateness of the legal environment is a factor that influences conflict among the management of irrigation in Kenya. Lack of a comprehensive legal framework has made the administration of smallholder irrigation schemes difficult and problematic, especially after the liberalization of the economy. He therefore recommend harmonization of some of the legislations and repeal of the Irrigation Act (cap 347) to provide for legal and new institutional arrangements, which will support a modern, well-coordinated, multi-sectoral and multi-stakeholder involvement in the sector for sustainable growth and improved performance.

As has occurred elsewhere, many community structures in Kenya are based on hierarchical and frequently patriarchal systems. In several projects women who challenged social boundaries are verbally attacked or physically threatened when conflicts escalates (Ngigi, 2000)

The adoption and customization of management structure that promotes personal values and at the same time all inclusive and democratic will foresee interpretation and transformation of conflict situation positively.

## **2.6 Personal differences and Conflict within Management**

According to McShane & Von Glinow (2008) interpersonal conflict is often caused by different values and beliefs due to unique backgrounds, experiences and training of individual person. Most people have their own set of values and ethics. The extent to which they apply these ethics in the workplace varies and can hence result to disagreements.

Along with conflict generated from cultural diversity, Zemka (1999) and Anick (2008), agrees that there is rise in the incidence of inter generational conflict as young and old people exhibit different needs, expectations and values which produce conflicting goals, preferences and actions.

Generation gaps have become pronounced as need to work together in organization has become paramount (Zemka, 1999 and Anick, 2008).

Nelson & Quick (2008) noted that people have their own set of values and ethics which they apply variedly in the workplace. Whereas some people have strong desires for approval from others and will work to meet others' ethical standards some are relatively unconcerned about approval from others and strongly apply their own ethical standards. Others operate seemingly without regard to ethics and values (Nelson & Quick, 2008). Tang & Tzeng (1992) assert that work ethic varies with education level irrespective of whether a person works full-time or part-time, income level and marital status. The lower the level of education of an employee, the higher their work ethic has been found to be.

According to Hart and Brett (2000), reduction of a person's outcomes by another is an unequivocal source of conflict. Likewise, blocking of the person's goals, outcomes, or aspirations is apt to generate conflict. Unless it is concealed or misunderstood in some way, such actions clearly foment conflict. .

Karina (2011) noted bias to Gender issues in the management of irrigation water as a cause of conflict in Kenya. He singled out Ahero irrigation scheme where gates are operated in some cases at midnight. Women expressed concern that this unholy hour is disadvantageous to their welfare and therefore a form of discrimination against them. There were also issues of favouritism by the Water Users Association (WUA) in their water sharing where men agitate to get water before women. Gender discrimination therefore is exhibited in allocation of water resources which would otherwise affect conflict within management.

## **2.7 Communication style and Conflict within Management**

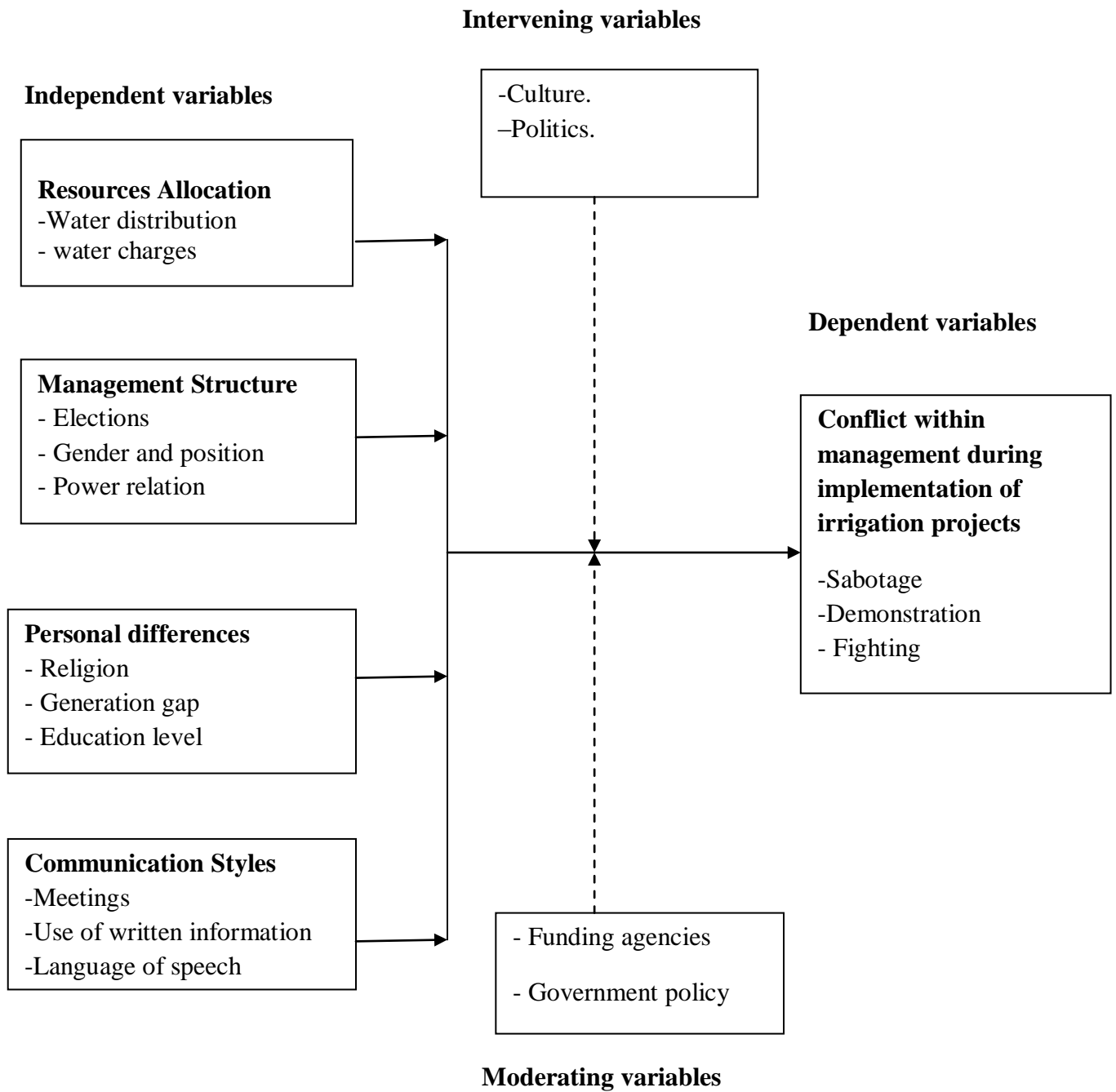
While highlighting the importance of communications in conflict, Putnam & Poole (1988) provide thorough coverage of three conflict levels namely; interpersonal, intergroup and inter-organizational. At whatever level, the effects of communications are double-edged. Low communication, on the one hand, results in low knowledge of others and may underpin coordination difficulties. These, in turn, lead to conflict (Pondy, 1967). On the other hand extensive

communication between party and other is generally agreed to be a ripe source for misunderstanding and resultant conflict (Thomas & Pondy, 1977). Too often one's words, facial expressions, body language, and speech lead to attributions of intent, which in turn spawn conflict. This phenomenon can take place within any culture, and it runs rampant in cross-cultural communication (Thomson, 1999)

Tolbize (2008) described breakdown in communication as the overarching, most common and most obvious source of conflict in projects. A lack of trust, respect, effective listening skills, and perceptual differences can lead to serious communication problems. He asserted that misinterpretation, misunderstanding and failure to execute instructions are all results of some type of communication breakdown. In irrigation projects lack of communication or in appropriate communication between different players is a factor that influence conflict especially with differences in age, education and language among the irrigation team members

## **2.8 Conceptual Framework**

The conceptual framework assesses how the independent variable namely resources, power structure, communication and personal differences result to conflict within management during implementation of the following irrigation projects; Thiha Sagana, Thiha micro, Gikondi and Karia irrigation projects.



**Figure 1: Conceptual Framework**

The independent variables in the study refer to factors that influence conflict such as personal differences, resources allocation, communication styles and management structure. The moderating variables include government policy and funding agencies policies which may influence the conduct of the projects. The dependent variables refer to demonstration, sabotage and physical fighting by the management during the interpretation of budgets, distribution of resources and planting of crops. Intervening variables include culture and politics.

## **2.9 Knowledge Gap**

Literature review has shown that it's common to encounter resource allocation, personal differences, communication problems and management structure as factors that influence conflict within management of projects. In Mukurweini the unexpected performance by the irrigation projects have been aggravated by factors influencing leadership conflict and as noted in the literature the influence is not the same in all organisations but varies depending on the project and place. This research therefore, intended to explore the extent to which each of the factors influence leadership conflicts during the implementation stage of irrigation projects in Mukurweini. This will fill in the knowledge gap on conflict within management of irrigation projects in Mukurweini where research on the factors has not been significant. The research will also aid bridging the knowledge gap by comparing what is known elsewhere and what will be established in Mukurweini.

## **2.10 Summary**

The chapter reviewed the relevant literature on factors influencing conflict within management during implementation of projects in organization and the trend of irrigation from the global, regional and Kenyan level. Conflict theory which explains incompatibility was found applicable in explaining how resource allocation, management structure, personal differences and communication style influences conflict in organization.

The chapter has also presented the conceptual framework to facilitate study on factors influencing (independent variable) conflict within management (dependent variable) at irrigation projects.



## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the research methodology that was used in the study. The chapter outline the mixed technique as the basic research design that is to be employed in the study. It also details the population, sample size, data collection methods, instruments and analysis that were employed in the research. It also presents a table on operationalisation of variables.

#### **3.2 Research Design**

As the research focused on the understanding the factors that influence conflicts during the implementation of irrigation projects in Mukurweini, a descriptive survey design was employed. Descriptive research according to Best (1970) is used to establish the conditions or relationship that exist, practices that prevail, beliefs, point of views, or attitudes that are held, processes that are going on, efforts that are felt or trends that are developing.

Social science studies identify two principle approaches to research, namely; quantitative and qualitative approaches. However, Creswell (2003) added the third approach which he calls mixed method approach and involves the application of the both qualitative and quantitative techniques. In the study, the condition that existed between independent variables (resources allocation, management structure, personal differences and communication styles) and the dependent variable (conflict within management) at Mukurweini constituency in Nyeri County was established using the mixed method approach. The study reviewed primary data which was obtained from the irrigation project leaders and from secondary data which was obtained from projects Constitution, assessment reports from line ministries and strategy reports by different funding agencies.

### 3.3 Target Population

Table 3.1 presents the targeted population of the study in each of the four projects.

**Table 3.1 Target Population of the Study**

<b>Project name</b>	<b>No. of Officials</b>	<b>percentage</b>
Thiha Sagana irrigation project	13	100
Thiha micro irrigation project	13	100
Gikondi irrigation project	19	100
Karia irrigation project	13	100
<b>Total</b>	<b>52</b>	<b>100</b>

The target population in this study consisted of the management officials of the four irrigation projects namely Thiha Sagana, Thiha Micro, Gikondi and Karia irrigation projects. These officials were the chairman, secretary, treasurer and committee members. Their total number was 52.

### 3.4 Sampling Procedure and Sample Size

The target population were the group leaders from all the irrigation projects in Mukurweini constituency. The accessible population was made up of 52 group leaders from the four projects which had reached the implementation stage. According to Mugenda and Mugenda (2003) when the total target population is so small that selecting a sample would be meaningless, then it should be considered as a whole without further sampling. Hence, in this research, the entire 52 member form the study population.

### 3.5 Research Instrument

The study employed a questionnaire to the project team officials as a tool for collecting data because it is convenient and saves time (Fleiss, 1981). The questionnaire was sub-divided into two parts where part one dealt with personal information of the officials and part two dealt with the

factors influencing management conflict. The questions were both open-ended and closed-ended to give varied ways of attaining appropriate response from the respondents.

### **3.6 Data Collection Procedures**

The study used both primary and secondary sources to collect data. The researcher employed methods that ensured collection of qualitative and quantitative data. The study instrument was administered by the researcher with the help of four research assistants. The questionnaires were dropped to the respondents within their homesteads and picked later after two days period.

### **3.7 Validity of instruments**

Mugenda and Mugenda (2003) define validity as the degree of accuracy with which results obtained from analyzed data represent the reality of the phenomenon under study. In other words, the instrument measured what it was supposed to measure. The researcher discussed the meaning of all the significant terms with experts in the subject matter and the university supervisor to ensure validity of the instruments.

### **3.8 Reliability of instruments**

Reliability refers to a measure of the degree to which a research instrument yields consistent results after repeated trials (Mugenda and Mugenda, 2003). To ensure reliability of the instruments that were used in the study, assistants to the study were inducted and sensitized on the instruments. For a period of two weeks prior to the actual study, a pre-test of the instruments were undertaken using the test –retest technique amongst a sample population from neighbouring Kirinyaga District to ensure correctness of the instrument.. The results were analyzed using Statistical Package for Social Sciences Software and the results were correlated to determine consistency. The results showed the questionnaire had a reliability index of 0.84. According to Orodho (2004) a correlation coefficient of about 0.8 should be considered strong enough to judge the instrument as reliable for the study. Thus the instrument was reliable enough to elicit data as required by the research questions.

### **3.9 Methods of data Analysis**

The study was predominantly descriptive. Descriptive data collected was coded and edited for completeness and standardization and then analyzed using Statistical Package for Social Scientists (SPSS). Means and standard deviations were used to describe the demographic variables of the participants, i.e. interval (age) data. Frequency and percents were used to describe ordinal (education level) and nominal (gender) data. Content analysis was used to analyze data obtained from open-ended questionnaires.

### **3.10 Ethical issues**

The researcher maintained research ethics by following the procedure outlined by the university and by seeking permission from the relevant authorities before carrying out the study. Honesty, integrity and confidence were highly maintained throughout the study.

### **3.11 Operationalisation of Variables**

Table 3.2 presents the operationalisation of both the dependent and independent variables used in this study.

**Table 3.2: Operationalisation of Variables.**

<b>Objective</b>	<b>Variable</b>	<b>Indicator(s)</b>	<b>Measurement</b>	<b>Scale</b>	<b>Data Collection Method</b>	<b>Data Analysis</b>
To establish how resources allocation influences conflict within management during implementation of irrigation projects	<b>Independent variable</b> Resources allocation	<ul style="list-style-type: none"> <li>• water allocation</li> <li>• Monthly charges</li> </ul>	<ul style="list-style-type: none"> <li>• Amount of water availed per household</li> <li>• Rate of satisfaction fees charged per household</li> </ul>	Ordinal and ratio	Questionnaire	Descriptive  Mean, standard deviation, frequency and percentage
To determine how management power structure influences conflict within management during the implementation of irrigation projects	<b>Independent Variable</b> management structure	<ul style="list-style-type: none"> <li>• Frequency of delayed elections.</li> <li>• Gender positions</li> <li>• Supervision</li> </ul>	<ul style="list-style-type: none"> <li>• Frequency of elections</li> <li>• No of female and youths in management committees.</li> <li>• No. of cases dispute over supervision has occurred</li> </ul>	Ordinal, Ratio	Questionnaire	Descriptive  Mean, standard deviation, frequency and percentage

<p>To assess how personal differences influences conflict within management during implementation of irrigation projects</p>	<p><b>Independent Variable</b> personal differences</p>	<ul style="list-style-type: none"> <li>• Denomination</li> <li>• age differential (generational gap)</li> <li>• Level of education</li> </ul>	<ul style="list-style-type: none"> <li>• No. of cases members experience unfairness due to religion</li> <li>• Frequency of disagreement due to Age differences</li> <li>• Frequency of disagreement due to level of education.</li> </ul>	<p>Ratio, Ordinal and nominal</p>	<p>Questionnaire</p>	<p>Descriptive Mean, standard deviation, frequency and percentage</p>
<p>To assess how communication styles influences conflict within management during the implementation of irrigation projects</p>	<p><b>Independent variable</b> communication styles</p>	<ul style="list-style-type: none"> <li>• Project meetings</li> <li>• Memos/letters</li> <li>• language used</li> </ul>	<ol style="list-style-type: none"> <li>a) frequency of meetings held</li> <li>b) frequency of the use of memos/letters</li> <li>c) frequency on the use of selected languages</li> </ol>	<p>Ratio and nominal</p>	<p>Questionnaire</p>	<p>Descriptive Mean, standard deviation, frequency and percentage</p>

### **3.12 Summary**

This chapter outlines the methodology that was employed in the study. The descriptive design that was employed has been given in details with methods that were used to collect data as well as instruments that were used identified and presented. Methods of analysis of the data collected have been discussed in the chapter. In the final part analysis the operationalisation of variables has been tabulated.

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND INTERPRETATION

#### 4.1 Introduction

This chapter focused on data analysis, interpretation and presentation. The purpose of this study was to investigate the factors influencing conflict within management during implementation of irrigation projects in Mukurweini Constituency, Nyeri County- Kenya. The objectives of the study were to establish how resources allocation, management structure, personal differences and communication styles influenced conflict within management during implementation of irrigation projects in Mukurweini constituency in Nyeri County. Quantitative data was mainly generated from this research and was analyzed using frequencies, standard deviation and percentages. Tables are used in the presentation for easy and effective communication.

#### 4.2 Response Rate

A total of 52 questionnaires were administered to the management leadership of the four irrigation projects as summarized in Table 4.1

**Table 4.1 Response Rate**

Category	Frequency	Percentage
Filled in questionnaire	50	96.2
Unreturned questionnaires	2	3.8
<b>Total</b>	<b>52</b>	<b>10</b>

Table 4.1 illustrates the response rate of the respondents who participated in the survey. Out of the 52 questionnaires distributed to the respondents, 50 were filled and returned. The response rate is 96.2%. This complied with Mugenda and Mugenda (2003) who suggests that for generalization a



response rate of 50% is adequate for analysis and reporting, 60% is good and a response rate of 70% and above is excellent. This high response rate can be attributed to the data collection procedure, where the researcher personally with aid of research assistants administered questionnaires and waited for respondents to fill in, kept reminding those respondents who were not present during the field visit to fill in the questionnaires through phone calls and picked the questionnaires once fully filled. The response rate demonstrated willingness of the respondent to participate in the survey that the study sought.

### **4.3 Background Information**

The aim of this section is to summarize the background information on the respondents and the management committee on their age, gender, position held in management and level of education.

#### **4.3.1 The Respondents Information**

The researcher sought to find out the background information of the respondents and looked at their gender composition, age, position held and their education level. Their responses are illustrated in Table 4.2.

**Table 4.2: Background Information of the Respondents (n=50)**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>		
Male	38	76.0
Female	12	24.0
<b>Age</b>		
Less than 30 years	4	8.0
30 years to 40 years	11	22.0
41 years to 50 years	21	42.0
Above 50 years	14	28.0
<b>Position held in the group</b>		
Committee member	28	56.0
Members	11	22.0
Executive Officials	11	22.0
<b>Education level</b>		
KCPE/CPE	23	46.0
KCSE/O level	23	46.0
A level	1	2.0
Diploma/degree	3	6.0

Most of respondents were male at 76% signifying their dominance and control over means of production. All respondents were mature persons with 92% aged 30 years and above. This implies that most of the respondents had advanced in age and very resourceful in terms of experiences and skills in management of conflict. This also shows that they had the knowledge required for the study.

The number of committee members (56%) presents a scenario where subcommittees such as advisory and supervisory subcommittees were active in checking and monitoring the executive.

Although all respondents had been to school and only 8% had gone beyond post secondary schooling. This shows that majority of the respondents were not so educated more specifically on post secondary education but that fact did not compromise on the quality of responses given by the respondents since the researcher and the research assistants explained and interpreted the questions, the respondents.

#### **4.4. Conflict within Management Committee at irrigation projects**

The researcher sought to understand the manifestation of conflict within management at irrigation projects in Mukurweini at the implementation stage.

##### **4.4.1 Expression of conflict**

The respondents were asked their views on the frequency of conflict as manifested through sabotage, demonstration and fighting as a way of expressing discontent within the management in relation to resource allocation, management structure, personal differences and communication styles. Their responses are indicated in the Table 4.4.

**Table 4.3: Expression of conflict**

<b>Category</b>	<b>Sabotage</b>	<b>Demonstrations</b>	<b>Fight</b>
	<b>%</b>	<b>%</b>	<b>%</b>
<b>Resource allocation factors</b>			
High	78.0	74.0	82.0
Average	6.0	12.0	18.0
Low	16.0	14.0	0.0
<b>Management structure factors</b>			
High	0.0	16.0	0.0
Average	18.0	6.0	22.0
Low	82.0	78.0	78.0
<b>Personal difference factors</b>			
High	8.0	24.0	24.0
Average	14.0	8.0	2.0
Low	78.0	68.0	74.0
<b>Communication style factors</b>			
High	8.0	0.0	2.0
Average	12.0	46.0	6.0
Low	80.0	54.0	92.0

%=Percentage

Table 4.3 shows that except for resource allocation factor where over 74% of respondent indicated that sabotage, demonstrations and physical fighting were high, over 68% of respondent indicated that sabotage, demonstration and physical fighting were very low as a result of conflict caused by management structure, personal differences and communication style.

While other factors registered minimal expression of conflict within management committee as a result of management structure, personal differences and communication styles, resources distribution especially water allocation and monthly charges are always inadequate which cultivate conflict as members struggle. The manifestation of conflict among leaders is reflection of the state of affairs among members as leaders are representative of the members who elected them.

#### **4.4.2 Conflict at the Irrigation Projects**

The researcher gave the respondents various statements regarding conflicts in terms of personal differences, communication style, resource allocation and management structure at the irrigation project. The respondents were asked to indicate the extent to which they agreed or disagreed with each of the statements. A five-point Likert scale was used to interpret the respondent's responses. According to the scale, those instances the respondents strongly agreed with the statements were awarded 1 while those instances in which they strongly disagreed were awarded 4. Within the continuum are 2 agree, 3 disagree and 5 for neutral. Mean (weighted average) and standard deviation were used to analyze the data. From the findings, the researcher noted that those instances with a mean less than 2.0 were rated as having a strong influence while those with a mean of more than 2.0 were rated as having least influence. On the same note the higher the standard deviation the higher the level of dispersion among the respondents.

As for the interpretation, if the score of the mean for a particular factor was below 2, the interpretation is that the respondents agreed with the statement. If the score of the mean was between 2 and 4 for a particular factor, the interpretation is that respondents disagreed with the statement and if the mean score of a particular factor is above 4, the interpretation is that the respondents were neutral about the statement.

**Table 4.4: Conflict at the Irrigation Projects (n=50)**

<b>Category</b>	<b>Mean</b>	<b>S.D</b>	<b>Interpretation</b>
<b>Resource allocation</b>			
Amount of water allocated to each farmer is fair to all	2.92	1.455	Disagree
Amount of money charged on supply of irrigation water is fair to all members	2.16	1.490	Disagree
<b>Management structure</b>			
Both the male and female members constitute the management committees	1.54	0.952	Agree
Supervisors have too much power at their disposal during monitoring of the projects	2.50	1.165	Disagree
Group leaders are democratically elected and in a transparent manner	1.42	0.810	Agree
<b>Personal differences</b>			
Denomination/religion influences conflict at irrigation project	2.98	1.204	Disagree
Differences in age among leaders influences conflict	2.96	1.124	Disagree
Differences in education and understanding influences conflict	2.80	1.278	Disagree
<b>Communication styles</b>			
Information is clearly communicated to members in language they understand.	1.68	1.039	Agree
Management encourages dialogue and open communication	1.74	0.723	Agree
Written communication such as memos and letters are mostly used in communicating to members	2.08	1.275	Disagree

From Table 4.4, it was noted that the respondents disagreed with all the three statements on resources allocation. They disagreed with the statements that amount of water allocated per house hold and the amount of money charged on supply of irrigation water is fair to all members they also

disagreed that revenue generated to maintain the irrigation pipe network is transparent and accounted for.

On the management structure, respondents agreed with two statements. They agreed with the statements that both the male and female members constitute the management committees while the group leaders are democratically elected and in a transparent manner. However, they disagreed with the statement that supervisors had too much power at their disposal during monitoring of the projects.

It was also noted that all the respondents disagreed with the statements regarding personal differences and indicated that they had no influence on conflict at the irrigation projects. More specifically, the respondents disagreed with the statements that denomination/religion, generation gap, and differences in education influenced conflict at irrigation project.

On communication styles, respondents agreed with three of the five statements. They agreed that information is clearly communicated to members in language they understand (M=1.68, S.D=1.039), that there are clear communication channels (M=1.68, S.D=0.784) and that management encourages dialogue and open communication (M=1.74, S.D=0.723) at the irrigation projects. However, the respondents did not agree with the statements that management officials know their roles & duties (M=2.06, S.D=0.913) and that written communication such as memos and letters are mostly used in communicating to members (M=2.08, S.D=1.275).

#### **4.5 Resource Allocation**

While addressing the first objective the researcher sought to establish how resources allocation influences conflict within management committee during implementation of irrigation projects in Mukurweini constituency in Nyeri County. The responses are indicated in Table 4.5.

**Table 4.5: Resource Allocation (n=50)**

Category	Frequency	Percentage
<b>Amount of money charged per household</b>		
Strongly agree	1	2.0
Agree	1	2.0
Disagree	11	22.0
Strongly disagree	31	62.0
<b>Total</b>	<b>50</b>	<b>100%</b>
Neutral	6	12.0
<b>Amount of water allocated per household</b>		
Strongly agree	5	10.0
Agree	14	28.0
Disagree	14	28.0
Strongly disagree	8	16.0
Neutral	9	18.0
<b>Total</b>	<b>50</b>	<b>100%</b>

From Table 4.5, 84.0% of the respondents disagreed with the statement that the amount of money charged per household for the operation and maintenance was adequate while 44.0% of the respondents disagreed that the amount of water allocated per household was adequate for irrigation needs. This consolidates the view that resources allocation is inadequate in their present state and man will always endeavour to have more. The struggle to amass more and more of scarce water at



the irrigation project is what produce conflict strongly influences the conflict within management committee at irrigation projects in Mukurweini constituency.

#### 4.6 Management Structure

The second objective sought to determine how management structure influences conflict within management committee during the implementation of irrigation projects in Mukurweini constituency in Nyeri County. The results were presented as follows:

##### 4.6.1 Supervisors Understanding of their Duties and Responsibilities

Respondents were asked to rate the supervisors understanding of their duties and responsibilities during the allocation and distribution of water. The results were as shown in Table 4.6.

**Table 4.6: Supervisors Understanding of their Duties and Responsibilities**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Very poor	6	12.0
Poor	3	6.0
Average	19	38.0
Good	19	38.0
Very good	3	6.0
<b>Total</b>	<b>50</b>	<b>100%</b>

From Table 4.6, over 82.0% of the respondents indicated that the supervisors understanding of their duties and responsibilities during the allocation and distribution of water was above fair. This means that the supervisor had a grasp of what was expected from them and didn't jeopardise their

relation with other members of committee of the individual farmers. Guide lines as stipulated in the project constitution safeguarded misuse of authority by the supervisors.

#### **4.6.2 Rating of the Involvement of the Women and Youth**

Respondents were asked to rate the involvement of women and youth in the management of the project.

##### **4.6.2.1: Women Involvement in Management**

The results for women involvement was unanimous as indicated in Table 4.7.

**Table 4.7: Women Involvement**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Very poor	0	0.0
Poor	0	0.0
Average	30	60.0
Good	14	28.0
Very good	6	12.0
<b>Total</b>	<b>50</b>	<b>100%</b>

From Table 4.7, all the respondents indicated that the involvement of women in the management committee of the irrigation project was more than average. This implies that gender issues were at all time under consideration.

#### 4.6.2.2: Youth Involvement in Management

The Youth participation in management was as indicated in Table 4.10

**Table 4.8: Youth Involvement in Management Committee**

Category	Frequency	Percentage
Very poor	4	8.0
Poor	12	24.0
Average	14	28.0
Good	15	30.0
Very good	5	10.0
Total	50	100%

From Table 4.10, 68.0% of the respondents indicated that the involvement of youth in the management committee of the irrigation project was more than average. This means that youth issues were properly addressed and this minimised chance for conflict.

#### 4.6.3 Management Delay of Elections with Intentions to Remain in Authority

Respondents were asked if the management ever delayed elections with the intention of remaining in authority. The results are shown in Table 4.9.

**Table 4.9: Management Delay of Elections**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	0	0.0
No	50	100.0

All of the respondents indicated that the management never delayed elections with the intention of remaining in authority. The implication was that democracy was upheld and constitution respected.

#### **4.7 Personal Difference**

While addressing the second objective of the study that sought to assess how personality differences influences management conflict during implementation of irrigation projects in Mukurweini constituency in Nyeri County, the study addressed the following:

##### **4.7.1 Influence of Religion on Management Conflict.**

The researcher asked the respondents if religion or denomination considerations were applicable during the process of fixing and determining water bills. Their results are shown in Table 4.10.

**Table 4.10: Influence of Religion on Management Conflict.**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Not applicable	47	94.0
Less often	0	0.0
Often	3	6.0
More often	0	0.0
Always	0	0.0
<b>Total</b>	<b>50</b>	<b>100%</b>

At least 94.0% of the respondents indicated that religious or denomination considerations were not applicable during implementation of irrigation project. Therefore religious consideration has no place in the determination and making of decisions involving the irrigation projects unlike in areas where religious institution facilitated such development projects.

#### **4.7.2 Influence of Church Loyalty on Conflict within Management.**

The researcher asked the respondents to comment on the extent to which church loyalties contributed to favouritism in allocation of water per house hold. The results are shown in Table 4.11.

**Table 4.11: Influence of Church Loyalty on Management Conflict.**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Not applicable	47	94.0
Less often	2	4.0
Often	1	2.0
More often	0	0.0
Always	0	0.0
<b>Total</b>	<b>50</b>	<b>100%</b>

From the study analysis, 94.0% of the respondents indicated that church loyalties were not applicable in allocation of water per house hold. Religious or denomination loyalty plays no role in the determination of decisions within the management as no church or denomination facilitated development of these projects.

#### **4.7.3 Influence of Education Level on Conflict within Management.**

The researcher asked the respondents to indicate the extent to which education levels influence decision making in management of the irrigation project. The results are shown in Table 4.12.

**Table 4.12: Influence of Education Level on Conflict within Management**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Not applicable	28	56.0
Less often	14	28.0
Often	2	4.0
More often	2	4.0
Always	4	8.0
<b>Total</b>	<b>50</b>	<b>100%</b>

The findings indicated that 84.0% of the respondents felt that education levels were less often and not applicable in influencing decision making in management of the irrigation project. This meant that there were no hindrances as result of education and understanding that could lead to conflict and therefore everyone opinion was respected. With majority of respondent having attained the KCSE level of education, they shared similar interpretation of conflict situation within management.

#### **4.7.4 Influence of Generation Gap on Conflict within Management**

In this section the researcher asked the respondents to rank the age groups listed as they experience conflict during management of irrigation projects. The results are indicated as follows.

##### **4.7.4.1 Conflict between Youth (18 -35 yrs) and those in Middle age (36-52yrs)**

The researcher sought to know the frequency of conflict between the youth and those in middle age. The results are shown in Table 4.13.

**Table 4.13: Frequency of conflict between Youth and those in Middle age .**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Not applicable	41	82.0
Low	7	14.0
Moderate	1	2.0
High	1	2.0
Very high	0	0.0
<b>Total</b>	<b>50</b>	<b>100%</b>

The findings showed that 82.0% of the respondents indicated conflict among the youth and middle aged was not applicable during management of irrigation projects. This meant that there was agreement in views during the management of project between the two age groups which therefore minimised chances of conflict.

#### **4.7.4.2 Conflict between Youth (18-35yrs) and those in Late Age (53yrs and above)**

On frequency of conflict within management committee between youths and those in late age, the results are as shown in Table 4.14

**Table 4.14: Frequency of conflict between Youth and those in Late Age**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Not applicable	38	76.0
Low	9	18.0
Moderate	3	6.0
High	0	0.0
Very high	0	0.0
<b>Total</b>	<b>50</b>	<b>100%</b>

The analysis shows that 76.0% of the respondents indicated conflict among the youth and late age was not applicable during management of irrigation projects. Therefore generation gap between the two age groups had no influence and complemented each other's views and opinions.

#### **4.7.4.3 Conflict between those in Middle Age and those in Late Age**

The frequency of conflict within management between those in middle age and those above 53 years are shown in Table 4.15



**Table 4.15: Frequency of conflict between those in Middle Age and those in Late Age**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Not applicable	33	66.0
Low	11	22.0
Moderate	2	4.0
High	4	8.0
Very high	0	0.0
<b>Total</b>	<b>50</b>	<b>100%</b>

At least 66.0% of the respondents indicated that conflict among the middle age and late age was not applicable during management of irrigation projects. These two age groups are close to each other with one been the transition to the other one and understanding between the two groups become necessary.

In summary, more than 60 % of respondent had the opinion that age differential or generation gap was not a serious factor that influenced conflict within management committee at the irrigation project during the implementation stage,

#### **4.8 Communication Styles**

While the researcher aimed at addressing the fourth objective that sought to assess how communication styles influences conflict within management during the implementation of irrigation projects in Mukurweini constituency in Nyeri County, it was established as follows:

##### **4.8.1 Frequency of Holding Meetings**

Respondents were asked how frequent meetings were held to update members of irrigation project on new developments. The results are shown in Table 4.19.

**Table 4.16: Frequency of Holding Meetings**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
None	0	0.0
Monthly	20	40.0
Quarterly	29	58.0
Half yearly	0	0.0
Annually	1	2.0
<b>Total</b>	<b>50</b>	<b>100%</b>

From the study, it was established that 98.0% of the respondents indicated that meetings were held either monthly or after three months to update members of irrigation project on new developments. This frequency shows that committee members closely briefed and informed each other on happenings within the management and among farmers in the four projects.

#### **4.8.2 Language Commonly Used during Meetings**

Respondents were asked to indicate the commonly used language to pass information during meetings.

##### **4.8.2.1 Use of Kiswahili Language during Meetings**

On the use of Kiswahili as a language of communication, the respondent gave the following summarized results in Table 4.17.

**Table 4.17: Use of Kiswahili Language during Meetings**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Not applicable	42	84.0
Very low	6	12.0
Low	2	4.0
Moderate	0	0.0
High	0	0.0
Very high	0	0.0
<b>Total</b>	<b>50</b>	<b>100%</b>

The study shows that 84.0% of the respondents indicated that Kiswahili language was not applicable to pass information during meetings and therefore was not commonly used. Whereas the projects are implemented in the rural areas with similar culture and traditions, the use of a foreign language was limited.

#### **4.8.2.2 Use of Kikuyu Language during Meetings**

Table 4.18 illustrates a summary on the frequency of the use of kikuyu as medium of communication.

**Table 4.18: Use of Kikuyu Language during Meetings.**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Not applicable	0	0.0
Very low	0	0.0
Low	0	0.0
Moderate	11	22.0
High	39	78.0
Very high	0	0.0
<b>Total</b>	<b>50</b>	<b>100%</b>

Findings from the study shows that 78.0% of the respondents indicated that the use of Kikuyu language was high in passing information during meetings and as a local language it was highly in use. This ensured clear understanding of information passed without misinterpretation and misinformation to members during meetings.

#### **4.8.2.3 Use of English Language during Meeting**

The respondent were asked to give their rating on the use of English as a mode of communication and their response are as summarized in Table 4.19

**Table 4.19: Use of English Language during Meeting.**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Not applicable	45	90.0
Very low	2	4.0
Low	1	2.0
Moderate	0	0.0
High	2	4.0
Very high	0	0.0
<b>Total</b>	<b>50</b>	<b>100%</b>

From the study 90.0% of the respondents indicated that English language was not applicable in passing information during meetings. The use of local language overshadowed the use of English as mode of communication during meetings.

#### **4.8.3 Method of Communication by Project Management**

Respondents were asked to rate the preferred method of communication by the project management. The results are indicated in Table 4.20.

##### **4.8.3.1 Letters as Preferred Method of Communication**

On the use of letters by the management committee to communicate, the result are summarized in Table 4.20

**Table 4.20: Use of Letter as preferred method of communication**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Not applicable	26	52.0
Very low	15	30.0
Low	2	4.0
Moderate	7	14.0
High	0	0.0
Very high	0	0.0
<b>Total</b>	<b>50</b>	<b>100%</b>

Whereas 52.0% of the respondents indicated that letters were not applicable as a method of communication by project management while 34% of the respondents indicated that their use were very low in communication by project management. Due to location of members of committee within the same village, it was not convenient to use correspondents in passing information.

#### **4.8.3.2 Memos as preferred method of communication.**

The use of memos to communicate was rated as indicated in Table 4.21

**Table 4.21: Use of Memos as a method of communication**

<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Not applicable	38	76.0
Very low	7	14.0
Low	2	4.0
Moderate	0	0.0
High	3	6.0
Very high	0	0.0
<b>Total</b>	<b>50</b>	<b>100%</b>

At least 76.0% of the respondents indicated that memos were not applicable as a method of communication by project management. Further 18.0% of the respondents indicated the application of this method of communication was low. The use of this formal way of communication was not prevalent bearing in mind that the project leaders came from the same locality and knew each other clearly. Formality would therefore not hold during meetings.

#### **4.8.4 Modes of Communication.**

Respondents were asked how often the management committee used the following modes of communication .The results are indicated in Table 4.22.

**Table 4.22: Use of the Different Modes of Communication.**

<b>Category</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
Radio announcement	100.0	0.0	0.0	0.0	0.0
Letters	72.0	10.0	4.0	4.0	0.0
Memos	84.0	14.0	0.0	2.0	0.0
Phones	18.0	2.0	26.0	20.0	34.0
Word of mouth	30.0	16.0	44.0	10.0	0.0
Barazas	38.0	32.0	20.0	10.0	0.0

1=none; 2=less often; 3=often; 4=more often; 5=very often; %=percentage

From the Table 4.22, none of the respondents used radio as a mode of communication while 80.0% of the respondents indicated they used phones oftenly as a mode of communication and 54.0% of the respondents often used word of mouth as a mode of communication. 30.0% of the respondents' oftenly used Barazas as a mode of communication.

#### **4.9 Summary**

The chapter discussed the main results obtained through analysis and presentation of data on factors influencing conflict within management during the implementation of irrigation projects at Mukurweini constituency in Nyeri County, Kenya. The report is based on the study variables of resource allocation, management structure, personal differences, communication style and conflict within management committees. The presentation of the finding is done mainly in form of table and a brief discussion.



## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents a summary of the major findings from the results of the study and the conclusions made from them. The chapter also presents the recommendations made by the researcher. This was done in respect to the stipulated objectives in a bid to answer the research questions.

#### **5.2 Summary of Findings**

The following are the major findings of the study as per the objectives.

##### **5.2.1 Influence of Resource Allocation on Conflict within Management**

The study established that resource allocation, particularly on water, billing and utilisation of collected funds had a major influence on conflict within management at irrigation projects in Mukurweini. The respondents disagreed with the statements that amount of money charged was fair to farmers with 84.0% of the respondents disagreeing with the statement and 44.0% of the respondents disagreeing with the statement that the amount of water allocated per household was adequate for irrigation needs of each farmer.

##### **5.2.2 Influence of Management Structure on Conflict within Management**

The study established that there was no influence of management structure on conflict within management at irrigation projects in Mukurweini constituency. While the 82% of the respondents agreed with the statements that the supervisor had an average and above knowledge on their duties and responsibilities, it was unanimously agreed (100%) that female members constituted part of the management committees and that group leaders were democratically elected and in a transparent manner without delay. This meant that the management upheld gender equality, democracy and the constitutions of the different groups were respected.

### **5.2.3 Influence of personal differences on Conflict within Management**

The study also established that personal differences had very little influence on conflict within management of irrigation projects at Mukurweini constituency. 94% of the respondent declared that denomination/religious matters and loyalty were not applicable during of making decisions relating to water bills or allocation of water. Age among management committee leaders had little influence on management conflict as 66%, 76% and 82% of respondents declared that there was no conflict between youths & middle age, youths & late age and middle & late age respectively. On the influence of education as a personal attribute on management conflict, 56.0% of the respondents indicated that education levels were not applicable in influencing decision making in management of the irrigation project.

### **5.2.4 Influence of Communication styles on Conflict within Management**

On communication styles there was very little influence on conflict within management as the respondents agreed that the information was clearly communicated to members in language they understand, there are clear communication channels, and management encouraged dialogue and open communication in a bid to minimize conflict at the irrigation projects. Written communications such as memos and letters are were least used in communicating among members. 58.0% of the respondents indicated that meetings were held quarterly to update members of irrigation project on new developments, 84.0% of the respondents indicated that Kiswahili language was not applicable in passing information during meetings. 78.0% of the respondents indicated that the usage of kikuyu language was highly rated in passing information during meetings. 90.0% of the respondents indicated that English language was not applicable to pass information during meetings. None of the respondents identified radio as a mode of communication. 54.0% of the respondents indicated that they used phones very often as a mode of communication, 54.0% of the respondents often used word of mouth as a mode of communication and 32.0% of the respondents less often used Barazas as a mode of communication.

### **5.3 Discussion**

The researcher started by looking at the factors influencing conflict within management during implementation of irrigation projects. It was noted that sabotage, quarrels and physical fights were high during resource allocation, but low when addressing issues to do with management structures, personal differences and communication styles among members of the management committee.

#### **5.3.1 Resource Allocation as a Factor Influencing Conflict within Management**

Resource allocation was found to have had a major influence on conflict within management committee at irrigation projects. While determining the extent to which resources allocation influences conflict within management committee during implementation of irrigation projects in Mukurweini constituency in Nyeri County, it was noted that the amount of water and money allocated to each farmer was not fair to all farmers and so was the transparency on the use of revenue generated to maintain irrigation pipe network. The findings collaborate and agree with Gichuki (2000) who asserted that water scarcity and competition among small holders at irrigation projects increases as the demand for scarce water resource increases. From the study, it was found that allocation of water resource influenced conflict which is supported by the views from Gichuki (2000) who found out that Competition for water resource, operation and maintenance costing and budgeting formed basis for conflict at irrigation projects. Nelson (2008) supports the findings of the study by arguing that anytime multiple parties share resources, there is potential for conflict which is enhanced when the shared resources become scarce.

The views therefore confirms that if the water charges and water allocation to individual farmer was fair and collected resources utilised with accountability to the satisfaction of the management committee, then the performance of the projects will have been satisfactory. The management committee are formed from elections from the individual farm holders and therefore reflect the opinion of the farmers. Any dissatisfaction on the part of the farmer is reflected within the management.

### **5.3.2. Management Structure as a Factor Influencing Conflict within Management**

Management structure was found not to be having any influence on conflict within management committee at irrigation projects. While referring to the way management structure influence conflict within management committee during implementation of irrigation projects in Mukurweini constituency in Nyeri County, the study found out that both the male and female members constituted the management committees. The management committee members' were democratically elected in a transparent manner. Secondary data from the irrigation project group Constitutions shows that a third of all elective positions have been reserved for women and youth. The percentage of committee members at the irrigation project management and the formation of institutions of control to the executive committee that had been put in place such as the advisory committee, disciplinary and supervisory sub-committees clearly indicate checks and balances within the management. The management structure of the irrigation projects had therefore ensured democracy which agrees with the views of Kegley and Wittkopf (1994), who asserted that when a leader has imbibed democratic values, it is less likely for him to resort to the use of force to solve conflicts. According to Kegley and Wittkopf (1994), where the leaders uphold democratic values, he/she respect the opinions of others as well as democratic channels that exist for nonviolent resolution of differences, the chances for conflict diminishes. Moreover, in a democratic environment, rules and regulations limit leaders' freedom, and encourage active participation and liberties thereby reducing the tendency of using violent means to resolve differences.

On the involvement of women and youth in the management of the irrigation project it was noted that elective positions had been widely distributed amongst the men, women and the youth despite the fact the men took the biggest share. The findings agree with Karina (2011) who noted that bias to Gender issues in the management of irrigation water was a cause of conflict in some projects in Kenya. The findings rather show disagreement with findings at Ahero irrigation scheme where women had expressed concern over the disadvantageous and discriminative attitude by the management. Therefore absence of gender discrimination in allocation of elective position minimised agitation and conflict at irrigation projects in Mukurweini.

### **5.3.3 Personal differences as a Factor Influencing Conflict within Management**

Personal differences had no significant influence on the conflict within the management committee at irrigation projects in Mukurweini constituency. As the study sought to establish how personal differences influence conflict within management during implementation of irrigation projects in Mukurweini constituency in Nyeri County, it was noted that denomination/religion, age among leaders and education and understanding did not influence conflict during implementation of irrigation projects. This is further supported by the fact religion/denomination was not a consideration during the process of implementation of irrigation projects; neither was church loyalties found to favour allocation of water per household. Education level was also found not influence the decision making during implementation of irrigation projects. The same effect was found among different age groups that were involved in the management of irrigation project. These results negates the views by Zemka (1999) and Anick (2008), who felt that incidence of inter generational conflict between young and old people was on the rise. The views by the two writers that different age groups exhibit different needs, expectations and values which produce conflicting goals, preferences and actions in irrigation projects is negated in this research report. In Mukurweini constituency, the generation gap between the different age groups had been mitigated at irrigation projects by the fact that the projects are Government and Donor initiated and funded and therefore there is no loyalty demand on the part of the project members to any particular section of an age group.

### **5.3.4. Communication Style as a Factor Influencing Conflict within Management**

Communication style was also established to have had very minimal influence on conflict within management committee at irrigation project in Mukurweini constituency in Nyeri County. It was noted that information was clearly communicated to members in language they understand and that there were also clear communication channels. The Management committee encouraged dialogue and open communication in a bid to minimize conflict at the irrigation projects. This was supported by the use of means that were appropriate and acceptable to the members such as word of mouth, phones and barazas. To add on to this, it was noted that meetings were held frequently to update members on the new developments in the locals' native language. The research findings therefore confirms and agreed with Pondy, (1967) who asserted that low communication results in low

knowledge of others and may underpin coordination difficulties. In Mukurweini, the high frequency of quarterly meetings addressed this challenge which ensured information reached members clearly and regularly.

According to Tolbize (2008) the most common and most obvious source of conflict in projects included lack of trust, respect, effective listening skills, and perceptual differences. Absence of these factors as indicated in the research finding confirms that misinterpretation, misunderstanding and failure to execute instructions as promoted by Tolbize (2008) was limited which resulted to minimal influence on conflict within management of irrigation projects.

#### **5.4 Conclusion**

In conclusion only resource allocation was confirmed as a factor that had a major influence on conflict within management committee at Mukurweini constituency. As noted anytime multiple parties share resources, there is potential for conflict which is enhanced when the shared resources become scarce. This however doesn't imply that management structure, personal differences and communication style were not important but rather their influence at the four projects was minimal. Their combined influence however minimal had an influence on the outcome of conflict especially when compounded by the competition for scarce water resource.

#### **5.5 Recommendations**

The following are recommended:

1. This study found out that the executive management committee was not open during the determination of monthly charges per house hold which made members suspicious. It is therefore recommended that the Management committee engage community further on determination of water charges and in the utilisation of collected funds.
2. The study also established that transparency and accountability was in question during utilization of collected funds. It is therefore recommended that members of management committee need to improve their skill on management of public resources as it demand high degree of transparency and accountability.

3. The study found that water was inadequate during the distribution to specific members who agreed that water allocation per household was not fair. It is recommended that the Government and the donors to conduct intensive feasibility study on the viability of irrigation projects based on definite number of beneficiary to avoid over stretching available water sources.

## **5.6 Areas of Further Research**

The following are recommended for further research:

1. The influence of Government and donor policies on conflict within the management during implementation of irrigation projects or related projects in Mukurweini and other constituencies.
2. Factors influencing conflict among the individual small farm holders at irrigation project in Mukurweini.

## **5.7 Summary**

This study has discussed the factors that influence conflict within management at small holders' irrigation projects in Mukurweini constituency. It has been established that resource allocation was the only factor that had a major influence while management structure, personal differences and communication styles had minimal influence at the four projects as tabulated. Based on the findings there are discussions, conclusion, recommendations and areas of further research being highlighted.

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## APPENDICES

### APPENDIX 1:LETTER OF INTRODUCTION TO THE RESPONDENTS

Waiharo Muigai,  
P.O Box 337  
Mukurweini

Dear Respondent,

**RE:FACTORS INFLUENCING MANAGEMENT CONFLICT DURING  
IMPLEMENTATION OF IRRIGATION PROJECT IN MUKURWEINI CONSTITUENCY,  
NYERI COUNTY, KENYA.**

I am a post graduate student of the University of Nairobi currently doing the above referred research. You have been selected to take part in this study. Attached find a questionnaire meant to gather information on issues related to the topic. The questionnaire is divided into two parts and you will be guided in each section.

I promise that all information given in this questionnaire are strictly meant for the purpose of this research and will be treated as confidential as possible.

Kindly, take your time and fill it within the first week of your receipt and return to enable me analyze your responses.

Yours faithfully,

MUIGAI J.E. WAIHARO  
RESEARCHER.  
L50/74549/2012

## APPENDIX 2: QUESTIONNAIRE

Title: Factors influencing management conflict during implementation of irrigation projects at Mukurweini Constituency, Nyeri County, Kenya

This questionnaire has sections A and B. Kindly fill both sections.

The research instrument has been formulated to collect data for the purpose of the research meant to create greater understanding on factors influencing management conflict during implementation of irrigation projects at Mukurweini Constituency, Nyeri County, Kenya

Please note that your response to these questions will be confidential and shall be used for the purpose of this research only.

### **INSTRUCTIONS**

**Please tick where appropriate and for explanation, please be brief**

#### **Part A: Background Information**

1. Please indicate your gender

Male  Female

2. Age (i) 18-24yrs  (ii) 25-30yrs  (iii) 30-35yrs  (iv) 36-40yrs

(v) 41-45yrs  (vi) 46- 50yrs  (vii) Over 50 yrs

3. What position do you hold in the group?

(i) Committee member  (ii) Member  (iii) executive Official

4. What is your highest level of academic qualification? (Tick appropriate answer)

(i) KCPE /CPE [ ] (ii) KCSE /O Level [ ] (iii) A Level [ ] (iv) Diploma/Degree [ ]

(v) Others (Specify) [ ].....

**Part B: Factors influencing management conflict**

5. What would you say has been frequency of occurrences of the following events as a way of expressing dissatisfaction within management in relation to the factors noted? (tick appropriate answer)

		Sabotage	Quarrels	Physical fighting
<b>Resource allocation factors</b>	High			
	Average			
	Low			
<b>Management structure factors</b>	High			
	Average			
	Low			
<b>Personal differences factor</b>	High			
	Average			
	Low			
<b>Communication styles factors</b>	High			
	Average			
	Low			

6. In the table below, various statements are provided regarding conflict at the irrigation project. Indicate the extent to which you agree or disagree with each statement by ticking where appropriate. Use the scale below to respond.

**SA** –Strongly agree    **A** – Agree    **D** – Disagree    **SA** – Strongly Disagree    **N**- Neutral

<b>Personal differences</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>	<b>N</b>
Denomination/religion influences conflict at irrigation project					
Differences in age among leaders influences conflict					
Differences in education and understanding influences conflict					

<b>Communication styles</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>	<b>N</b>
Information is clearly communicated to members in language they understand.					
There are clear communication channels					
Management officials know their roles & duties					
Management encourages dialogue and open communication					
Written communication such as memos and letters are mostly used in communicating to members					
<b>Resource allocation</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>	<b>N</b>
Amount of water allocated to each farmer is fair to all					
Amount of money charged on supply of irrigation water is fair to all members					
Revenue generated to maintain the irrigation pipe network is transparent and accountable.					
<b>Management structure</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>	<b>N</b>
Both the male and female members constitute the management committees					
Supervisors have too much power at their disposal during monitoring of the projects					
Group leaders are democratically elected and in a transparent manner					

**Resource allocation**

7. To what extent do you agree with the amount of money charged per household for the operation and maintenance of project?

Strongly Agree.  Agree  Disagree  Strongly Disagree  Neutral

8. Do you agree that the amount of water allocated per house hold is adequate for irrigation needs

Strongly Agree.  Agree  Disagree  Strongly Disagree  Neutral

Kindly explain.....



### Personal differences

9. Are religious or denominational considerations applicable during the process of fixing water bills?

(i) Not applicable [ ] (ii) less often [ ] (iii) often [ ] (iv) more often [ ] (v) always [ ]

10. To what extent does church loyalty contribute to favourism in allocation of water per household?

(i) Not applicable [ ] (ii) less often [ ] (iii) often [ ] (iv) more often [ ] (v) always [ ]

11. To what extent do education levels influence decision making in management of the irrigation project?

(i) Not applicable [ ] (ii) less often [ ] (iii) often [ ] (iv) more often [ ] (v) always [ ]

12. Kindly rank the age groups listed as they experience conflict during management of irrigation projects?

The rating should be as follows: 0 = not applicable, 1 = low, 2 = moderate, 3 = high, 4 = very high.

a). Youth (18 to 35 yrs) & middle age (36 to 53 yrs) ( )

b). Youths (18 to 35yrs) & late age (53yrs and above) ( )

c). Middle age (36 to 53yrs) & late age (53yrs and above) ( )

### Management structure

13. In your own opinion how would do you rate the supervisors understanding of their duties and responsibilities during the allocation and distribution of water?

Very poor  Poor  Average  Good  Very good

14. How would you rate the involvement of the following group members in management of the project

	Very Poor.	Poor	Average	Good	Very Good
Women	[ ]	[ ]	[ ]	[ ]	[ ]
Youths	[ ]	[ ]	[ ]	[ ]	[ ]

15. Has the management ever delayed elections with the intention of remaining in authority? (Tick appropriate answer)

Yes [ ] No [ ]

If yes for how long ?

1-3Months [ ] 4-6 months [ ] 7-9 months [ ] 10 -12 months[ ] over 13 months [ ]

16. Please state the reasons given as the cause of the delay?

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**Communication styles**

17. How frequent are the meetings held to update members of irrigation project on new developments?

- 1 = None [ ]
- 2 = Monthly [ ]
- 3 = Quarterly [ ]
- 4 = Half yearly [ ]
- 5 = Annually [ ]

18. Which language is commonly used to pass information during meetings?

The rating should be as follows: 0 = not applicable, 1= very low, 2 = low, 3 = moderate,

4 = high, 5 = very high.

- a) Kiswahili
- b) Kikuyu
- c) English

19. How would you rate the preferred method of communication by the project management?

The rating should be as follows: 0 = not applicable, 1= very low, 2 = low, 3 = moderate,

4 = high, 5 = very high.

(i) Letters  (ii) memos  (iii) village criers  (iv) others

20. How often do the management committee use the following modes of communication?

Use the following scale; none= (0) less often= (1) often = (2) more often= (3) very often= (4)

- a) Radio announcement [ ]
- b) Letters [ ]
- c) Memos [ ]
- d) Phones [ ]
- e) Word of mouth [ ]
- f) Village criers [ ]
- g) Barazas [ ]

**Thank you very much for your time and participation**